



2019 Herbicide Evaluation Trials

Dr. Travis Legleiter and Sara Carter

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Enlist

LLGT27

VARIETY X FUNGICIDE

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A special note of gratitude is extended to Mr. Charles Slack for his 53 years of service to the University of Kentucky.

PESTICIDES USED

<u>TRADE NAME</u>	<u>COMMON NAME</u>	<u>COMPANY</u>
AATREX	ATRAZINE	SYNGENTA
ACCENT Q	NICOSULFURON	CORTEVA
ACURON	S-METOLACHLOR + ATRAZINE + MESOTRIONE + BICYCLOPYRONE	SYNGENTA
ACTIVATOR 90	NON-IONIC SURFACTANT	LOVELAND
ALITE 27	ISOXAFLUTOLE	BAYER
AMS	AMMONIUM SULFATE	CLEAN CROP
AMSOL	AMMONIUM SULFATE	WINFIELD
ANTHEM FLEX	CARFENTRAZONE-ETHYL + PYROXASULFONE	FMC
ANTHEM MAXX	PYROXASULFONT + FLUTHIACET-METHYL	FMC
ARMEZON	TOPRAMEZONE	BASF
ARMEZON PRO	DIMETHENAMID-P + TOPRAMEZONE	BASF
ASSURE II	QUIZALOFOP P-ETHYL	CORTEVA
AUTHORITY ELITE	S-METOLACHLOR + SULFENTRAZONE	FMC
AUTHORITY MTZ	SULFENTRAZONE + METRIBUZIN	FMC
AUTHORITY XL	SULFENTRAZONE	FMC
AXIAL BOLD	FENOXAPROP-P-ETHYL + PINOXADEN	SYNGENTA
BALANCE FLEXX	ISOXAFLUTOLE	BAYER
BICEP II MAGNUM	ATRAZINE + S-METOLACHLOR	SYNGENTA
BOUNDARY	S-METOLACHLOR + METRIBUZIN	SYNGENTA
BROADAXE XC	SULFENTRAZONE + S-METOLACHLOR	SYNGENTA
CAPRENO	THIENCARBOZONE + TEMBOTRIONE	BAYER
CLARITY	DICAMBA	BASF
CLASS ACT RIDION	WATER CONDITIONER + SURFACTANT	WINFIELD
CLASSIC	CHLORIMURON ETHYL	CORTEVA
CORVUS	ISOXAFLUTOLE + THIENCARBAZONE-METHYL	BAYER
CROP OIL CONCENTRATE (COC)		LOVELAND
CRUSHER	RIMSULFURON + THIFENSULFURON-METHYL	FMC
DEGREE XTRA	ACETOCHLOR + ATRAZINE	BAYER
DELARO	PROTHIOCONAZOLE + TRIFLOXYSTROBIN	SYNGENTA
DIFLEXX	DICAMBA	BAYER
DIFLEXX DUO	DICAMBA + TEMBOTRIONE	BAYER
DUAL II MAGNUM	S-METOLACHLOR	SYNGENTA
DURANGO DMA	GLYPHOSATE	CORTEVA
ELEVORE	HALAUXIFEN-METHYL	CORTEVA
ENDIGO	LAMBDA-CYHALOTHRIN + THIAMETHOXAM	SYNGENTA
ENGENIA	DICAMBA	BASF
ENLIST DUO	2,4-D (CHOLINE) + GLYPHOSATE	CORTEVA

PESTICIDES USED (CONTINUED)

<u>TRADE NAME</u>	<u>COMMON NAME</u>	<u>COMPANY</u>
ENLIST ONE	2,4-D (CHOLINE)	CORTEVA
FIERCE	FLUMIOXAZIN + PYROXASULFONE	VALENT
FIERCE EZ	FLUMIOXAZIN + PYROXASULFONE	VALENT
FIERCE MTZ	FLUMIOXAZIN + PYROXASULFONE + METRIBUZIN	VALENT
FINESSE CEREAL & FALLOW	CHLORSULFURON + METSULFURON METHYL	FMC
FIRSTSHOT	THIFENSULFURON + TRIBENURON METHYL	FMC
GRAMOXONE	PARAQUAT	SYNGENTA
GRAMOXONE MAGNUM	PARAQUAT	SYNGENTA
HALEX GT	GLYPHOSATE (PS)+ MESOTRIONE + S-METOLACHLOR	SYNGENTA
HARNESS	ACETOCHLOR	BAYER
HARNESS XTRA	ACETOCHLOR + ATRAZINE	BAYER
HARNESS MAX	ACETOCHLOR + MESOTRIONE	BAYER
IMPACT	TOPRAMEZONE	AMVAC
IMPACTZ	TOPRAMEZONE + ATRAZINE	AMVAC
INDUCE	NONIONIC SURFACTANT	HELENA
INTACT	DRIFT CONTROL + DEPOSITION AID	PRECISION LABS
INTERLINE	GLUFOSINATE	UPL
INTIMIDATOR	FOMESAFEN + METRIBUZIN + S-METOLACHLOR	LOVELAND
LAUDIS	TEMBOTRIONE	BAYER
LEADOFF	RIMSULFURON + THIFENSULFURON METHYL	CORTEVA
LIBERTY 280	GLUFOSINATE AMMONIUM	BASF
LOW VOL 4	2,4-D ESTER	LOVELAND
LUMAX	S-METOLACHLOR + ATRAZINE + MESOTRIONE	SYNGENTA
MIRAVIS TOP	ADEPIDYN	SYNGENTA
MOCCASIN II PLUS	S-METOLACHLOR	UPL
MOCCASIN MTZ	S-METOLACHLOR + METRIBUZIN	UPL
MSO	METHYLATED SEED OIL	LOVELAND
NIS	NON-IONIC SURFACTANT	
NPAK AMS LIQUID	AMMONIUM SULFATE	WINFIELD
ONTARGET	DRIFT CONTROL + DEPOSITION AID	WINFIELD
OSPREY	MESOSULFURON-METHYL	BAYER
OUTLOOK	DIMETHENAMID-P	BASF
POWERFLEX HL	PYROXSULAM	CORTEVA
PREFIX	S-METOLACHLOR + BENOXACOR	SYNGENTA
QUELEX	HALAUXIFEN-METHYL + FLORASULAM	CORTEVA
REALM Q	RIMSULFURON + MESOTRIONE	CORTEVA
RESICORE	ACETOCHLOR + CLOPYRALID + MESOTRIONE	CORTEVA
ROUNDUP POWERMAX	GLYPHOSATE (POTASSIUM SALT)	BAYER

PESTICIDES USED (CONTINUED)

<u>TRADE NAME</u>	<u>COMMON NAME</u>	<u>COMPANY</u>
SCOUT	GLUFOSINATE	VALENT
SELECT MAX	CLETHODIM	VALENT
SENCOR	METRIBUZIN	BAYER
SHARPEN	SAFLUFENACIL	BASF
SHIELD EX	TOLPYRALATE	SUMMIT AGRO USA
SONIC	SULFENTRAZONE + CLORANSULAM-METHYL	CORTEVA
STATUS	DICAMBA + DIFLUENZOPYR	BASF
TAVIUM	S-METOLACHLOR + DICAMBA	SYNGENTA
TRICOR	METRIBUZIN	UPL
TRIPZIN ZC	PENDIMETHALIN + METRIBUZIN	UPL
TRIVENCE	CHLORIMURON ETHYL + FLUMIOXAZIN + METRIBUZIN	CORTEVA
V-10440		VALENT
VALOR SX	FLUMIOXAZIN	VALENT
VALOR XLT	FLUMIOXAZIN + CHLORIMURON	VALENT
VERDICT	DIMETHENAMID-P + SAFLUFENACIL	BASF
WARRANT	ACETOCHOLOR	BAYER
XTENDIMAX WITH VAPORGRIP	DICAMBA + VAPROGRIP TECHNOLOGY	BAYER
ZIDUA	PYROXASULFONE	BASF
ZIDUA PRO	PYROXASULFONE + SAFLUFENACIL + IMAZETHAPYR	BASF

Princeton Climate Data, March 2019

DATE	AIR TEMP			PRECIP	RH		SOIL TEMP				
	MX	MN	AV		MX	MN	MX	MN	MX	MN	EVAP
03-01-2019	38	34	36		100	90	42	40			
03-02-2019	42	37	39		98	71	43	41			
03-03-2019	36	23	29	0.06	99	79	43	39			
03-04-2019	26	13	19		84	45	38	35			
03-05-2019	33	12	22		88	42	36	34			
03-06-2019	36	15	25		88	35	38	34			
03-07-2019	42	29	35		83	32	40	36			
03-08-2019	45	37	41	0.10	99	71	42	38			
03-09-2019	66	42	54	0.95	100	62	39	36			
03-10-2019	59	39	49		88	41	50	39			
03-11-2019	57	38	47		75	30	51	46			
03-12-2019	56	32	44		89	36	50	43			
03-13-2019	76	50	63	0.04	82	43	49	46			
03-14-2019	75	51	63	0.96	97	37	52	49			
03-15-2019	51	38	44		68	48	55	49			
03-16-2019	53	27	40		94	27	51	45			
03-17-2019	58	28	43		91	25	74	73			
03-18-2019	52	27	39		94	28	51	42			
03-19-2019	56	27	41		90	26	50	43			
03-20-2019	62	34	48	0.07	98	27	51	44			
03-21-2019	50	33	41	0.01	100	58	50	47			
03-22-2019	65	30	47		100	25	53	42			
03-23-2019	61	30	45		89	26	55	44			
03-24-2019	69	44	56	0.02	85	38	55	48			
03-25-2019	60	44	52	0.41	100	70	52	50			
03-26-2019	53	33	43		98	28	52	46			
03-27-2019	63	26	44		91	16	53	45			
03-28-2019	74	37	55		83	28	53	48			
03-29-2019	69	52	60	0.19	98	48	57	53			
03-30-2019	66	39	52	0.53	97	65	57	54			
03-31-2019	45	32	38		92	40	54	47			

Summary for 3-1-2019 through 3-31-2019:

	AIR TEMP			TOTAL PRECIP	RH		SOIL TEMP				
	MX	MN	AV		MX	MN	MX	MN	MX	MN	TOTAL EVAP
	55	33	44	3.34	92	43	50	44			
(Deviation from normal)	-6	-2	-4	-1.60							

Princeton Climate Data, April 2019

DATE	AIR TEMP			PRECIP	RH		SOIL TEMP				EVAP
	MX	MN	AV		MX	MN	MX	MN	MX	MN	
04-01-2019	52	26	39		90	29	53	47			
04-02-2019	60	32	46		94	27	56	46			
04-03-2019	69	39	54		90	32	55	49			
04-04-2019	66	48	57	0.11	98	44	59	52			
04-05-2019	62	52	57	0.01	100	69	57	54			
04-06-2019	73	46	59		100	46	63	57			
04-07-2019	70	59	64	0.05	99	62	64	58			
04-08-2019	71	57	64	0.33	100	66	59	56			
04-09-2019	76	50	63		100	34	67	60			
04-10-2019	80	45	62		91	29	65	57			
04-11-2019	82	65	73		65	37	67	61			
04-12-2019	76	47	61	0.24	97	32	66	60			
04-13-2019	65	43	54	1.21	99	45	64	57			
04-14-2019	67	37	52	0.18	100	59	61	56			
04-15-2019	63	33	48		98	36	62	50			
04-16-2019	77	48	62		77	35	64	55			
04-17-2019	79	58	68		78	38	65	58			
04-18-2019	69	49	59	0.56	99	54	65	60			
04-19-2019	49	43	46	1.14	98	87	62	54			
04-20-2019	64	41	52	0.32	96	29	57	49			
04-21-2019	75	36	55		99	23	61	52			
04-22-2019	80	49	64		73	32	62	56			
04-23-2019	79	57	68		93	46	69	59			
04-24-2019	79	53	66	0.05	100	54	66	60			
04-25-2019	73	59	66	0.30	100	69	70	64			
04-26-2019	69	44	56		96	22	67	60			
04-27-2019	74	42	58		98	37	65	56			
04-28-2019	67	45	56		89	59	66	60			
04-29-2019	81	47	64		95	44	64	58			
04-30-2019	84	58	71		97	43	72	61			

Summary for 4-1-2019 through 4-30-2019:

	AIR TEMP			TOTAL PRECIP	RH		SOIL TEMP				TOTAL EVAP
	MX	MN	AV		MX	MN	MX	MN	MX	MN	
	71	47	59	4.50	94	44	63	56			
(Deviation from normal)	-0	+1	+0	-0.30							

Princeton Climate Data, May 2019

DATE	AIR TEMP			PRECIP	RH		SOIL TEMP				EVAP
	MX	MN	AV		MX	MN	MX	MN	MX	MN	
05-01-2019	80	61	70	0.46	100	57	69	64			
05-02-2019	74	60	67	0.02	100	76	71	64			
05-03-2019	71	62	66	0.54	99	70	68	64			
05-04-2019	72	58	65	0.08	99	77	74	73			
05-05-2019	71	52	61	0.01	100	43	70	66			
05-06-2019	76	48	62		100	43	75	65			
05-07-2019	82	55	68		97	45	77	68			
05-08-2019	85	59	72		95	42	78	67			
05-09-2019	76	64	70	0.11	96	64	76	69			
05-10-2019	66	54	60	0.05	98	73	72	65			
05-11-2019	62	52	57	0.04	99	77	66	61			
05-12-2019	60	46	53		100	78	70	65			
05-13-2019	60	44	52		100	57	65	57			
05-14-2019	69	40	54		100	41	69	60			
05-15-2019	69	50	59	0.50	99	73	70	60			
05-16-2019	85	53	69		100	57	66	62			
05-17-2019	86	66	76		93	44	77	69			
05-18-2019	87	65	76		94	45	67	64			
05-19-2019	78	65	71	0.58	99	63	66	65			
05-20-2019	78	56	67		100	44	76	69			
05-21-2019	87	58	72		88	51	77	70			
05-22-2019	84	66	75	0.04	96	66	77	71			
05-23-2019	87	73	80		94	62	67	65			
05-24-2019	89	66	77		100	43	76	70			
05-25-2019	88	69	78		98	49	69	67			
05-26-2019	89	68	78	0.01	98	52	70	68			
05-27-2019	89	66	77		100	47	70	68			
05-28-2019	89	71	80		90	45	78	72			
05-29-2019	86	65	75	2.45	100	53	79	73			
05-30-2019	76	65	70	0.72	100	72	77	75			
05-31-2019	80	60	70		100	54	74	73			

Summary for 5-1-2019 through 5-31-2019:

AIR TEMP			TOTAL PRECIP	RH		SOIL TEMP				
MX	MN	AV		MX	MN	MX	MN	MX	MN	TOTAL EVAP
78	59	69	5.61	98	57	72	67			
(Deviation from normal)-2 +3 +0			+0.65							

Princeton Climate Data, June 2019

DATE	AIR TEMP			PRECIP	RH		SOIL TEMP				
	MX	MN	AV		MX	MN	GRASS	MN	BARE	MN	EVAP
06-01-2019	82	60	71		100	50	76	72			
06-02-2019	84	63	73	0.01	96	52	70	67			
06-03-2019	76	58	67		94	35	77	69			
06-04-2019	82	55	68		92	50	68	65			
06-05-2019	90	70	80		96	51	70	67			
06-06-2019	81	71	76		95	73	79	73			
06-07-2019	78	68	73	0.06	100	71	77	74			
06-08-2019	79	67	73	0.14	100	76	78	73			
06-09-2019	82	70	76	0.02	100	70	71	70			
06-10-2019	77	56	66		100	37	79	76			
06-11-2019	76	52	64		92	37	77	69			
06-12-2019	77	54	65		93	39	75	68			
06-13-2019	75	52	63		98	35	75	67			
06-14-2019	78	47	62		99	34	75	65			
06-15-2019	85	63	74		81	56	76	69			
06-16-2019	89	70	79	0.15	99	61	79	72			
06-17-2019	86	69	77		99	56	77	72			
06-18-2019	85	70	77	0.04	98	56	79	75			
06-19-2019	87	68	77	1.15	100	57	75	72			
06-20-2019	79	65	72	0.01	100	62	72	70			
06-21-2019	87	63	75	0.63	100	61	77	72			
06-22-2019	82	66	74	0.70	100	71	71	70			
06-23-2019	86	68	77	0.60	99	67	72	69			
06-24-2019	82	67	74	0.38	99	62	78	73			
06-25-2019	84	63	73		100	47	73	71			
06-26-2019	89	67	78	0.36	100	56	74	70			
06-27-2019	82	67	74		98	54	75	72			
06-28-2019	88	68	78		97	48	76	72			
06-29-2019	90	68	79		100	49	76	73			
06-30-2019	90	68	79	0.08	100	49	76	73			

Summary for 6-1-2019 through 6-30-2019:

	AIR TEMP			TOTAL PRECIP	RH		SOIL TEMP				
	MX	MN	AV		MX	MN	GRASS	MN	BARE	MN	TOTAL EVAP
	83	64	73	4.33	98	54	75	71			
(Deviation from normal)	-4	+0	-2	+0.48							

Princeton Climate Data, July 2019

DATE	AIR TEMP			PRECIP	RH		SOIL TEMP				
	MX	MN	AV		MX	MN	MX	MN	MX	MN	EVAP
07-01-2019	88	68	78	0.02	99	57	76	73			
07-02-2019	91	70	80	0.50	100	55	76	73			
07-03-2019	87	71	79	0.08	99	64	76	74			
07-04-2019	88	68	78	0.09	99	66	76	73			
07-05-2019	89	71	80		100	60	77	74			
07-06-2019	86	70	78		100	64	77	75			
07-07-2019	89	72	80	0.16	100	64	78	75			
07-08-2019	89	73	81		98	57	78	76			
07-09-2019	90	70	80		98	48	77	75			
07-10-2019	88	73	80	0.85	99	64	78	75			
07-11-2019	87	70	78		100	57	78	76			
07-12-2019	86	67	76		99	52	77	74			
07-13-2019	89	67	78		96	58	76	73			
07-14-2019	84	70	77		99	57	74	73			
07-15-2019	81	71	76	0.24	96	74	76	74			
07-16-2019	83	74	78	0.37	97	77	74	73			
07-17-2019	88	73	80	0.10	99	64	76	75			
07-18-2019	86	72	79	0.03	99	77	77	75			
07-19-2019	90	73	81		99	60	78	76			
07-20-2019	90	74	82		100	58	78	76			
07-21-2019	89	74	81	0.09	100	65	77	76			
07-22-2019	81	66	73	0.48	100	77	76	75			
07-23-2019	79	60	69		99	46	75	73			
07-24-2019	80	59	69		100	36	72	70			
07-25-2019	82	56	69		100	46	72	69			
07-26-2019	85	60	72		99	44	74	69			
07-27-2019	87	63	75		100	47	75	70			
07-28-2019	87	65	76		100	52	76	71			
07-29-2019	86	68	77		96	58	76	72			
07-30-2019	85	68	76	0.11	99	62	76	73			
07-31-2019	85	64	74		100	49	76	72			

Summary for 7-1-2019 through 7-31-2019:

	AIR TEMP			TOTAL PRECIP	RH		SOIL TEMP				
	MX	MN	AV		MX	MN	MX	MN	MX	MN	TOTAL EVAP
	86	68	77	3.12	99	59	76	73			
(Deviation from normal)	-3	+2	-0	-1.17							

Princeton Climate Data, August 2019

DATE	AIR TEMP			PRECIP	RH		SOIL TEMP				
	MX	MN	AV		MX	MN	MX	MN	MX	MN	EVAP
08-01-2019	84	64	74		95	47	77	73			
08-02-2019	88	65	76		93	52	77	73			
08-03-2019	87	67	77	0.02	99	60	74	73			
08-04-2019	84	67	75	1.69	100	66	76	72			
08-05-2019	86	65	75		100	49	79	74			
08-06-2019	88	67	77	0.85	100	68	76	72			
08-07-2019	84	64	74		100	63	76	73			
08-08-2019	83	66	74	0.01	100	68	76	72			
08-09-2019	86	69	77		100	65	77	73			
08-10-2019	88	66	77		100	49	76	72			
08-11-2019	87	63	75		99	41	76	71			
08-12-2019	90	67	78		99	66	76	72			
08-13-2019	91	74	82		98	58	79	76			
08-14-2019	88	69	78		100	48	76	74			
08-15-2019	84	64	74		100	50	75	72			
08-16-2019	87	61	74		100	55	76	71			
08-17-2019	92	69	80		100	48	76	72			
08-18-2019	92	69	80		100	47	77	73			
08-19-2019	93	69	81		100	51	78	74			
08-20-2019	92	69	80	0.09	99	55	77	75			
08-21-2019	90	66	78		100	55	76	73			
08-22-2019	77	69	73	2.15	100	77	76	74			
08-23-2019	82	68	75	0.09	100	68	75	72			
08-24-2019	79	65	72		87	58	72	69			
08-25-2019	82	65	73	0.82	99	70	72	69			
08-26-2019	80	72	76	0.59	99	84	78	76			
08-27-2019	82	66	74		100	70	73	70			
08-28-2019	82	58	70		100	33	77	73			
08-29-2019	84	54	69		100	40	77	70			
08-30-2019	87	58	72		100	40	73	69			
08-31-2019	87	66	76		98	45	74	71			

Summary for 8-1-2019 through 8-31-2019:

	AIR TEMP			TOTAL PRECIP	RH		SOIL TEMP				
	MX	MN	AV		MX	MN	MX	MN	MX	MN	TOTAL EVAP
	86	66	76	6.31	99	56	76	72			
(Deviation from normal)	-1	+2	+0	+2.30							

Princeton Climate Data, October 2019

DATE	AIR TEMP			PRECIP	RH		SOIL TEMP				
	MX	MN	AV		MX	MN	MX	MN	MX	MN	EVAP
10-01-2019	93	65	79		100	42	78	72			
10-02-2019	94	64	79		100	38	75	71			
10-03-2019	94	61	77		100	42	75	71			
10-04-2019	78	55	66		89	35	74	69			
10-05-2019	86	53	69		81	18	70	66			
10-06-2019	77	57	67	0.83	97	56	69	67			
10-07-2019	69	49	59	0.21	99	49	72	66			
10-08-2019	73	45	59		100	31	69	62			
10-09-2019	79	45	62		96	39	67	62			
10-10-2019	84	60	72		97	55	67	63			
10-11-2019	71	43	57	0.20	98	73	69	66			
10-12-2019	58	33	45		100	33	66	58			
10-13-2019	68	34	51		100	33	63	56			
10-14-2019	74	38	56		100	31	65	56			
10-15-2019	76	44	60	1.07	100	58	66	59			
10-16-2019	66	39	52	0.28	100	49	66	59			
10-17-2019	61	35	48		100	44	61	55			
10-18-2019	68	35	51		100	35	61	54			
10-19-2019	72	40	56		99	52	63	55			
10-20-2019	74	53	63		100	42	67	60			
10-21-2019	68	59	63	0.41	96	77	65	62			
10-22-2019	63	41	52		95	40	64	58			
10-23-2019	68	36	52		99	31	60	54			
10-24-2019	71	42	56		93	31	61	54			
10-25-2019	56	49	52	0.22	97	84	61	57			
10-26-2019	71	54	62	1.54	99	86	61	57			
10-27-2019	66	50	58		100	58	64	58			
10-28-2019	60	46	53	0.02	100	79	63	58			
10-29-2019	61	54	57		97	75	61	59			
10-30-2019	56	50	53	1.19	100	92	61	57			
10-31-2019	51	28	39	0.39	100	68	58	49			

Summary for 10-1-2019 through 10-31-2019:

	AIR TEMP			TOTAL PRECIP	RH		SOIL TEMP				
	MX	MN	AV		MX	MN	MX	MN	MX	MN	TOTAL EVAP
	71	47	59	6.36	98	51	66	60			
(Deviation from normal)	-0	-1	-1	+3.31							

Princeton Monthly Climate Data March-October 2019

----- AIR TEMPERATURE -----											-- SOD --	
YEAR	MONTH	AVERAGE			EXTREME		AVG DEPART FROM NORM	NO. OF DAYS		4" TEMP AVERAGE		
		MAX	MIN	AVG	MAX	MIN		>=90	<=32	MAX	MIN	
2019	Mar	55	33	44	76	12	-3	0	14	50	44	
2019	Apr	71	47	59	84	26	-0	0	2	63	56	
2019	May	78	59	69	89	40	+2	0	0	72	67	
2019	Jun	83	64	73	90	47	-2	3	0	75	71	
2019	Jul	86	68	77	91	56	-1	4	0	76	73	
2019	Aug	86	66	76	93	54	-1	7	0	76	72	
2019	Sep	88	62	75	95	50	+4	14	0	75	71	
2019	Oct	71	47	59	94	28	+0	3	1	66	60	

----- PRECIPITATION -----										
YEAR	MONTH	DEPARTURE		CUMULATIVE		GREATEST		% RAIN DAYS	NO. DAYS >=.01	
		TOTAL	FROM NORMAL	TOTAL	DEPARTURE	24 HOUR TOTAL				
2019	Mar	3.34	-1.60	3.34	-1.60	0.96	35	11		
2019	Apr	4.50	-0.30	7.84	-1.90	1.21	40	12		
2019	May	5.61	+0.65	13.45	-1.25	2.45	45	14		
2019	Jun	4.33	+0.48	17.78	-0.77	1.15	47	14		
2019	Jul	3.12	-1.17	20.90	-1.94	0.85	42	13		
2019	Aug	6.31	+2.30	27.21	+0.36	2.15	29	9		
2019	Sep	0.34	-2.99	27.55	-2.63	0.31	7	2		
2019	Oct	6.36	+3.31	33.91	+0.68	1.54	35	11		

Spindletop Climate Data, April 2019

DATE	AIR TEMP			PRECIP	RH		SOIL TEMP				EVAP
	MX	MN	AV		MX	MN	GRASS	MN	BARE	MN	
04-01-2019	49	22	35		85	33	49	42	49	44	
04-02-2019	60	32	46		68	30	50	44	50	45	
04-03-2019	67	42	54		59	33	53	45	52	46	
04-04-2019	76	47	61		64	26	54	49	53	49	
04-05-2019	61	51	56	0.48	97	78	53	52	53	52	
04-06-2019	74	53	63		98	44	57	52	56	53	
04-07-2019	70	52	61	0.67	96	74	57	54	58	54	
04-08-2019	70	59	64	0.17	95	65	58	56	61	58	
04-09-2019	73	51	62		98	28	60	55	61	59	
04-10-2019	75	44	59		85	32	60	54	59	56	
04-11-2019	82	53	67		67	36	60	56	59	56	
04-12-2019	71	54	62	0.27	90	47	59	58	59	58	
04-13-2019	71	49	60	0.01	93	34	58	55	58	56	
04-14-2019	80	41	60	1.18	98	37	60	56	59	56	
04-15-2019	51	38	44		85	54	57	53	57	53	
04-16-2019	76	37	56		87	33	57	51	55	52	
04-17-2019	78	57	67		67	42	59	55	57	55	
04-18-2019	80	63	71		79	41	60	57	59	57	
04-19-2019	62	45	53	0.56	98	91	60	55	59	55	
04-20-2019	45	41	43	0.80	98	86	55	53	55	53	
04-21-2019	68	42	55	0.01	97	39	57	52	55	53	
04-22-2019	76	43	59		92	35	58	54	57	54	
04-23-2019	80	57	68		89	50	61	56	59	56	
04-24-2019	78	54	66		94	53	62	58	60	58	
04-25-2019	77	59	68	0.07	96	55	62	60	61	60	
04-26-2019	65	49	57	0.53	96	41	61	59	61	58	
04-27-2019	67	44	55	0.01	86	35	59	56	58	56	
04-28-2019	65	45	55		93	57	58	57	57	56	
04-29-2019	80	43	61		96	48	58	55	59	55	
04-30-2019	84	59	71		93	52	61	58	61	58	

Summary for the period 4-1-2019 through 4-30-2019:

	AIR TEMP			TOTAL PRECIP	RH		SOIL TEMP				TOTAL EVAP
	MX	MN	AV		MX	MN	GRASS	MN	BARE	MN	
	70	48	59	4.76	88	47	58	54	57	54	
(Deviation from normal)	+5	+3	+4	+0.88							

Spindletop Climate Data, June 2019

DATE	AIR TEMP			PRECIP	RH		SOIL TEMP				EVAP
	MX	MN	AV		MX	MN	GRASS	MN	BARE	MN	
06-01-2019	82	58	70		98	50	69	66	74	68	
06-02-2019	83	63	73		85	46	70	67	74	70	
06-03-2019	79	52	65		76	30	68	65	72	68	
06-04-2019	83	57	70		80	37	68	65	72	67	
06-05-2019	88	69	78	0.04	95	54	70	67	74	69	
06-06-2019	85	67	76	0.03	96	62	71	68	75	71	
06-07-2019	72	69	70	0.86	98	88	70	69	73	72	
06-08-2019	82	69	75	0.35	96	72	71	69	76	72	
06-09-2019	82	68	75	0.50	96	69	71	70	77	73	
06-10-2019	79	59	69	0.13	97	57	71	70	78	73	
06-11-2019	75	48	61		95	37	70	66	73	69	
06-12-2019	78	54	66	0.04	95	50	68	66	70	68	
06-13-2019	69	51	60		95	37	67	65	70	67	
06-14-2019	78	45	61		92	33	67	62	70	64	
06-15-2019	83	66	74		60	49	67	65	70	66	
06-16-2019	89	66	77	1.49	98	57	70	67	74	69	
06-17-2019	85	67	76	1.28	99	65	70	68	74	70	
06-18-2019	82	67	74	0.50	98	66	71	69	75	72	
06-19-2019	86	67	76	0.11	98	63	73	70	78	73	
06-20-2019	78	66	72	0.09	98	69	72	70	76	74	
06-21-2019	83	61	72	0.13	97	46	72	69	76	71	
06-22-2019	79	65	72	0.28	96	69	71	70	75	72	
06-23-2019	87	62	74	0.07	95	65	72	69	77	72	
06-24-2019	83	70	76	0.23	94	66	72	71	77	75	
06-25-2019	84	67	75		96	47	73	71	78	74	
06-26-2019	90	66	78		84	45	74	70	78	73	
06-27-2019	92	67	79		92	42	75	72	78	74	
06-28-2019	93	67	80		90	36	76	72	78	74	
06-29-2019	92	66	79		92	41	76	73	78	74	
06-30-2019	90	71	80		91	57	76	73	78	75	

Summary for the period 6-1-2019 through 6-30-2019:

	AIR TEMP			TOTAL PRECIP	RH		SOIL TEMP				TOTAL EVAP
	MX	MN	AV		MX	MN	GRASS	MN	BARE	MN	
	83	63	73	6.13	92	54	71	68	75	71	
(Deviation from normal)+0	+0	+1	+1	+2.47							

Spindletop Climate Data, July 2019

DATE	AIR TEMP			PRECIP	RH		SOIL TEMP				EVAP
	MX	MN	AV		MX	MN	GRASS	MN	BARE	MN	
07-01-2019	90	68	79		96	51	76	73	78	75	
07-02-2019	93	71	82		90	42	76	73	78	75	
07-03-2019	92	69	80	0.56	98	58	76	74	78	75	
07-04-2019	88	68	78		99	60	76	73	78	74	
07-05-2019	91	71	81		98	54	77	74	79	76	
07-06-2019	90	74	82		93	57	77	75	79	76	
07-07-2019	92	73	82		96	54	78	75	79	77	
07-08-2019	88	71	79		94	55	78	76	79	77	
07-09-2019	92	70	81		96	47	77	75	79	76	
07-10-2019	94	70	82		94	42	78	75	79	76	
07-11-2019	92	72	82		95	58	78	76	79	77	
07-12-2019	88	67	77		97	43	77	74	78	76	
07-13-2019	91	63	77		94	37	76	73	77	73	
07-14-2019	91	70	80	0.06	96	57	76	73	77	74	
07-15-2019	92	70	81	0.46	95	54	76	74	76	75	
07-16-2019	91	72	81	0.08	95	50	76	74	77	75	
07-17-2019	88	75	81	0.25	96	63	76	75	77	76	
07-18-2019	91	72	81	0.07	97	59	77	75	79	76	
07-19-2019	94	76	85		93	53	78	76	80	78	
07-20-2019	94	76	85		91	52	78	76	81	78	
07-21-2019	87	74	80	0.89	93	65	77	76	80	78	
07-22-2019	83	68	75	0.27	97	70	76	75	79	77	
07-23-2019	80	63	71		92	38	75	73	77	75	
07-24-2019	82	58	70		97	41	72	70	75	72	
07-25-2019	85	58	71		97	41	72	69	75	71	
07-26-2019	89	61	75	0.01	94	35	74	69	75	71	
07-27-2019	91	65	78		84	35	75	70	76	72	
07-28-2019	90	67	78		85	41	76	71	76	72	
07-29-2019	91	70	80		84	38	76	72	76	73	
07-30-2019	86	66	76	0.48	97	63	76	73	76	74	
07-31-2019	89	65	77	0.17	98	51	76	72	76	73	

Summary for the period 7-1-2019 through 7-31-2019:

	AIR TEMP			TOTAL PRECIP	RH		SOIL TEMP				TOTAL EVAP
	MX	MN	AV		MX	MN	GRASS	MN	BARE	MN	
	90	69	79	3.30	94	50	76	74	78	75	
(Deviation from normal)	+4	+4	+4	-1.70							

Spindletop Climate Data, August 2019

DATE	AIR TEMP			PRECIP	RH		SOIL TEMP				EVAP
	MX	MN	AV		MX	MN	GRASS	MN	BARE	MN	
08-01-2019	90	66	78		93	38	77	73	77	74	
08-02-2019	90	67	78		96	45	77	73	78	74	
08-03-2019	90	65	77		97	40	77	73	77	74	
08-04-2019	88	65	76		89	35	76	72	77	73	
08-05-2019	92	62	77		94	32	76	71	76	72	
08-06-2019	90	68	79	0.35	94	42	76	72	76	73	
08-07-2019	87	68	77		89	49	76	73	77	74	
08-08-2019	90	65	77		94	44	76	72	76	73	
08-09-2019	92	70	81		94	41	77	73	78	74	
08-10-2019	87	64	75		83	37	76	72	77	74	
08-11-2019	90	58	74		92	29	76	71	76	72	
08-12-2019	92	67	79		84	37	76	72	76	73	
08-13-2019	90	73	81	0.51	94	54	76	74	77	74	
08-14-2019	90	71	80		97	42	76	74	78	75	
08-15-2019	88	67	77		92	36	75	72	77	74	
08-16-2019	92	63	77		95	33	76	71	77	73	
08-17-2019	94	67	80		89	38	76	72	78	74	
08-18-2019	97	73	85		85	32	77	73	79	75	
08-19-2019	99	71	85	0.08	85	32	78	74	80	76	
08-20-2019	95	69	82	0.17	97	48	77	75	79	76	
08-21-2019	94	68	81	0.10	98	43	76	73	79	75	
08-22-2019	90	70	80	0.01	93	43	76	74	79	76	
08-23-2019	72	61	66	0.03	96	72	75	72	77	74	
08-24-2019	82	57	69	0.08	93	38	72	69	75	71	
08-25-2019	86	59	72	0.01	91	48	72	69	75	71	
08-26-2019	73	69	71	0.94	96	90	72	71	74	73	
08-27-2019	84	70	77	0.07	97	66	73	70	75	72	
08-28-2019	82	61	71	0.06	98	38	73	71	76	73	
08-29-2019	84	56	70		91	36	72	68	74	70	
08-30-2019	90	66	78		84	44	73	69	76	71	
08-31-2019	90	65	77	0.01	96	42	74	71	76	72	

Summary for the period 8-1-2019 through 8-31-2019:

	AIR TEMP			TOTAL PRECIP	RH		SOIL TEMP				TOTAL EVAP
	MX	MN	AV		MX	MN	GRASS	MN	BARE	MN	
	89	66	77	2.42	92	43	75	72	77	73	
(Deviation from normal)+	5	+3	+4	-1.51							

Spindletop Climate Data, September 2019

DATE	AIR TEMP			PRECIP	RH		SOIL TEMP				EVAP
	MX	MN	AV		MX	MN	GRASS	MN	BARE	MN	
09-01-2019	90	66	78	0.18	98	42	74	71	76	73	
09-02-2019	87	68	77		93	49	74	71	76	73	
09-03-2019	92	59	75		98	37	74	70	76	72	
09-04-2019	91	68	79		88	45	74	71	77	73	
09-05-2019	83	59	71		94	40	73	71	75	72	
09-06-2019	89	51	70		98	38	72	68	74	70	
09-07-2019	78	59	68		98	54	71	70	73	71	
09-08-2019	84	55	69		98	41	71	67	73	69	
09-09-2019	93	60	76		96	34	73	68	74	70	
09-10-2019	101	63	82		92	28	74	69	76	71	
09-11-2019	95	75	85		76	36	75	72	78	74	
09-12-2019	96	72	84		84	33	75	72	78	74	
09-13-2019	98	70	84		87	33	76	72	78	74	
09-14-2019	86	61	73		85	28	75	72	77	74	
09-15-2019	97	58	77		80	17	74	69	75	71	
09-16-2019	95	65	80		73	37	74	70	76	72	
09-17-2019	88	67	77		90	37	74	71	76	73	
09-18-2019	91	62	76		93	36	74	70	76	72	
09-19-2019	93	64	78		82	34	74	70	76	72	
09-20-2019	88	69	78		79	42	74	71	76	73	
09-21-2019	94	68	81		77	30	74	70	76	72	
09-22-2019	93	66	79		72	26	74	70	76	72	
09-23-2019	86	64	75		71	45	72	71	75	73	
09-24-2019	84	50	67		97	29	71	67	73	69	
09-25-2019	90	52	71		82	20	70	66	73	68	
09-26-2019	84	56	70		81	27	72	69	75	71	
09-27-2019	94	54	74		74	31	71	66	74	69	
09-28-2019	97	73	85		78	29	73	70	76	72	
09-29-2019	97	66	81		93	31	74	70	76	72	
09-30-2019	97	72	84		82	32	74	71	77	73	

Summary for the period 9-1-2019 through 9-30-2019:

	AIR TEMP			TOTAL PRECIP	RH		SOIL TEMP				TOTAL EVAP
	MX	MN	AV		MX	MN	GRASS	MN	BARE	MN	
	91	63	77	0.18	86	35	73	70	76	72	
(Deviation from normal)	+13	+7	+10	-3.02							

Spindletop Monthly Climate Data March-October 2019

----- AIR TEMPERATURE -----											-- SOD --	
YEAR	MONTH	AVERAGE			EXTREME		AVG DEPART FROM NORM	NO. OF DAYS		4" TEMP AVERAGE		
		MAX	MIN	AVG	MAX	MIN		MAX >=90	MIN <=32	MAX	MIN	
2019	Mar	53	32	43	76	9	-1	0	16	45	41	
2019	Apr	70	48	59	84	22	+4	0	2	58	54	
2019	May	79	60	69	92	45	+5	4	0	65	63	
2019	Jun	83	63	73	93	45	+1	5	0	71	68	
2019	Jul	90	69	79	94	58	+3	19	0	76	74	
2019	Aug	89	66	77	99	56	+2	20	0	75	72	
2019	Sep	91	63	77	101	50	+9	19	0	73	70	
2019	Oct	73	49	61	97	34	+4	3	0	63	60	

----- PRECIPITATION -----										
YEAR	MONTH	DEPARTURE			CUMULATIVE		GREATEST		% RAIN DAYS	NO. DAYS >=.01
		TOTAL	FROM NORMAL	TOTAL	DEPARTURE	24 HOUR TOTAL	TOTAL			
2019	Mar	3.49	-0.91	3.49	-0.91	1.24	29	9		
2019	Apr	4.76	+0.88	8.25	-0.03	1.18	40	12		
2019	May	4.49	+0.02	12.74	-0.01	1.21	48	15		
2019	Jun	6.13	+2.47	18.87	+2.46	1.49	53	16		
2019	Jul	3.30	-1.70	22.17	+0.76	0.89	35	11		
2019	Aug	2.42	-1.51	24.59	-0.75	0.94	42	13		
2019	Sep	0.18	-3.02	24.77	-3.77	0.18	3	1		
2019	Oct	7.55	+4.98	32.32	+1.21	2.17	39	12		

University of Kentucky

Axial Bold - University Testing in Wheat

Trial ID: 19-1_WHT_REC Location: UKREC 109-B1 Trial Year: 2019
 Protocol ID: HPX151A4-2018US Investigator: Travis Legleiter
 Project ID: Study Director:
 Sponsor Contact: Scott Cully

General Trial Information

Investigator: Travis Legleiter **Title:** Assistant Extension Professor

Trial Status: E established

Trial Location

City: Princeton
State/Prov.: Kentucky
Postal Code: 42445

Conducted Under GLP: No
Conducted Under GEP: No

Investigator: Travis Legleiter **Title:** Assistant Extension Professor
Organization: University of Kentucky
Address: 1205 Hopkinsville Street **Phone No.:** 859-562-1323
City+State/Prov: Princeton, KY
Postal Code: 42445 **E-mail:** Travis.Legleiter@uky.edu

Crop Description

Crop 1: C TRZAW Triticum aestivum Winter wheat
Variety: Pioneer 26R10
Planting Date: 7-24-2019 **Planting Rate:** 165 LB/A
Depth: 1 IN
Planting Method: DRILLE drilled
Row Spacing: 7.5 IN **Planting Equipment:** DD disc drill
Soil Temperature: 57 F **Soil Moisture:** DAMP damp
Harvest Date: 6-19-2019
Harvested Width: 3.75 FT
% Standard Moisture: 15.5

Pest Description

Pest 1 Type: W **Code:** LOLMG Lolium multiflorum gaudini
Common Name: Annual ryegrass
Artificial Population: X
Establishment Date: 10-12-2018

Site and Design

Treated Plot Width: 10 FT
Treated Plot Length: 30 FT
Treated Plot Area: 300 FT² **Treatments:** 6 **Tillage Type:** CONTIL conventional-till
Replications: 4 **Study Design:** RACOB� Randomized Complete Block (RCB)

Maintenance

No.	Date	Type	Maintenance Product Name	Rate	Rate Unit
1.	2-27-2019	FERT	28% UAN	40	lba/a
2.	3-26-2019	FERT	32% UAN	80	lba/a
3.	5-6-2019	FUNG	Caramba	15	oz/a

Soil Description

Texture: SIL silt loam
Soil Name: Crider Silt Loam

University of Kentucky

Application Description	
	A
Application Date	3-12-2019
Appl. Start Time	3:27 PM
Appl. Stop Time	3:48 PM
Application Method	BROADC
Application Timing	POSPOS
Application Placement	FOLIAR
Applied By	JLG
Air Temperature Start, Stop	61 F
% Relative Humidity Start, Stop	38
Wind Velocity+Dir. Start	4.6 MPH SE
Wind Velocity+Dir. Max	8.9 MPH SE
Wet Leaves (Y/N)	N no
Soil Temperature	48 F
Soil Moisture	WET
% Cloud Cover	70

Crop Stage At Each Application	
	A
Crop 1 Code, BBCH Scale	TRZAW BCER
Stage Scale Used	BBCH
Stage Majority, Percent	23 80
Stage Minimum, Percent	21
Stage Maximum, Percent	27
Height Average	5.25 in
Height Minimum, Maximum	4 6.5

Pest Stage At Each Application	
	A
Pest 1 Code, Type, Scale	LOLMG W
Stage Majority, Percent	23
Stage Minimum, Percent	13
Stage Maximum, Percent	29
Height Average	4 in
Height Minimum, Maximum	2.5 6
Density Average	26 ft ²
Density Min, Max	18 34

Application Equipment	
	A
Appl. Equipment	CO2 Backpack
Equipment Type	BACCAI
Operation Pressure	26 PSI
Nozzle Type	FLAFXR
Nozzle Size	015
Nozzle Spacing	20 IN
Boom Length	10 FT
Boom Height	20 IN
Ground Speed	3 MPH
Carrier	H2O
Application Amount	10 GAL/AC
Mix Overage	957 mL
Mix Size	2 L
Propellant	COMCO2

University of Kentucky

Context	Date	By	Notes
STATUS	7-31-2019	Travis Legleiter	Automatically added by ARM: Trial Status updated to 'E' when Planting Date entered.

SE Definitions	
	1.
Crop Type, Code	C

University of Kentucky

Axial Bold - University Testing in Wheat

Trial ID: 19-1_WHT_REC Location: UKREC 109-B1 Trial Year: 2019
 Protocol ID: HPX151A4-2018US Investigator: Travis Legleiter
 Project ID: Study Director:
 Sponsor Contact: Scott Cully

	C TRZAW BCER Triticum aesti> Winter wheat	C TRZAW BCER Triticum aesti> Winter wheat	C TRZAW BCER Triticum aesti> Winter wheat	W Weed LOLMG Lolium multifl> Annual ryegrass C -	C TRZAW BCER Triticum aesti> Winter wheat
Pest Type					
Pest Code					
Pest Scientific Name					
Pest Name					
Crop Type, Code					
BBCH Scale					
Crop Scientific Name					
Crop Name					
Rating Date	3-19-2019	3-27-2019	4-4-2019	4-4-2019	4-15-2019
Part Rated	PLANT C	PLANT C	PLANT C	PLANT P	PLANT C
Rating Type	PHYGEN	PHYGEN	PHYGEN	CONTRO	PHYGEN
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Days After First/Last Applic.	7 7	15 15	23 23	23 23	34 34
Trt-Eval Interval	7 DA-A	15 DA-A	23 DA-A	23 DA-A	34 DA-A
Plant-Eval Interval	-127 DP-1	-119 DP-1	-111 DP-1	-111 DP-1	-100 DP-1
ARM Action Codes					
Number of Decimals					
Trt Treatment					
No. Name	1	2	3	4	5
Rate					
Unit					
Appl Code					
1 Check	0.0	0.0	0.0	0.0	0.0
2 Axial Bold	0.0	0.0	0.0	85.0	0.0
3 Finesse Fallow and Cereal NIS	0.0	0.0	0.0	25.0	0.0
4 Osprey	0.0	0.0	0.0	45.0	0.0
NIS					
N-PAK AMS					
5 PowerFlex HL	0.0	0.0	0.0	55.0	0.0
NIS					
N-PAK AMS					
6 Metribuzin	0.0	0.0	0.0	15.0	0.0
LSD P=.05	.	.	.	12.41	.
Standard Deviation	0.00	0.00	0.00	8.23	0.00
CV	0.0	0.0	0.0	21.95	0.0
Replicate F	0.000	0.000	0.000	0.902	0.000
Replicate Prob(F)	1.0000	1.0000	1.0000	0.4634	1.0000
Treatment F	0.000	0.000	0.000	55.328	0.000
Treatment Prob(F)	1.0000	1.0000	1.0000	0.0001	1.0000

Could not calculate LSD (% mean diff) for columns 1,2,3,5 because error mean square = 0.

University of Kentucky

Pest Type	W Weed				
Pest Code	LOLMG				
Pest Scientific Name	Lolium multifl>				
Pest Name	Annual ryegrass				
Crop Type, Code	C -	C TRZAW	C TRZAW	C TRZAW	C TRZAW
BBCH Scale		BCER	BCER	BCER	BCER
Crop Scientific Name		Triticum aesti>	Triticum aesti>	Triticum aesti>	Triticum aesti>
Crop Name		Winter wheat	Winter wheat	Winter wheat	Winter wheat
Rating Date	4-15-2019	6-19-2019	6-19-2019	6-19-2019	6-19-2019
Part Rated	PLANT P	PLANT C	PLANT C	PLANT C	PLANT C
Rating Type	CONTRO	WEIGHT	MOICON	WEITES	LENGTH
Rating Unit	%	LB	%	LB	FT
Number of Subsamples	1	1	1	1	1
Days After First/Last Applic.	34 34	99 99	99 99	99 99	99 99
Trt-Eval Interval	34 DA-A	99 DA-A	99 DA-A	99 DA-A	99 DA-A
Plant-Eval Interval	-100 DP-1	-35 DP-1	-35 DP-1	-35 DP-1	-35 DP-1
ARM Action Codes			ET2		
Number of Decimals					
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	6	7	8
1 Check			0.0	1.725	17.40
2 Axial Bold	15 fl oz/a A		88.8	9.045	16.15
3 Finesse Fallow and Cereal NIS	0.3 oz/a A 0.5 % v/v A		8.8	3.685	17.15
4 Osprey NIS N-PAK AMS	4.75 oz/a A 0.5 % v/v A 5.9 % v/v A		52.5	4.838	17.80
5 PowerFlex HL NIS N-PAK AMS	2 oz/a A 0.5 % v/v A 5.9 % v/v A		68.8	8.610	18.28
6 Metribuzin	3 oz/a A		8.8	2.798	18.45
LSD P=.05			7.66	2.1953	2.800
Standard Deviation			5.08	1.4565	1.817
CV			13.4	28.47	10.2
Replicate F			0.161	2.723	0.349
Replicate Prob(F)			0.9207	0.0812	0.7906
Treatment F			213.258	17.589	0.372
Treatment Prob(F)			0.0001	0.0001	0.8240
					118.457
					0.0001
					23.914
					0.0001

Could not calculate LSD (% mean diff) for columns 1,2,3,5 because error mean square = 0.

University of Kentucky

Pest Type				
Pest Code				
Pest Scientific Name				
Pest Name				
Crop Type, Code				C TRZAW
BBCH Scale				BCER
Crop Scientific Name				Triticum aesti>
Crop Name				Winter wheat
Rating Date				6-19-2019
Part Rated				PLANT C
Rating Type				YIELD
Rating Unit				BU
Number of Subsamples				1
Days After First/Last Applic.				99 99
Trt-Eval Interval				99 DA-A
Plant-Eval Interval				-35 DP-1
ARM Action Codes				TY1
Number of Decimals				1
Trt Treatment		Rate	Appl	
No. Name		Rate Unit	Code	11
1 Check				11.7
2 Axial Bold		15 fl oz/a	A	68.3
3 Finesse Fallow and Cereal		0.3 oz/a	A	26.5
NIS		0.5 % v/v	A	
4 Osprey		4.75 oz/a	A	35.1
NIS		0.5 % v/v	A	
N-PAK AMS		5.9 % v/v	A	
5 PowerFlex HL		2 oz/a	A	62.9
NIS		0.5 % v/v	A	
N-PAK AMS		5.9 % v/v	A	
6 Metribuzin		3 oz/a	A	19.7
LSD P=.05				17.17
Standard Deviation				11.39
CV				30.49
Replicate F				2.838
Replicate Prob(F)				0.0734
Treatment F				16.687
Treatment Prob(F)				0.0001

Could not calculate LSD (% mean diff) for columns 1,2,3,5 because error mean square = 0.

University of Kentucky

Axial Bold - University Testing in Wheat

Trial ID: 19-1_WHT_REC	Location: UKREC 109-B1	Trial Year: 2019
Protocol ID: HPX151A4-2018US	Investigator: Travis Legleiter	
Project ID:	Study Director:	
	Sponsor Contact: Scott Cully	

Pest Type

W, Weed = Weed or volunteer crop

Pest Code

LOLMG, Lolium multiflorum gaudini, Annual ryegrass = US

Crop Type, Code

C = EPPO species (Bayer) codes

TRZAW, BCER, Triticum aestivum, Winter wheat = US

Part Rated

PLANT = plant

C = Crop is Part Rated

P = Pest is Part Rated

Rating Type

PHYGEN = phytotoxicity - general / injury

CONTRO = control / burndown or knockdown

WEIGHT = weight

MOICON = moisture content

WEITES = weight - test

LENGTH = length

YIELD = yield

Rating Unit

% = percent

LB = pound

FT = foot

BU = bushel

Plant-Eval Interval

-127 DP-1 = 1 TRZAW 7-24-2019

-119 DP-1 = 1 TRZAW 7-24-2019

-111 DP-1 = 1 TRZAW 7-24-2019

-100 DP-1 = 1 TRZAW 7-24-2019

-35 DP-1 = 1 TRZAW 7-24-2019

ARM Action Codes

ET2 = Excluded treatment 2

TY1 = $(726 / (3.75 * [10])) * [7] * (100 - [8]) / 84.5$

University of Kentucky

Evaluation of Pre-emerge herbicides for ryegrass control in wheat

Trial ID: 19-2_WHT-REC Location: UKREC 109-B1 Trial Year: 2019
 Protocol ID: 19-2_WHT-REC Investigator: Travis Legleiter
 Project ID: Study Director: Travis Legleiter
 Sponsor Contact:

General Trial Information

Study Director: Travis Legleiter **Title:** Assistant Professor
Investigator: Travis Legleiter

Trial Status: E established
Initiation Date: 10-12-2018

Trial Location

City: Princeton **Country:** USA United States
State/Prov.: Kentucky
Postal Code: 42445

Conducted Under GLP: No
Conducted Under GEP: No

Contacts

Study Director: Travis Legleiter **Title:** Assistant Professor
Organization: University of Kentucky
Address: 1205 Hopkinsville Street **Phone No.:** 859-562-1323
City+State/Prov: Princeton, KY
Postal Code: 42445
Country: USA United States

Investigator: Travis Legleiter

Crop Description

Crop 1: C TRZAW Triticum aestivum Winter wheat
Variety: Pioneer 26R10
Planting Date: 10-24-2018 **Planting Rate:** 165 LB/A
Depth: 1 IN
Row Spacing: 7.5 IN
Soil Temperature: 57 F
Planting Method: DRILLE drilled
Planting Equipment: DD disc drill
Soil Moisture: DAMP damp
Harvested Width: 3.75 FT
% Standard Moisture: 15.5

Pest Description

Pest 1 Type: W **Code:** LOLMU Lolium multiflorum
Common Name: Bearded ryegrass **Artificial Population:** X
Establishment Date: 10-12-2018
Establishment Method/Description: Broadcast Spreader

Site and Design

Treated Plot Width: 10 FT
Treated Plot Length: 30 FT
Treated Plot Area: 300 FT² **Treatments:** 9 **Tillage Type:** CONTIL conventional-till
Replications: 4 **Study Design:** RACOB� Randomized Complete Block (RCB)

Application Description

	A	B	C	D
Application Date	10-13-2018	10-24-2018	10-27-2018	12-3-2018
Appl. Start Time	8:34 AM	4:22 PM	12:34 PM	10:41 AM
Appl. Stop Time	8:36 AM	4:26 PM	12:43 PM	10:53 AM
Application Method	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing	14 DPP	PRE	DPRE	EPOST
Application Placement	SOIL	SOIL	SOIL	FOLIAR
Applied By	JLG	JLG	JLG	JLG
Air Temperature Start, Stop	50 F	71 F	58 F	46 F
% Relative Humidity Start, Stop	83	34	68	64
Wind Velocity+Dir. Start	3 MPH NE	2.5 MPH NE	4 MPH NW	9 MPH NW
Wet Leaves (Y/N)	Y yes	N no	Y yes	N no
Soil Temperature	53 F	57 F	52 F	41 F
Soil Moisture	WET	DAMP	WET	WET
% Cloud Cover	65	65	65	65

University of Kentucky

Crop Stage At Each Application

	A	B	C	D
Crop 1 Code, BBCH Scale	TRZAW BCER	TRZAW BCER	TRZAW BCER	TRZAW BCER
Stage Scale Used				FEEKES
Stage Majority, Percent				1.3
Height Average				2 IN
Height Minimum, Maximum				1.25 2.5

Pest Stage At Each Application

	A	B	C	D
Pest 1 Code, Type, Scale	LOLMU W	LOLMU W	LOLMU W	LOLMU W
Stage Majority, Percent		11 75	11 75	
Stage Minimum, Percent				11
Stage Maximum, Percent				21
Height Average		1 IN	3 IN	2 IN
Height Minimum, Maximum		0.5 1.5	1 4.25	0.75 2.75
Density Average		30 FT2	47 FT2	23 FT2

Application Equipment

	A	B	C	D
Appl. Equipment	BACKPACK	BACKPACK	BACKPACK	BACKPACK
Equipment Type	BACSPR	BACSPR	BACSPR	BACSPR
Operation Pressure	30 PSI	30 PSI	30 PSI	30 PSI
Nozzle Type	XR11002	XR11002	XR11002	XR11002
Nozzle Size	02	02	02	02
Nozzle Spacing	20 IN	20 IN	20 IN	20 IN
Boom Length	10 FT	10 FT	10 FT	10 FT
Boom Height	18 IN	18 IN	18 IN	18 IN
Ground Speed	3 MPH	3 MPH	3 MPH	3 MPH
Carrier	WATER	WATER	WATER	WATER
Application Amount	15 GAL/AC	15 GAL/AC	15 GAL/AC	15 GAL/AC
Mix Size	2 L	2 L	2 L	2 L
Propellant	COMCO2	COMCO2	COMCO2	COMCO2

Context	Date	By	Notes
STATUS	8-15-2019	Travis Legleiter	Automatically added by ARM: Trial Status updated to 'E' when Rating Date entered.

SE Definitions

	1.
Crop Type, Code	C

University of Kentucky

Trial ID: 19-2_WHT-REC	Location: UKREC 109-B1	Trial Year: 2019
Protocol ID: 19-2_WHT-REC	Investigator: Travis Legleiter	
Project ID:	Study Director: Travis Legleiter	
Sponsor Contact:		

Pest Type Pest Code Pest Scientific Name Pest Name Crop Type, Code BBCH Scale Crop Scientific Name Crop Name Rating Date Part Rated Rating Type Rating Unit Number of Subsamples Days After First/Last Applic. Plant-Eval Interval ARM Action Codes Number of Decimals		W Weed LOLMG Lolium multifl> Annual ryegrass C -		W Weed LOLMG Lolium multifl> Annual ryegrass C -	W Weed LOLMG Lolium multifl> Annual ryegrass C -	W Weed LOLMG Lolium multifl> Annual ryegrass C -		
	C TRZAW BCER Triticum aesti> Winter wheat 11-25-2018 PLANT C PHYGEN %	11-25-2018 PLANT P CONTROL %	C TRZAW BCER Triticum aesti> Winter wheat 12-19-2018 PLANT C PHYGEN %	12-19-2018 PLANT P CONTROL %	11-27-2019 PLANT P CONTROL %	3-13-2019 PLNAT P COUNT FT2		
	1 43 29 32 DP-1	1 43 29 32 DP-1	1 67 16 56 DP-1	1 67 16 56 DP-1	1 106 55 95 DP-1	1 151 100 140 DP-1 AL		
Trt Treatment No. Name	Rate Rate Unit	Appl Code	1	2	3	4	5	6
1 Fierce Roundup PowerMax N-PAK AMS	3 oz/a 32 fl oz/a 2.5 % v/v	A A A	1.3	100.0	0.0	96.3	93.8	2.4
2 Anthem Flex Roundup PowerMax N-PAK AMS	3 oz/a 32 fl oz/a 2.5 % v/v	B B B	1.3	98.8	0.0	97.5	95.0	1.0
3 Anthem Flex Roundup PowerMax N-PAK AMS	3 oz/a 32 fl oz/a 2.5 % v/v	C C C	0.8	99.5	0.0	99.5	95.0	4.4
4 Anthem Flex Metribuzin	3 oz/a 2 oz/a	D D	0.0	0.0	0.0	55.0	83.8	2.9
5 Anthem Flex Roundup PowerMax N-PAK AMS Anthem Flex Metribuzin	2 oz/a 32 fl oz/a 2.5 % v/v 1 oz/a 2 oz/a	B B B D D	0.0	100.0	0.0	98.8	96.3	0.3
6 Zidua Roundup PowerMax N-PAK AMS	2 oz/a 32 fl oz/a 2.5 % v/v	C C C	0.0	100.0	0.0	95.8	95.0	1.8
7 Zidua Metribuzin	3 oz/a 2 oz/a	D D	0.0	82.5	0.0	70.0	93.8	1.6
8 Zidua Roundup PowerMax N-PAK AMS Zidua Metribuzin	2 oz/a 32 fl oz/a 2.5 % v/v 2 oz/a 2 oz/a	C C C D D	0.0	96.3	0.0	92.5	94.5	1.0
9 Untreated			0.0	0.0	0.0	0.0	0.0	20.3
LSD P=.05			1.86	3.41	.	12.60	11.96	3.06 - 14.93
Standard Deviation			1.28	2.34	0.00	8.63	8.19	0.36t
CV			353.26	3.11	0.0	11.02	9.87	67.49t
Replicate F			1.064	2.085	0.000	0.711	1.720	2.896
Replicate Prob(F)			0.3828	0.1287	1.0000	0.5548	0.1896	0.0559
Treatment F			0.772	1352.553	0.000	59.100	58.531	3.828
Treatment Prob(F)			0.6303	0.0001	1.0000	0.0001	0.0001	0.0050

t=Mean descriptions are reported in transformed data units, and are not de-transformed.
 Missing data estimates are included in columns:Yates=3
 Excluded replicate 3 in column 7
 Could not calculate LSD (% mean diff) for columns 3 because error mean square = 0.

University of Kentucky

Pest Type								
Pest Code								
Pest Scientific Name								
Pest Name								
Crop Type, Code	C TRZAW	C TRZAW	C TRZAW	C TRZAW	C TRZAW	C TRZAW		
BBCH Scale	BCER	BCER	BCER	BCER	BCER	BCER		
Crop Scientific Name	Triticum aesti>	Triticum aesti>	Triticum aesti>	Triticum aesti>	Triticum aesti>	Triticum aesti>		
Crop Name	Winter wheat	Winter wheat	Winter wheat	Winter wheat	Winter wheat	Winter wheat		
Rating Date	7-2-2019	7-2-2019	7-2-2019	7-2-2019	7-2-2019	7-2-2019		
Part Rated	PLANT C	PLANT C	PLANT C	PLANT C	PLANT C	PLANT C		
Rating Type	PLOT LENGTH	WEIGHT	MOICON	TESTWEIGHT	YIELD	YIELD		
Rating Unit	FT	LB	%	LB	bu/ac	BU		
Number of Subsamples	1	1	1	1	1	1		
Days After First/Last Applic.	262 211	262 211	262 211	262 211	262 211	262 211		
Plant-Eval Interval	251 DP-1	251 DP-1	251 DP-1	251 DP-1	251 DP-1	251 DP-1		
ARM Action Codes	ER3			ET9		TY1		
Number of Decimals						1		
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	7	8	9	10	11	12
1 Fierce	3 oz/a	A	26.13	10.870	14.05	51.55	81.028	83.0
Roundup PowerMax	32 fl oz/a	A						
N-PAK AMS	2.5 % v/v	A						
2 Anthem Flex	3 oz/a	B	26.10	10.528	14.08	51.05	79.005	80.9
Roundup PowerMax	32 fl oz/a	B						
N-PAK AMS	2.5 % v/v	B						
3 Anthem Flex	3 oz/a	C	26.27	9.753	14.03	51.50	72.905	74.6
Roundup PowerMax	32 fl oz/a	C						
N-PAK AMS	2.5 % v/v	C						
4 Anthem Flex	3 oz/a	D	25.83	9.088	13.88	50.75	68.693	70.3
Metribuzin	2 oz/a	D						
5 Anthem Flex	2 oz/a	B	26.03	11.610	13.88	51.73	87.298	89.3
Roundup PowerMax	32 fl oz/a	B						
N-PAK AMS	2.5 % v/v	B						
Anthem Flex	1 oz/a	D						
Metribuzin	2 oz/a	D						
6 Zidua	2 oz/a	C	26.27	10.343	14.00	51.43	77.380	79.2
Roundup PowerMax	32 fl oz/a	C						
N-PAK AMS	2.5 % v/v	C						
7 Zidua	3 oz/a	D	26.43	10.830	14.18	51.45	80.403	82.3
Metribuzin	2 oz/a	D						
8 Zidua	2 oz/a	C	26.27	11.375	14.13	52.08	84.623	86.6
Roundup PowerMax	32 fl oz/a	C						
N-PAK AMS	2.5 % v/v	C						
Zidua	2 oz/a	D						
Metribuzin	2 oz/a	D						
9 Untreated			26.37	3.868	14.38	47.55	28.313	29.0
LSD P=.05			0.329	1.6838	0.350	0.765	12.7779	13.07
Standard Deviation			0.190	1.1538	0.240	0.520	8.7556	8.96
CV			0.73	11.76	1.7	1.01	11.95	11.94
Replicate F			394.554	9.711	4.445	2.506	13.565	13.572
Replicate Prob(F)			0.0001	0.0002	0.0128	0.0868	0.0001	0.0001
Treatment F			2.815	16.711	1.657	2.382	16.493	16.507
Treatment Prob(F)			0.0372	0.0001	0.1612	0.0584	0.0001	0.0001

t=Mean descriptions are reported in transformed data units, and are not de-transformed.
 Missing data estimates are included in columns:Yates=3
 Excluded replicate 3 in column 7
 Could not calculate LSD (% mean diff) for columns 3 because error mean square = 0.

University of Kentucky

Evaluation of Pre-emerge herbicides for ryegrass control in wheat

Trial ID: 19-2_WHT-REC
 Protocol ID: 19-2_WHT-REC
 Project ID:

Location: UKREC 109-B1 Trial Year: 2019
 Investigator: Travis Legleiter
 Study Director: Travis Legleiter
 Sponsor Contact:

Pest Type

W, Weed = Weed or volunteer crop

Pest Code

LOLMG, Lolium multiflorum gaudini, Annual ryegrass = US

Crop Type, Code

C = EPPO species (Bayer) codes

TRZAW, BCER, Triticum aestivum, Winter wheat = US

Part Rated

PLANT = plant

C = Crop is Part Rated

P = Pest is Part Rated

Rating Type

PHYGEN = phytotoxicity - general / injury

COUNT = count

WEIGHT = weight

MOICON = moisture content

YIELD = yield

Rating Unit

% = percent

FT2 = square foot

FT = foot

LB = pound

bu/ac = bushels per acre

BU = bushel

Plant-Eval Interval

32 DP-1 = 1 TRZAW 10-24-2018

56 DP-1 = 1 TRZAW 10-24-2018

95 DP-1 = 1 TRZAW 10-24-2018

140 DP-1 = 1 TRZAW 10-24-2018

251 DP-1 = 1 TRZAW 10-24-2018

ARM Action Codes

AL = Automatic log transformation of X+1

ER3 = Excluded replicate 3

ET9 = Excluded treatment 9

TY1 = $(726 / (3.75 * [7])) * [8] * (100 - [9]) / 84.5$

University of Kentucky

Evaluation of Annual Ryegrass Cover Crop Termination Treatments and Timings

Trial ID: 19-3_LOL-REC Location: UKREC 109-B3 Trial Year: 2018
 Protocol ID: 19-3_LOL-REC Investigator: Travis Legleiter
 Project ID: Study Director:
 Sponsor Contact:

General Trial Information

Study Director: Travis Legleiter **Title:** Assistant Extension Professor
Investigator: Travis Legleiter **Title:** Assistant Extension Professor

Trial Status: E established

Trial Location

City: Princeton **Country:** USA United States
State/Prov.: Kentucky
Postal Code: 42445

Conducted Under GLP: No

Conducted Under GEP: No

Contacts

Study Director: Travis Legleiter **Title:** Assistant Extension Professor
Organization: University of Kentucky
Address: 1205 Hopkinsville Street **Phone No.:** 859-562-1323
City+State/Prov: Princeton, KY
Postal Code: 42445 **E-mail:** Travis.Legleiter@uky.edu

Investigator: Travis Legleiter **Title:** Assistant Extension Professor
Organization: University of Kentucky
Address: 1205 Hopkinsville Street **Phone No.:** 859-562-1323
City+State/Prov: Princeton, KY
Postal Code: 42445 **E-mail:** Travis.Legleiter@uky.edu

Crop Description

Crop 1: C LOLMG Lolium multiflorum gaudini Annual ryegrass

Variety: Marshal

Planting Date: 10-4-2018

Depth: 0.5 IN

Planting Rate: 16 LB/A

Row Spacing: 7 IN

Planting Method: DRILLE drilled
Planting Equipment: DD disc drill
Soil Moisture: DAMP damp

Emergence Date: 10-9-2018

Site and Design

Treated Plot Width: 10 FT

Treated Plot Length: 20 FT

Treated Plot Area: 200 FT² **Treatments:** 13

Replications: 4

Study Design: RAOBL Randomized Complete Block (RCB)

Application Description

	A	B
Application Date	3-12-2019	4-23-2019
Appl. Start Time	11:44 AM	10:44 AM
Appl. Stop Time	12:15 PM	11:01 AM
Application Method	BROADC	BROADC
Application Timing	early spring	late spring
Application Placement	FOLIAR	FOLIAR
Applied By	jlg	jlg
Air Temperature Start, Stop	53 F	72 F
% Relative Humidity Start, Stop	44	45
Wind Velocity+Dir. Start	2 MPH SE	1.5 MPH SW
Wind Velocity+Dir. Max	4.1 MPH SE	4.3 MPH SW
Wet Leaves (Y/N)	N no	N no
Soil Temperature	41 F	58 F
Soil Moisture	wet	SLIWET
% Cloud Cover	100	

University of Kentucky

Crop Stage At Each Application				
	A		B	
Crop 1 Code, BBCH Scale	LOLMG BGRM		LOLMG BGRM	
Days after Emergence	154		196	
Stage Scale Used	BBCH		BBCH	
Stage Majority, Percent	24	80	51	
Stage Minimum, Percent	22			
Stage Maximum, Percent	28			
Height Average	4.4 in		19 in	
Height Minimum, Maximum	2.5	6.25	14	23.75

Application Equipment				
	A		B	
Appl. Equipment	backpack		backpack	
Equipment Type	BACCAI		BACCAI	
Operation Pressure	32	PSI	31	PSI
Nozzle Type	FLAFXR		FLAFXR	
Nozzle Size	02		02	
Nozzle Spacing	20 IN		20 IN	
Boom Length	10 FT		6.7 FT	
Boom Height	20 IN		20 FT	
Ground Speed	3 MPH		3 KPH	
Carrier	H2O		H2O	
Application Amount	15	GAL/AC	15	GAL/AC
Mix Overage	957 mL		957 mL	
Mix Size	2 L		2 L	
Propellant	comco2		COMCO2	

Context	Date	By	Notes
STATUS	8-15-2019	Travis Legleiter	Automatically added by ARM: Trial Status updated to 'E' when Planting Date entered.

SE Definitions	
	1.
Crop Type, Code	C

University of Kentucky

Evaluation of Annual Ryegrass Cover Crop Termination Treatments and Timings

Trial ID: 19-3_LOL-REC	Location: UKREC 109-B3 Trial Year: 2018
Protocol ID: 19-3_LOL-REC	Investigator: Travis Legleiter
Project ID:	Study Director:
	Sponsor Contact:

Pest Type	W Weed	W Weed	W Weed	W Weed		
Pest Code	LOLMG	LOLMG	LOLMG	LOLMG		
Pest Scientific Name	Lolium multifl>	Lolium multifl>	Lolium multifl>	Lolium multifl>		
Pest Name	Annual ryegrass	Annual ryegrass	Annual ryegrass	Annual ryegrass		
Crop Type, Code	C -	C -	C -	C -		
Rating Date	3-27-2019	4-12-2019	5-13-2019	5-23-2019		
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P		
Rating Type	control	control	control	control		
Rating Unit	%	%	%	%		
Number of Subsamples	1	1	1	1		
Days After First/Last Applic.	15 15	31 31	62 20	72 30		
Trt-Eval Interval	15 DA-A	31 DA-A	62 DA-A	72 DA-A		
Plant-Eval Interval	174 DP-1	190 DP-1	221 DP-1	231 DP-1		
Days After Emergence	169 DE-1	185 DE-1	216 DE-1	226 DE-1		
ARM Action Codes	AL EC	ER1	ET13	ET13		
Trt Treatment No. Name	Rate Unit	Appl Code	1	2	3	4
1 Roundup PowerMax N-PAK AMS	22 fl oz/a A 2.5 % v/v A		42.5	40.0	37.5	41.3
2 Roundup PowerMax N-PAK AMS	44 fl oz/a A 2.5 % v/v A		52.3	71.7	55.0	50.0
3 Roundup PowerMax Sharpen N-PAK AMS MSO	44 fl oz/a A 1 fl oz/a A 2.5 % v/v A 1 % v/v A		59.6	81.7	71.3	70.0
4 Roundup PowerMax Atrazine N-PAK AMS	44 fl oz/a A 1 qt/a A 2.5 % v/v A		21.2	63.3	73.8	68.8
5 Roundup PowerMax Leadoff 1.5 oz/a Rimsulfuron (Resolve) Thifensulfuron (Harmony) N-PAK AMS	44 fl oz/a A 1 oz/a A 0.5 oz/a A 2.5 % v/v A		49.5	68.3	80.0	75.5
6 Gramoxone Metribuzin 2,4-D LV6 COC	4 pt/a A 8 oz/a A 11 fl oz/a A 1 % v/v A		68.5	60.0	61.3	53.8
7 Roundup PowerMax N-PAK AMS	22 fl oz/a B 2.5 % v/v B		0.0	0.0	41.3	52.5
8 Roundup PowerMax N-PAK AMS	44 fl oz/a B 2.5 % v/v B		0.0	0.0	62.5	82.5
9 Roundup PowerMax Sharpen N-PAK AMS MSO	44 fl oz/a B 1 fl oz/a B 2.5 % v/v B 1 % v/v B		0.0	0.0	63.8	90.0
10 Roundup PowerMax Atrazine N-PAK AMS	44 fl oz/a B 1 qt/a B 2.5 % v/v B		0.0	0.0	37.5	75.0
11 Roundup PowerMax Leadoff 1.5 oz/a Rimsulfuron (Resolve) Thifensulfuron (Harmony) N-PAK AMS	44 fl oz/a B 1 oz/a B 0.5 oz/a B 2.5 % v/v B		0.0	0.0	56.3	83.8
12 Gramoxone Metribuzin 2,4-D LV6 COC	4 pt/a B 8 oz/a B 11 fl oz/a B 1 % v/v B		0.0	0.0	75.0	52.5

t=Mean descriptions are reported in transformed data units, and are not de-transformed.
Excluded replicate 1 in column 2

University of Kentucky

Pest Type	W Weed	W Weed	W Weed	W Weed
Pest Code	LOLMG	LOLMG	LOLMG	LOLMG
Pest Scientific Name	Lolium multifl>	Lolium multifl>	Lolium multifl>	Lolium multifl>
Pest Name	Annual ryegrass	Annual ryegrass	Annual ryegrass	Annual ryegrass
Crop Type, Code	C -	C -	C -	C -
Rating Date	3-27-2019	4-12-2019	5-13-2019	5-23-2019
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P
Rating Type	control	control	control	control
Rating Unit	%	%	%	%
Number of Subsamples	1	1	1	1
Days After First/Last Applic.	15 15	31 31	62 20	72 30
Trt-Eval Interval	15 DA-A	31 DA-A	62 DA-A	72 DA-A
Plant-Eval Interval	174 DP-1	190 DP-1	221 DP-1	231 DP-1
Days After Emergence	169 DE-1	185 DE-1	216 DE-1	226 DE-1
ARM Action Codes	AL EC	ER1	ET13	ET13
Trt Treatment	Rate	Appl		
No. Name	Rate Unit	Code		
13 Untreated	1	2	3	4
	0.0	0.0	0.0	0.0
LSD P=.05	2.73 - 7.63	18.69	13.41	16.29
Standard Deviation	0.04t	11.09	9.32	11.33
CV	5.02t	37.44	15.64	17.09
Replicate F	0.137	0.672	1.999	6.312
Replicate Prob(F)	0.9369	0.5198	0.1333	0.0017
Treatment F	2472.861	29.040	9.894	7.767
Treatment Prob(F)	0.0001	0.0001	0.0001	0.0001

Pest Type

W, Weed = Weed or volunteer crop

Pest Code

LOLMG, Lolium multiflorum gaudini, Annual ryegrass = US

Crop Type, Code

C = EPPO species (Bayer) codes

Part Rated

PLANT = plant

P = Pest is Part Rated

Rating Unit

% = percent

Plant-Eval Interval

174 DP-1 = 1 LOLMG 10-4-2018

190 DP-1 = 1 LOLMG 10-4-2018

221 DP-1 = 1 LOLMG 10-4-2018

231 DP-1 = 1 LOLMG 10-4-2018

ARM Action Codes

AL = Automatic log transformation of X+1

EC = Do not analyze untreated check, while still reporting treatment mean on AOV Means Table

ER1 = Excluded replicate 1

ET13 = Excluded treatment 13

University of Kentucky

ANTHEM FLEX, FINESSE, AND HARMONY EXTRA USE IN WINTER WHEAT

Trial ID: 19-4_WHT-REC Location: UKREC 109-B1 Trial Year: 2018
 Protocol ID: USA-18-732 Investigator: Travis Legleiter
 Project ID: Study Director:
 Sponsor Contact: Matthew Wiggins

General Trial Information

Investigator: Travis Legleiter

Trial Status: E established

Trial Location

City: Princeton **Country:** USA United States
State/Prov.: Kentucky
Postal Code: 42445

Conducted Under GLP: No

Conducted Under GEP: No

Investigator: Travis Legleiter
Organization: University of Kentucky
Address: 1205 Hopkinsville Street **Phone No.:** 859-562-1323
City+State/Prov: Princeton, KY
Postal Code: 42445 **E-mail:** Travis.Legleiter@uky.edu

Crop Description

Crop 1: C TRZAW Triticum aestivum Winter wheat
Variety: Pioneer 26R10
Planting Date: 10-24-2018 **Planting Rate:** 165 LB/A
Depth: 1 IN
Row Spacing: 7.5 IN **Planting Method:** DRILLE drilled
Soil Temperature: 57 F **Planting Equipment:** DD disc drill
Soil Moisture: DAMP damp
Harvest Date: 7-2-2019
Harvested Width: 3.75 FT
% Standard Moisture: 15.5

Pest Description

Pest 1 Type: W **Code:** LOLMG Lolium multiflorum gaudini
Common Name: Annual ryegrass **Artificial Population:** X
Establishment Date: 10-12-2018

Site and Design

Treated Plot Width: 10 FT
Treated Plot Length: 30 FT
Treated Plot Area: 300 FT² **Treatments:** 8 **Tillage Type:** CONTIL conventional-till
Replications: 4 **Study Design:** RACOB� Randomized Complete Block (RCB)

Maintenance

No.	Date	Type	Maintenance Product Name	Rate	Rate Unit
1.	2-27-2019	FERT	28% UAN	40	lb/a
2.	3-26-2019	FERT	32% UAN	80	lb/a
3.	5-6-2019	FUNG	Caramba	15	oz/a

Soil Description

Texture: SIL silt loam
Soil Name: Crider Silt Loam

University of Kentucky

Application Description					
	A	B	C	D	E
Application Date	10-13-2018	10-24-2018	10-27-2018	12-3-2018	3-19-2019
Appl. Start Time	8:40 AM	4:27 PM	12:46 PM	10:54 PM	10:17 AM
Appl. Stop Time	8:45 AM	4:29 PM	12:54 PM	10:58 PM	10:26 AM
Application Method	BROADC	BROADC	BROADC	BROADC	BROADC
Application Timing	14 DPP	PRE	DELAYED PRE	EARLY POST	GREENUP
Application Placement	FOLIAR	FOLIAR	FOLIAR	FOLIAR	FOLIAR
Applied By	JLG	JLG	JLG	JLG	JLG
Air Temperature Start, Stop	49 F	71 F	58 F	46 F	51 F
% Relative Humidity Start, Stop	83	75	68	64	36
Wind Velocity+Dir. Start	0.6 MPH NE	1.2 MPH NE	2.2 MPH NW	8.6 MPH NW	2.5 MPH SE
Wind Velocity+Dir. Max	3.3 MPH NE	2.5 MPH NE	3.9 MPH NW	12.4 MPH NW	3.6 MPH SE
Wet Leaves (Y/N)	Y yes	N no	Y yes	N no	N no
Soil Temperature	53 F	57 F	52 F	41 F	38 F
Soil Moisture	WET	DAMP	WET	WET	DAMP
% Cloud Cover	30	75	95	100	5

Crop Stage At Each Application					
	A	B	C	D	E
Crop 1 Code, BBCH Scale	TRZAW BCER	TRZAW BCER	TRZAW BCER	TRZAW BCER	TRZAW BCER
Stage Scale Used				FEEKES	FEEKES
Stage Majority, Percent				1.3	2.2
Stage Minimum, Percent				1.2	
Stage Maximum, Percent				1.3	
Height Average				2.25 IN	4.5 IN
Height Minimum, Maximum				1.5 3	2.75 6

Pest Stage At Each Application					
	A	B	C	D	E
Pest 1 Code, Type, Scale	LOLMG W	LOLMG W	LOLMG W	LOLMG W	LOLMG W
Stage Majority, Percent		11	11	13	11
Stage Minimum, Percent				13	12
Stage Maximum, Percent				21	25
Height Average		1.25 IN	2 IN	2.5 IN	3.5 IN
Height Minimum, Maximum		1 1.5	0.5 3.25	2 3.5	1 5.25
Density Average		27.5 FT2	53 FT2	42 FT2	15 FT2
Density Min, Max		14 41	25 81	41 43	11 17

Application Equipment					
	A	B	C	D	E
Appl. Equipment	CO2 BACKPACK	CO2 BACKPACK	CO2 BACKPACK	CO2BACKPACK	CO2BACKPACK
Equipment Type	BACCAI	BACCAI	BACCAI	BACCAI	BACCAI
Operation Pressure	30 PSI	30 PSI	30 PSI	30 PSI	32 PSI
Nozzle Type	FLAFXR	FLAFXR	FLAFXR	FLAFXR	FLAFXR
Nozzle Size	02	02	02	02	02
Nozzle Spacing	20 IN	20 IN	20 IN	20 IN	20 IN
Boom Length	10 FT	10 FT	10 FT	10 FT	10 FT
Boom Height	18 IN	18 IN	18 IN	18 IN	18 IN
Ground Speed	3 MPH	3 MPH	3 MPH	3 MPH	3 MPH
Carrier	H20	H20	H20	H20	H20
Application Amount	15 GAL/AC	15 GAL/AC	15 GAL/AC	15 GAL/AC	15 GAL/AC
Mix Overage	436 mL	436 mL	436 mL	436 mL	436 mL
Mix Size	2 L	2 L	2 L	2 L	2 L
Propellant	COMCO2	COMCO2	COMCO2	COMCO2	COMCO2

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Context	Date	By	Notes
STATUS	7-29-2019	Travis Legleiter	Automatically added by ARM: Trial Status updated to 'E' when Planting Date entered.

SE Definitions	
	1.
Crop Type, Code	C

University of Kentucky

ANTHEM FLEX, FINESSE, AND HARMONY EXTRA USE IN WINTER WHEAT

Trial ID: 19-4_WHT-REC Location: UKREC 109-B1 Trial Year: 2018
 Protocol ID: USA-18-732 Investigator: Travis Legleiter
 Project ID: Study Director:
 Sponsor Contact: Matthew Wiggins

Pest Type	W Weed			W Weed	
Pest Code	LOLMG			LOLMG	
Pest Scientific Name	Lolium multifl>			Lolium multifl>	
Pest Name	Annual ryegrass			Annual ryegrass	
Crop Type, Code	C -	C TRZAW	C TRZAW	C -	
BBCH Scale		BCER	BCER		
Crop Scientific Name		Triticum aesti>	Triticum aesti>		
Crop Name		Winter wheat	Winter wheat		
Rating Date	11-2-2018	11-25-2018	11-25-2018	11-25-2018	
Part Rated	plant P	PLANT C	PLANT C	PLANT P	
Rating Type	CONTROL	PHYSTU	PHYCHL	CONTRO	
Rating Unit	%	%	%	%	
Number of Subsamples	1	1	1	1	
Days After First/Last Applic.	20 6	43 29	43 29	43 29	
Plant-Eval Interval	9 DP-1	32 DP-1	32 DP-1	32 DP-1	
ARM Action Codes	AA			ET5	
Number of Decimals					
Trt Treatment	Rate	Appl			
No. Name	Rate Unit Code				
		1	2	3	
		4			
1 UNTREATED CHECK		0.0	0.0	0.0	0.0
2 ANTHEM FLEX	0.0875 lb ai/a A	97.7	0.0	0.0	94.5
3 FINESSE	0.0234 lb ai/a A	99.9	0.0	0.0	99.0
ANTHEM FLEX	0.0875 lb ai/a A				
4 FINESSE	0.0234 lb ai/a B	80.5	0.0	0.0	85.0
ANTHEM FLEX	0.0875 lb ai/a B				
NIS	0.25 % v/v B				
5 ANTHEM FLEX	0.0875 lb ai/a C	72.6	0.0	0.0	80.0
6 ANTHEM FLEX	0.0875 lb ai/a C	77.8	0.0	0.0	80.0
HARMONY EXTRA WITH TOTALSOL	0.0234 lb ai/a E				
NIS	0.25 % v/v E				
7 ANTHEM FLEX	0.0875 lb ai/a C	70.0	0.0	0.0	73.8
HARMONY EXTRA WITH TOTALSOL	0.0234 lb ai/a E				
QUELEX	0.0094 lb ai/a E				
NIS	0.25 % v/v E				
8 ANTHEM FLEX	0.0875 lb ai/a D	0.0	0.0	0.0	0.0
METRIBUZIN	0.14 lb ai/a D				
NIS	0.25 % v/v D				
HARMONY EXTRA WITH TOTALSOL	0.0234 lb ai/a E				
NIS	0.25 % v/v E				
LSD P=.05		4.01 - 14.09	.	.	9.93
Standard Deviation		6.59t	0.00	0.00	6.69
CV		12.86t	0.0	0.0	10.83
Replicate F		1.617	0.000	0.000	1.498
Replicate Prob(F)		0.2156	1.0000	1.0000	0.2489
Treatment F		103.293	0.000	0.000	165.568
Treatment Prob(F)		0.0001	1.0000	1.0000	0.0001

t=Mean descriptions are reported in transformed data units, and are not de-transformed.
 Excluded replicate 4 in column 23
 Could not calculate LSD (% mean diff) for columns 2,3,5,6,8,9,12,13,16,17 because error mean square = 0.

University of Kentucky

Pest Type			W Weed		
Pest Code			LOLMG		
Pest Scientific Name			Lolium multifl>		
Pest Name			Annual ryegrass		
Crop Type, Code	C TRZAW	C TRZAW	C -	C TRZAW	C TRZAW
BBCH Scale	BCER	BCER		BCER	BCER
Crop Scientific Name	Triticum aesti>	Triticum aesti>		Triticum aesti>	Triticum aesti>
Crop Name	Winter wheat	Winter wheat		Winter wheat	Winter wheat
Rating Date	2-19-2019	2-19-2019	2-19-2019	3-27-2019	3-27-2019
Part Rated	PLANT C	PLANT C	PLANT P	PLANT C	PLANT C
Rating Type	PHYSTU	PHYCHL	CONTRO	PHYSTU	PHYCHL
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Days After First/Last Applic.	129 78	129 78	129 78	165 8	165 8
Plant-Eval Interval	118 DP-1	118 DP-1	118 DP-1	154 DP-1	154 DP-1
ARM Action Codes					
Number of Decimals					
Trt Treatment	Rate	Appl			
No. Name	Rate	Unit Code	5	6	7
1 UNTREATED CHECK			0.0	0.0	0.0
2 ANTHEM FLEX	0.0875 lb ai/a	A	0.0	0.0	92.0
3 FINESSE	0.0234 lb ai/a	A	0.0	0.0	97.5
ANTHEM FLEX	0.0875 lb ai/a	A			
4 FINESSE	0.0234 lb ai/a	B	0.0	0.0	92.5
ANTHEM FLEX	0.0875 lb ai/a	B			
NIS	0.25 % v/v	B			
5 ANTHEM FLEX	0.0875 lb ai/a	C	0.0	0.0	82.5
6 ANTHEM FLEX	0.0875 lb ai/a	C	0.0	0.0	87.5
HARMONY EXTRA WITH TOTALSOL	0.0234 lb ai/a	E			
NIS	0.25 % v/v	E			
7 ANTHEM FLEX	0.0875 lb ai/a	C	0.0	0.0	82.5
HARMONY EXTRA WITH TOTALSOL	0.0234 lb ai/a	E			
QUELEX	0.0094 lb ai/a	E			
NIS	0.25 % v/v	E			
8 ANTHEM FLEX	0.0875 lb ai/a	D	0.0	0.0	41.3
METRIBUZIN	0.14 lb ai/a	D			
NIS	0.25 % v/v	D			
HARMONY EXTRA WITH TOTALSOL	0.0234 lb ai/a	E			
NIS	0.25 % v/v	E			
LSD P=.05				8.61	
Standard Deviation	0.00	0.00	0.00	5.86	0.00
CV	0.0	0.0	0.0	8.14	0.0
Replicate F	0.000	0.000	0.000	2.520	0.000
Replicate Prob(F)	1.0000	1.0000	1.0000	0.0857	1.0000
Treatment F	0.000	0.000	0.000	134.271	0.000
Treatment Prob(F)	1.0000	1.0000	1.0000	0.0001	1.0000

t=Mean descriptions are reported in transformed data units, and are not de-transformed.

Excluded replicate 4 in column 23

Could not calculate LSD (% mean diff) for columns 2,3,5,6,8,9,12,13,16,17 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed		
Pest Code	LOLMG	LAMAM		
Pest Scientific Name	Lolium multifl>	Lamium amplexi>		
Pest Name	Annual ryegrass	Henbit		
Crop Type, Code	C -	C -	C TRZAW	C TRZAW
BBCH Scale			BCER	BCER
Crop Scientific Name			Triticum aesti>	Triticum aesti>
Crop Name			Winter wheat	Winter wheat
Rating Date	3-27-2019	3-27-2019	4-4-2019	4-4-2019
Part Rated	PLANT P	PLANT P	PLANT C	PLANT C
Rating Type	CONTRO	CONTRO	PHYSTU	PHYCHL
Rating Unit	%	%	%	%
Number of Subsamples	1	1	1	1
Days After First/Last Applic.	165 8	165 8	173 16	173 16
Plant-Eval Interval	154 DP-1	154 DP-1	162 DP-1	162 DP-1
ARM Action Codes	EC			
Number of Decimals				
Trt Treatment	Rate	Rate		
No. Name	Unit Code	Unit Code		
1 UNTREATED CHECK				
2 ANTHEM FLEX	0.0875 lb ai/a A			
3 FINESSE	0.0234 lb ai/a A			
ANTHEM FLEX	0.0875 lb ai/a A			
4 FINESSE	0.0234 lb ai/a B			
ANTHEM FLEX	0.0875 lb ai/a B			
NIS	0.25 % v/v B			
5 ANTHEM FLEX	0.0875 lb ai/a C			
6 ANTHEM FLEX	0.0875 lb ai/a C			
HARMONY EXTRA WITH TOTALSOL	0.0234 lb ai/a E			
NIS	0.25 % v/v E			
7 ANTHEM FLEX	0.0875 lb ai/a C			
HARMONY EXTRA WITH TOTALSOL	0.0234 lb ai/a E			
QUELEX	0.0094 lb ai/a E			
NIS	0.25 % v/v E			
8 ANTHEM FLEX	0.0875 lb ai/a D			
METRIBUZIN	0.14 lb ai/a D			
NIS	0.25 % v/v D			
HARMONY EXTRA WITH TOTALSOL	0.0234 lb ai/a E			
NIS	0.25 % v/v E			
LSD P=.05	6.45	36.39		
Standard Deviation	4.34	24.75	0.00	0.00
CV	5.39	40.71	0.0	0.0
Replicate F	7.374	0.637	0.000	0.000
Replicate Prob(F)	0.0020	0.5993	1.0000	1.0000
Treatment F	6.284	7.202	0.000	0.000
Treatment Prob(F)	0.0011	0.0002	1.0000	1.0000

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Excluded replicate 4 in column 23

Could not calculate LSD (% mean diff) for columns 2,3,5,6,8,9,12,13,16,17 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed		
Pest Code	LOLMG	LAMAM		
Pest Scientific Name	Lolium multifl>	Lamium amplexi>		
Pest Name	Annual ryegrass	Henbit		
Crop Type, Code	C -	C -	C TRZAW	C TRZAW
BBCH Scale			BCER	BCER
Crop Scientific Name			Triticum aesti>	Triticum aesti>
Crop Name			Winter wheat	Winter wheat
Rating Date	4-4-2019	4-4-2019	4-15-2019	4-15-2019
Part Rated	PLANT P	PLANT P	PLANT C	PLANT C
Rating Type	CONTRO	CONTRO	PHYSTU	PHYCHL
Rating Unit	%	%	%	%
Number of Subsamples	1	1	1	1
Days After First/Last Applic.	173 16	173 16	184 27	184 27
Plant-Eval Interval	162 DP-1	162 DP-1	173 DP-1	173 DP-1
ARM Action Codes	EC			
Number of Decimals				
Trt Treatment	Rate	Rate		
No. Name	Unit Code	Unit Code		
1 UNTREATED CHECK				
2 ANTHEM FLEX	0.0875 lb ai/a A			
3 FINESSE	0.0234 lb ai/a A			
ANTHEM FLEX	0.0875 lb ai/a A			
4 FINESSE	0.0234 lb ai/a B			
ANTHEM FLEX	0.0875 lb ai/a B			
NIS	0.25 % v/v B			
5 ANTHEM FLEX	0.0875 lb ai/a C			
6 ANTHEM FLEX	0.0875 lb ai/a C			
HARMONY EXTRA WITH TOTALSOL	0.0234 lb ai/a E			
NIS	0.25 % v/v E			
7 ANTHEM FLEX	0.0875 lb ai/a C			
HARMONY EXTRA WITH TOTALSOL	0.0234 lb ai/a E			
QUELEX	0.0094 lb ai/a E			
NIS	0.25 % v/v E			
8 ANTHEM FLEX	0.0875 lb ai/a D			
METRIBUZIN	0.14 lb ai/a D			
NIS	0.25 % v/v D			
HARMONY EXTRA WITH TOTALSOL	0.0234 lb ai/a E			
NIS	0.25 % v/v E			
LSD P=.05	12.10	38.69	.	.
Standard Deviation	8.15	26.31	0.00	0.00
CV	10.44	40.09	0.0	0.0
Replicate F	1.126	0.325	0.000	0.000
Replicate Prob(F)	0.3651	0.8072	1.0000	1.0000
Treatment F	2.256	6.537	0.000	0.000
Treatment Prob(F)	0.0846	0.0004	1.0000	1.0000

t=Mean descriptions are reported in transformed data units, and are not de-transformed.
 Excluded replicate 4 in column 23
 Could not calculate LSD (% mean diff) for columns 2,3,5,6,8,9,12,13,16,17 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed		
Pest Code	LOLMG	LOLMG		
Pest Scientific Name	Lolium multifl>	Lolium multifl>		
Pest Name	Annual ryegrass	Annual ryegrass		
Crop Type, Code	C -	C -	C TRZAW	C TRZAW
BBCH Scale			BCER	BCER
Crop Scientific Name			Triticum aesti>	Triticum aesti>
Crop Name			Winter wheat	Winter wheat
Rating Date	4-15-2019	5-13-2019	7-2-2019	7-2-2019
Part Rated	PLANT P	PLANT P	PLANT C	PLANT C
Rating Type	CONTRO	CONTRO	WEIGHT	MOICON
Rating Unit	%	%	LB	%
Number of Subsamples	1	1	1	1
Days After First/Last Applic.	184 27	212 55	262 105	262 105
Plant-Eval Interval	173 DP-1	201 DP-1	251 DP-1	251 DP-1
ARM Action Codes	ET2	EC	EC	
Number of Decimals				
Trt Treatment	Rate	Rate	Rate	Rate
No. Name	Unit	Unit	Unit	Unit
	Code	Code	Code	Code
	18	19	20	21
1 UNTREATED CHECK	0.0	0.0	1.885	15.425
2 ANTHEM FLEX	0.0875 lb ai/a A	73.8	75.0	8.075
3 FINESSE	0.0234 lb ai/a A	80.0	80.0	9.595
ANTHEM FLEX	0.0875 lb ai/a A			14.275
4 FINESSE	0.0234 lb ai/a B	75.0	73.8	8.988
ANTHEM FLEX	0.0875 lb ai/a B			12.620
NIS	0.25 % v/v B			
5 ANTHEM FLEX	0.0875 lb ai/a C	65.0	66.3	8.478
6 ANTHEM FLEX	0.0875 lb ai/a C	78.8	78.8	8.490
HARMONY EXTRA WITH TOTALSOL	0.0234 lb ai/a E			13.750
NIS	0.25 % v/v E			
7 ANTHEM FLEX	0.0875 lb ai/a C	72.5	62.5	8.475
HARMONY EXTRA WITH TOTALSOL	0.0234 lb ai/a E			13.675
QUELEX	0.0094 lb ai/a E			
NIS	0.25 % v/v E			
8 ANTHEM FLEX	0.0875 lb ai/a D	91.3	86.3	8.975
METRIBUZIN	0.14 lb ai/a D			14.100
NIS	0.25 % v/v D			
HARMONY EXTRA WITH TOTALSOL	0.0234 lb ai/a E			
NIS	0.25 % v/v E			
LSD P=.05	13.37	16.65	1.3381	2.0444
Standard Deviation	9.00	11.21	0.9007	1.3903
CV	13.63	15.01	10.32	9.96
Replicate F	1.454	1.166	14.409	2.116
Replicate Prob(F)	0.2604	0.3502	0.0001	0.1287
Treatment F	45.044	2.118	1.224	1.509
Treatment Prob(F)	0.0001	0.1015	0.3395	0.2182

t=Mean descriptions are reported in transformed data units, and are not de-transformed.
 Excluded replicate 4 in column 23
 Could not calculate LSD (% mean diff) for columns 2,3,5,6,8,9,12,13,16,17 because error mean square = 0.

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Pest Type			
Pest Code			
Pest Scientific Name			
Pest Name			
Crop Type, Code	C TRZAW	C TRZAW	C TRZAW
BBCH Scale	BCER	BCER	BCER
Crop Scientific Name	Triticum aestivum	Triticum aestivum	Triticum aestivum
Crop Name	Winter wheat	Winter wheat	Winter wheat
Rating Date	7-2-2019	7-2-2019	7-2-2019
Part Rated	PLANT C	PLANT C	PLANT C
Rating Type	WEITES	LENGTH	YIELD
Rating Unit	%	FT	BU
Number of Subsamples	1	1	1
Days After First/Last Applic.	262 105	262 105	262 105
Plant-Eval Interval	251 DP-1	251 DP-1	251 DP-1
ARM Action Codes		ER4	EC TY1
Number of Decimals			1
Trt Treatment	Rate	Appl	
No. Name	Rate Unit Code		
		22	23
1 UNTREATED CHECK		36.48	25.23
2 ANTHEM FLEX	0.0875 lb ai/a A	49.78	25.03
3 FINESSE	0.0234 lb ai/a A	50.38	24.83
ANTHEM FLEX	0.0875 lb ai/a A		74.5
4 FINESSE	0.0234 lb ai/a B	41.85	25.03
ANTHEM FLEX	0.0875 lb ai/a B		70.5
NIS	0.25 % v/v B		
5 ANTHEM FLEX	0.0875 lb ai/a C	44.98	24.73
6 ANTHEM FLEX	0.0875 lb ai/a C	50.60	24.60
HARMONY EXTRA WITH TOTALSOL	0.0234 lb ai/a E		66.4
NIS	0.25 % v/v E		
7 ANTHEM FLEX	0.0875 lb ai/a C	50.43	24.67
HARMONY EXTRA WITH TOTALSOL	0.0234 lb ai/a E		65.9
QUELEX	0.0094 lb ai/a E		
NIS	0.25 % v/v E		
8 ANTHEM FLEX	0.0875 lb ai/a D	50.25	24.57
METRIBUZIN	0.14 lb ai/a D		70.0
NIS	0.25 % v/v D		
HARMONY EXTRA WITH TOTALSOL	0.0234 lb ai/a E		
NIS	0.25 % v/v E		
LSD P=.05		12.971	0.524
Standard Deviation		8.821	0.299
CV		18.83	1.21
Replicate F		1.369	17.595
Replicate Prob(F)		0.2796	0.0002
Treatment F		1.436	1.929
Treatment Prob(F)		0.2435	0.1400

t=Mean descriptions are reported in transformed data units, and are not de-transformed.
 Excluded replicate 4 in column 23
 Could not calculate LSD (% mean diff) for columns 2,3,5,6,8,9,12,13,16,17 because error mean square = 0.

University of Kentucky

ANTHEM FLEX, FINESSE, AND HARMONY EXTRA USE IN WINTER WHEAT

Trial ID: 19-4_WHT-REC Location: UKREC 109-B1 Trial Year: 2018
 Protocol ID: USA-18-732 Investigator: Travis Legleiter
 Project ID: Study Director:
 Sponsor Contact: Matthew Wiggins

Pest Type

W, Weed = Weed or volunteer crop

Pest Code

LOLMG, Lolium multiflorum gaudini, Annual ryegrass = US

LAMAM, Lamium amplexicaule, Henbit = US

Crop Type Code

C = EPPO species (Bayer) codes

TRZAW, BCER, Triticum aestivum, Winter wheat = Triticum aestivum

Part Rated

PLANT = plant

P = Pest is Part Rated

C = Crop is Part Rated

Rating Type

PHYSTU = phytotoxicity - stunting

PHYCHL = phytotoxicity - chlorosis

CONTRO = control / burndown or knockdown

WEIGHT = weight

MOICON = moisture content

WEITES = weight - test

LENGTH = length

YIELD = yield

Rating Unit

% = percent

LB = pound

FT = foot

BU = bushel

Plant-Eval Interval

9 DP-1 = 1 TRZAW 10-24-2018

32 DP-1 = 1 TRZAW 10-24-2018

118 DP-1 = 1 TRZAW 10-24-2018

154 DP-1 = 1 TRZAW 10-24-2018

162 DP-1 = 1 TRZAW 10-24-2018

173 DP-1 = 1 TRZAW 10-24-2018

201 DP-1 = 1 TRZAW 10-24-2018

251 DP-1 = 1 TRZAW 10-24-2018

ARM Action Codes

AA = Automatic arcsine square root % transformation

ET5 = Excluded treatment 5

EC = Do not analyze untreated check, while still reporting treatment mean on AOV Means Table

ET2 = Excluded treatment 2

ER4 = Excluded replicate 4

TY1 = $(726 / (3.75 * [23])) * [20] * (100 - [21]) / 84.5$

University of Kentucky

ALITE 27 / LIBERTYLINK GT27 SOYBEAN SYSTEM CONSERVATION TILL

Trial ID: 19-9 SOY-FUL Location: Fulton County Trial Year: 2019
 Protocol ID: MKD-H-2019-US-D62-A-04.0 Investigator: Travis Legleiter
 Project ID: Study Director: Darren Unland
 Sponsor Contact: Greg Stapleton

General Trial Information

Study Director: Darren Unland
Investigator: Travis Legleiter **Title:** Assistant Extension Professor

Trial Status: E established
ARM Trial Created On: 4-8-2019

Trial Location

City: Hickman **Country:** USA United States
State/Prov.: Kentucky
Postal Code: 42445

Conducted Under GLP: No
Conducted Under GEP: No

Contacts

Study Director: Darren Unland

Investigator: Travis Legleiter **Title:** Assistant Extension Professor
Organization: University of Kentucky
Address: 1205 Hopkinsville Street **Phone No.:** 859-562-1323
City+State/Prov.: Princeton, KY
Postal Code: 42445 **E-mail:** Travis.Legleiter@uky.edu

Crop Description

Crop 1: C GLXMA Glycine max Soybean **BBCH Scale:** BSOY
Entry Date: 8-14-2019 **Stage Scale:** VR
Variety: CZ 3929 GT LL **Planting Rate:** 140000 S/A
Depth: 1 IN **Planting Method:** PLANTD planted
Row Spacing: 15 IN **Planting Equipment:** VP vacuum planter
Soil Temperature: 73 F **Soil Moisture:** WET wet

Pest Description

Pest 1 Type: W **Code:** ERICA Erigeron canadensis
Common Name: Canada horseweed **Entry Date:** 8-14-2019
Crop: 1 GLXMA

Pest 2 Type: W **Code:** AMAPA Amaranthus palmeri
Common Name: Palmer amaranth **Entry Date:** 8-14-2019
Crop: 1 GLXMA

Pest 3 Type: W **Code:** RANAR Ranunculus arvensis
Common Name: Corn buttercup **Entry Date:** 8-26-2019

Pest 4 Type: W **Code:** RUMCR Rumex crispus
Common Name: Curly dock **Entry Date:** 8-26-2019

Pest 5 Type: W **Code:** AMATA Amaranthus tamariscinus
Common Name: Common waterhemp **Entry Date:** 8-26-2019

Pest 6 Type: W **Code:** PANDI Panicum dichotomiflorum
Common Name: Fall panicum **Entry Date:** 8-26-2019

Pest 7 Type: W **Code:** ELEIN Eleusine indica
Common Name: Goosegrass **Entry Date:** 8-26-2019

Site and Design

Treated Plot Width: 10 FT
Treated Plot Length: 30 FT
Treated Plot Area: 300 FT² **Treatments:** 10 **Tillage Type:** NOTILL no-till
Replications: 4 **Study Design:** RACOB L Randomized Complete Block (RCB)

Soil Description

% Sand: 6 **% OM:** 2.5 **Texture:** SIL silt loam
% Silt: 79 **pH:** 6.6 **Soil Name:** Genada Silt Loam
% Clay: 15 **CEC:** 7.6

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Application Description		
	A	B
Application Date	5-31-2019	6-28-2019
Appl. Start Time	8:40 AM	8:46 AM
Appl. Stop Time	9:05 AM	9:10 AM
Interval to Prev. Appl.		28 DAYS
Application Method	BROADC	BROADC
Application Timing	7DPP	post
Application Placement	foliar	foliar
Applied By	MK	MK
Appl. Entry Date	8-14-2019	8-14-2019
Air Temperature Start, Stop	80 F	88.6 F
% Relative Humidity Start, Stop	62	47.2
Wind Velocity+Dir. Start	3 MPH S	1.9 MPH SE
Wind Velocity+Dir. Max	5 MPH S	2.8 MPH SE
Soil Temperature	72 F	75.3 F
Soil Moisture	SLIWET	WET
% Cloud Cover	2	45

Crop Stage At Each Application		
	A	B
Crop 1 Code, BBCH Scale	GLXMA BSOY	GLXMA BSOY

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Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale	ERICA W	ERICA W
Height Average	5 IN	
Height Minimum, Maximum	4 6	
Density Average	0.5 FT2	
Density Min, Max	0 1	
Pest 2 Code, Type, Scale	AMAPA W	AMAPA W
Height Average	5 IN	2 in
Height Minimum, Maximum	4 6	0.5 3.5
Density Average	6 FT2	12 ft2
Density Min, Max	2 10	6 18
Pest 3 Code, Type, Scale	RANAR W	RANAR W
Height Average	5 in	
Height Minimum, Maximum	4 6	
Density Average	9 ft2	
Density Min, Max	8 10	
Pest 4 Code, Type, Scale	RUMCR W	RUMCR W
Height Average	4 in	
Height Minimum, Maximum	2 6	
Density Average	0.5 ft2	
Density Min, Max	0 1	
Pest 5 Code, Type, Scale	AMATA W	AMATA W
Height Average		3 in
Density Average		0.5 ft2
Density Min, Max		0 1
Pest 6 Code, Type, Scale	PANDI W	PANDI W
Height Average		1.5 in
Height Minimum, Maximum		0.5 2
Density Average		6 ft2
Density Min, Max		1 11
Pest 7 Code, Type, Scale	ELEIN W	ELEIN W
Height Average		0.25 in
Density Average		0.5 ft2
Density Min, Max		0 1

Application Equipment

	A	B
Appl. Equipment	CO2BAC	CO2BAC
Equipment Type	BACCAI	BACCAI
Operation Pressure	32 PSI	32 PSI
Nozzle Type	FLAFXR	FLAFXR
Nozzle Size	02	02
Nozzle Spacing	20 IN	20 IN
Boom Length	10 FT	10 FT
Boom Height	18 IN	18 IN
Ground Speed	3 MPH	3 MPH
Carrier	WATER	
Application Amount	15 GAL/AC	15 GAL/AC
Mix Overage	436 mL	436 mL
Mix Size	2 L	2 L
Propellant	COMCO2	COMCO2

Context	Date	By	Notes
STATUS	4-8-2019	Travis Legleiter	Automatically added by ARM: Trial Status updated to 'S' during trial creation.
STATUS	8-14-2019	Zachary Perry	Automatically added by ARM: Trial Status updated to 'E' when Application Date entered.

University of Kentucky

ALITE 27 / LIBERTYLINK GT27 SOYBEAN SYSTEM CONSERVATION TILL

Trial ID: 19-9 SOY-FUL	Location: Fulton County	Trial Year: 2019
Protocol ID: MKD-H-2019-US-D62-A-04.0	Investigator: Travis Legleiter	
Project ID:	Study Director: Darren Unland	
	Sponsor Contact: Greg Stapleton	

Pest Type		W Weed	W Weed	W Weed
Pest Code		AMAPA	AMAPA	PANDI
Pest Scientific Name		Amaranthus pal>	Amaranthus pal>	Panicum dichot>
Pest Name		Palmer amaranth	Palmer amaranth	Fall panicum
Crop Type, Code	C GLXMA	C -	C GLXMA	C -
BBCH Scale	BSOY		BSOY	
Crop Scientific Name	Glycine max		Glycine max	
Crop Name	Soybean		Soybean	
Rating Date	6-12-2019	6-12-2019	6-28-2019	6-28-2019
Part Rated	PLANT C	PLANT P	PLANT C	PLANT P
Rating Type	PHYGEN	CONTROL	PHYGEN	CONTROL
Rating Unit	%	%	%	%
Number of Subsamples	1	1	1	1
Data Entry Date	8-26-2019	8-26-2019	8-26-2019	8-26-2019
Days After First/Last Applic.	12 12	12 12	28 28	28 28
ARM Action Codes			ET6	
Trt Treatment	Rate	Appl		
No. Name	Rate Unit	Code	1	2
1 CHECK			0.0	0.0
2 ZIDUA PRO	6.0 fl oz/a	A	0.0	100.0
ROUNDUP POWERMAX	32.0 fl oz/a	A		0.0
2,4-D LV6	10.7 fl oz/a	A		88.8
Amsol AMS	17.0 lb ai/100 gal	A		94.8
MSO	1.0 % v/v	A		
LIBERTY 280 SL	32.0 fl oz/a	B		
ROUNDUP POWERMAX	32.0 fl oz/a	B		
Amsol AMS	17.0 lb ai/100 gal	B		
3 ALITE 27	2.0 fl oz/a	A	0.0	100.0
ZIDUA PRO	6.0 fl oz/a	A		0.0
ROUNDUP POWERMAX	32.0 fl oz/a	A		87.5
2,4-D LV6	10.7 fl oz/a	A		95.3
Amsol AMS	17.0 lb ai/100 gal	A		
MSO	1.0 % v/v	A		
LIBERTY 280 SL	32.0 fl oz/a	B		
ROUNDUP POWERMAX	32.0 fl oz/a	B		
Amsol AMS	17.0 lb ai/100 gal	B		
4 SONIC	5.0 oz wt/a	A	0.0	100.0
ROUNDUP POWERMAX	32.0 fl oz/a	A		0.0
2,4-D LV6	10.7 fl oz/a	A		82.5
Amsol AMS	17.0 lb ai/100 gal	A		87.5
MSO	1.0 % v/v	A		
LIBERTY 280 SL	32.0 fl oz/a	B		
ROUNDUP POWERMAX	32.0 fl oz/a	B		
Amsol AMS	17.0 lb ai/100 gal	B		
5 ALITE 27	2.0 fl oz/a	A	0.0	100.0
SONIC	5.0 oz wt/a	A		0.0
ROUNDUP POWERMAX	32.0 fl oz/a	A		90.0
2,4-D LV6	10.7 fl oz/a	A		85.0
Amsol AMS	17.0 lb ai/100 gal	A		
MSO	1.0 % v/v	A		
LIBERTY 280 SL	32.0 fl oz/a	B		
ROUNDUP POWERMAX	32.0 fl oz/a	B		
Amsol AMS	17.0 lb ai/100 gal	B		
6 BOUNDARY	24.0 fl oz/a	A	0.0	97.5
ROUNDUP POWERMAX	32.0 fl oz/a	A		0.0
2,4-D LV6	10.7 fl oz/a	A		32.5
Amsol AMS	17.0 lb ai/100 gal	A		66.3
MSO	1.0 % v/v	A		
LIBERTY 280 SL	32.0 fl oz/a	B		
ROUNDUP POWERMAX	32.0 fl oz/a	B		
Amsol AMS	17.0 lb ai/100 gal	B		

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 Could not calculate LSD (% mean diff) for columns 1,3,6,9 because error mean square = 0.

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Pest Type		W Weed		W Weed	W Weed
Pest Code		AMAPA		AMAPA	PANDI
Pest Scientific Name		Amaranthus pal>		Amaranthus pal>	Panicum dichot>
Pest Name		Palmer amaranth		Palmer amaranth	Fall panicum
Crop Type, Code	C GLXMA	C -	C GLXMA	C -	C -
BBCH Scale	BSOY		BSOY		
Crop Scientific Name	Glycine max		Glycine max		
Crop Name	Soybean		Soybean		
Rating Date	6-12-2019	6-12-2019	6-28-2019	6-28-2019	6-28-2019
Part Rated	PLANT C	PLANT P	PLANT C	PLANT P	PLANT P
Rating Type	PHYGEN	CONTROL	PHYGEN	CONTROL	CONTROL
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Data Entry Date	8-26-2019	8-26-2019	8-26-2019	8-26-2019	8-26-2019
Days After First/Last Applic.	12 12	12 12	28 28	28 28	28 28
ARM Action Codes				ET6	
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	1	2	3
7 ALITE 27	2.0 fl oz/a	A	0.0	98.8	0.0
BOUNDARY	24.0 fl oz/a	A			
ROUNDUP POWERMAX	32.0 fl oz/a	A			
2,4-D LV6	10.7 fl oz/a	A			
Amsol AMS	17.0 lb ai/100 gal	A			
MSO	1.0 % v/v	A			
LIBERTY 280 SL	32.0 fl oz/a	B			
ROUNDUP POWERMAX	32.0 fl oz/a	B			
Amsol AMS	17.0 lb ai/100 gal	B			
8 AUTHORITY ASSIST	5.0 fl oz/a	A	0.0	100.0	0.0
ROUNDUP POWERMAX	32.0 fl oz/a	A			
2,4-D LV6	10.7 fl oz/a	A			
Amsol AMS	17.0 lb ai/100 gal	A			
MSO	1.0 % v/v	A			
LIBERTY 280 SL	32.0 fl oz/a	B			
ROUNDUP POWERMAX	32.0 fl oz/a	B			
Amsol AMS	17.0 lb ai/100 gal	B			
9 ALITE 27	2.0 fl oz/a	A	0.0	100.0	0.0
AUTHORITY ASSIST	5.0 fl oz/a	A			
ROUNDUP POWERMAX	32.0 fl oz/a	A			
2,4-D LV6	10.7 fl oz/a	A			
Amsol AMS	17.0 lb ai/100 gal	A			
MSO	1.0 % v/v	A			
LIBERTY 280 SL	32.0 fl oz/a	B			
ROUNDUP POWERMAX	32.0 fl oz/a	B			
Amsol AMS	17.0 lb ai/100 gal	B			
10 ALITE 27	3.0 fl oz/a	A	0.0	98.8	0.0
ROUNDUP POWERMAX	32.0 fl oz/a	A			
2,4-D LV6	10.7 fl oz/a	A			
Amsol AMS	17.0 lb ai/100 gal	A			
MSO	1.0 % v/v	A			
LIBERTY 280 SL	32.0 fl oz/a	B			
ROUNDUP POWERMAX	32.0 fl oz/a	B			
Amsol AMS	17.0 lb ai/100 gal	B			
LSD P=.05			1.92		8.64
Standard Deviation	0.00		1.33	0.00	5.92
CV	0.0		1.48	0.0	8.55
Replicate F	0.000		2.842	0.000	5.210
Replicate Prob(F)	1.0000		0.0565	1.0000	0.0065
Treatment F	0.000		2250.158	0.000	104.385
Treatment Prob(F)	1.0000		0.0001	1.0000	0.0001

t=Mean descriptions are reported in transformed data units, and are not de-transformed.
 Could not calculate LSD (% mean diff) for columns 1,3,6,9 because error mean square = 0.

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Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	6	7	8	9	10
1	CHECK				0.0	0.0	0.0	0.0	0.0
2	ZIDUA PRO	6.0 fl oz/a		A	0.0	92.0	100.0	0.0	92.5
	ROUNDUP POWERMAX	32.0 fl oz/a		A					
	2,4-D LV6	10.7 fl oz/a		A					
	Amsol AMS	17.0 lb ai/100 gal		A					
	MSO	1.0 % v/v		A					
	LIBERTY 280 SL	32.0 fl oz/a		B					
	ROUNDUP POWERMAX	32.0 fl oz/a		B					
	Amsol AMS	17.0 lb ai/100 gal		B					
3	ALITE 27	2.0 fl oz/a		A	0.0	95.5	100.0	0.0	97.5
	ZIDUA PRO	6.0 fl oz/a		A					
	ROUNDUP POWERMAX	32.0 fl oz/a		A					
	2,4-D LV6	10.7 fl oz/a		A					
	Amsol AMS	17.0 lb ai/100 gal		A					
	MSO	1.0 % v/v		A					
	LIBERTY 280 SL	32.0 fl oz/a		B					
	ROUNDUP POWERMAX	32.0 fl oz/a		B					
	Amsol AMS	17.0 lb ai/100 gal		B					
4	SONIC	5.0 oz wt/a		A	0.0	96.3	100.0	0.0	98.8
	ROUNDUP POWERMAX	32.0 fl oz/a		A					
	2,4-D LV6	10.7 fl oz/a		A					
	Amsol AMS	17.0 lb ai/100 gal		A					
	MSO	1.0 % v/v		A					
	LIBERTY 280 SL	32.0 fl oz/a		B					
	ROUNDUP POWERMAX	32.0 fl oz/a		B					
	Amsol AMS	17.0 lb ai/100 gal		B					
5	ALITE 27	2.0 fl oz/a		A	0.0	95.0	100.0	0.0	96.8
	SONIC	5.0 oz wt/a		A					
	ROUNDUP POWERMAX	32.0 fl oz/a		A					
	2,4-D LV6	10.7 fl oz/a		A					
	Amsol AMS	17.0 lb ai/100 gal		A					
	MSO	1.0 % v/v		A					
	LIBERTY 280 SL	32.0 fl oz/a		B					
	ROUNDUP POWERMAX	32.0 fl oz/a		B					
	Amsol AMS	17.0 lb ai/100 gal		B					
6	BOUNDARY	24.0 fl oz/a		A	0.0	91.3	100.0	0.0	92.5
	ROUNDUP POWERMAX	32.0 fl oz/a		A					
	2,4-D LV6	10.7 fl oz/a		A					
	Amsol AMS	17.0 lb ai/100 gal		A					
	MSO	1.0 % v/v		A					
	LIBERTY 280 SL	32.0 fl oz/a		B					
	ROUNDUP POWERMAX	32.0 fl oz/a		B					
	Amsol AMS	17.0 lb ai/100 gal		B					

t=Mean descriptions are reported in transformed data units, and are not de-transformed.
 Could not calculate LSD (% mean diff) for columns 1,3,6,9 because error mean square = 0.

University of Kentucky

Pest Type		W Weed AMAPA	W Weed PANDI		W Weed AMAPA
Pest Code		Amaranthus pal>	Panicum dichot>		Amaranthus pal>
Pest Scientific Name		Palmer amaranth	Fall panicum		Palmer amaranth
Pest Name		C -	C -		C -
Crop Type, Code	C GLXMA			C GLXMA	
BBCH Scale	BSOY			BSOY	
Crop Scientific Name	Glycine max			Glycine max	
Crop Name	Soybean			Soybean	
Rating Date	7-11-2019	7-11-2019	7-11-2019	7-23-2019	7-23-2019
Part Rated	PLANT C	PLANT P	PLANT P	PLANT C	PLANT P
Rating Type	PHYGEN	CONTROL	CONTROL	PHYGEN	CONTROL
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Data Entry Date	8-26-2019	8-26-2019	8-26-2019	8-26-2019	8-26-2019
Days After First/Last Applic.	41 13	41 13	41 13	53 25	53 25
ARM Action Codes					
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	6	7	8
7 ALITE 27	2.0 fl oz/a	A	0.0	86.3	100.0
BOUNDARY	24.0 fl oz/a	A			
ROUNDUP POWERMAX	32.0 fl oz/a	A			
2,4-D LV6	10.7 fl oz/a	A			
Amsol AMS	17.0 lb ai/100 gal	A			
MSO	1.0 % v/v	A			
LIBERTY 280 SL	32.0 fl oz/a	B			
ROUNDUP POWERMAX	32.0 fl oz/a	B			
Amsol AMS	17.0 lb ai/100 gal	B			
8 AUTHORITY ASSIST	5.0 fl oz/a	A	0.0	93.8	98.8
ROUNDUP POWERMAX	32.0 fl oz/a	A			
2,4-D LV6	10.7 fl oz/a	A			
Amsol AMS	17.0 lb ai/100 gal	A			
MSO	1.0 % v/v	A			
LIBERTY 280 SL	32.0 fl oz/a	B			
ROUNDUP POWERMAX	32.0 fl oz/a	B			
Amsol AMS	17.0 lb ai/100 gal	B			
9 ALITE 27	2.0 fl oz/a	A	0.0	93.0	100.0
AUTHORITY ASSIST	5.0 fl oz/a	A			
ROUNDUP POWERMAX	32.0 fl oz/a	A			
2,4-D LV6	10.7 fl oz/a	A			
Amsol AMS	17.0 lb ai/100 gal	A			
MSO	1.0 % v/v	A			
LIBERTY 280 SL	32.0 fl oz/a	B			
ROUNDUP POWERMAX	32.0 fl oz/a	B			
Amsol AMS	17.0 lb ai/100 gal	B			
10 ALITE 27	3.0 fl oz/a	A	0.0	90.3	100.0
ROUNDUP POWERMAX	32.0 fl oz/a	A			
2,4-D LV6	10.7 fl oz/a	A			
Amsol AMS	17.0 lb ai/100 gal	A			
MSO	1.0 % v/v	A			
LIBERTY 280 SL	32.0 fl oz/a	B			
ROUNDUP POWERMAX	32.0 fl oz/a	B			
Amsol AMS	17.0 lb ai/100 gal	B			
LSD P=.05				7.26	1.15
Standard Deviation	0.00			5.00	0.79
CV	0.0			6.0	0.88
Replicate F	0.000			3.938	1.000
Replicate Prob(F)	1.0000			0.0188	0.4079
Treatment F	0.000			138.459	6383.223
Treatment Prob(F)	1.0000			0.0001	0.0001

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 Could not calculate LSD (% mean diff) for columns 1,3,6,9 because error mean square = 0.

University of Kentucky

Pest Type				W Weed
Pest Code				PANDI
Pest Scientific Name				Panicum dichot>
Pest Name				Fall panicum
Crop Type, Code				C -
BBCH Scale				
Crop Scientific Name				
Crop Name				
Rating Date				7-23-2019
Part Rated				PLANT P
Rating Type				CONTROL
Rating Unit				%
Number of Subsamples				1
Data Entry Date				8-26-2019
Days After First/Last Applic.				53 25
ARM Action Codes				AA
Trt Treatment	Rate	Appl		
No. Name	Rate Unit	Code	11	
1 CHECK			0.0	
2 ZIDUA PRO	6.0 fl oz/a	A	100.0	
ROUNDUP POWERMAX	32.0 fl oz/a	A		
2,4-D LV6	10.7 fl oz/a	A		
Amsol AMS	17.0 lb ai/100 gal	A		
MSO	1.0 % v/v	A		
LIBERTY 280 SL	32.0 fl oz/a	B		
ROUNDUP POWERMAX	32.0 fl oz/a	B		
Amsol AMS	17.0 lb ai/100 gal	B		
3 ALITE 27	2.0 fl oz/a	A	99.0	
ZIDUA PRO	6.0 fl oz/a	A		
ROUNDUP POWERMAX	32.0 fl oz/a	A		
2,4-D LV6	10.7 fl oz/a	A		
Amsol AMS	17.0 lb ai/100 gal	A		
MSO	1.0 % v/v	A		
LIBERTY 280 SL	32.0 fl oz/a	B		
ROUNDUP POWERMAX	32.0 fl oz/a	B		
Amsol AMS	17.0 lb ai/100 gal	B		
4 SONIC	5.0 oz wt/a	A	100.0	
ROUNDUP POWERMAX	32.0 fl oz/a	A		
2,4-D LV6	10.7 fl oz/a	A		
Amsol AMS	17.0 lb ai/100 gal	A		
MSO	1.0 % v/v	A		
LIBERTY 280 SL	32.0 fl oz/a	B		
ROUNDUP POWERMAX	32.0 fl oz/a	B		
Amsol AMS	17.0 lb ai/100 gal	B		
5 ALITE 27	2.0 fl oz/a	A	100.0	
SONIC	5.0 oz wt/a	A		
ROUNDUP POWERMAX	32.0 fl oz/a	A		
2,4-D LV6	10.7 fl oz/a	A		
Amsol AMS	17.0 lb ai/100 gal	A		
MSO	1.0 % v/v	A		
LIBERTY 280 SL	32.0 fl oz/a	B		
ROUNDUP POWERMAX	32.0 fl oz/a	B		
Amsol AMS	17.0 lb ai/100 gal	B		
6 BOUNDARY	24.0 fl oz/a	A	99.8	
ROUNDUP POWERMAX	32.0 fl oz/a	A		
2,4-D LV6	10.7 fl oz/a	A		
Amsol AMS	17.0 lb ai/100 gal	A		
MSO	1.0 % v/v	A		
LIBERTY 280 SL	32.0 fl oz/a	B		
ROUNDUP POWERMAX	32.0 fl oz/a	B		
Amsol AMS	17.0 lb ai/100 gal	B		

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University of Kentucky

Pest Type				W Weed
Pest Code				PANDI
Pest Scientific Name				Panicum dichot>
Pest Name				Fall panicum
Crop Type, Code				C -
BBCH Scale				
Crop Scientific Name				
Crop Name				
Rating Date				7-23-2019
Part Rated				PLANT P
Rating Type				CONTROL
Rating Unit				%
Number of Subsamples				1
Data Entry Date				8-26-2019
Days After First/Last Applic.				53 25
ARM Action Codes				AA
Trt No.	Treatment Name	Rate	Appl Code	
		Rate Unit		11
7	ALITE 27	2.0 fl oz/a	A	98.1
	BOUNDARY	24.0 fl oz/a	A	
	ROUNDUP POWERMAX	32.0 fl oz/a	A	
	2,4-D LV6	10.7 fl oz/a	A	
	Amsol AMS	17.0 lb ai/100 gal	A	
	MSO	1.0 % v/v	A	
	LIBERTY 280 SL	32.0 fl oz/a	B	
	ROUNDUP POWERMAX	32.0 fl oz/a	B	
	Amsol AMS	17.0 lb ai/100 gal	B	
8	AUTHORITY ASSIST	5.0 fl oz/a	A	99.8
	ROUNDUP POWERMAX	32.0 fl oz/a	A	
	2,4-D LV6	10.7 fl oz/a	A	
	Amsol AMS	17.0 lb ai/100 gal	A	
	MSO	1.0 % v/v	A	
	LIBERTY 280 SL	32.0 fl oz/a	B	
9	ALITE 27	2.0 fl oz/a	A	99.7
	AUTHORITY ASSIST	5.0 fl oz/a	A	
	ROUNDUP POWERMAX	32.0 fl oz/a	A	
	2,4-D LV6	10.7 fl oz/a	A	
	Amsol AMS	17.0 lb ai/100 gal	A	
	MSO	1.0 % v/v	A	
	LIBERTY 280 SL	32.0 fl oz/a	B	
10	ALITE 27	3.0 fl oz/a	A	99.7
	ROUNDUP POWERMAX	32.0 fl oz/a	A	
	2,4-D LV6	10.7 fl oz/a	A	
	Amsol AMS	17.0 lb ai/100 gal	A	
	MSO	1.0 % v/v	A	
	LIBERTY 280 SL	32.0 fl oz/a	B	
LSD P=.05				1.29 - 1.81
Standard Deviation				4.49t
CV				5.73t
Replicate F				4.133
Replicate Prob(F)				0.0156
Treatment F				151.890
Treatment Prob(F)				0.0001

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University of Kentucky

ALITE 27 / LIBERTYLINK GT27 SOYBEAN SYSTEM CONSERVATION TILL

Trial ID: 19-9 SOY-FUL Location: Fulton County Trial Year: 2019
Protocol ID: MKD-H-2019-US-D62-A-04.0 Investigator: Travis Legleiter
Project ID: Study Director: Darren Unland
Sponsor Contact: Greg Stapleton

Pest Type

W, Weed = Weed or volunteer crop

Pest Code

AMAPA, Amaranthus palmeri, Palmer amaranth = US

PANDI, Panicum dichotomiflorum, Fall panicum = US

Crop Type Code

C = EPPO species (Bayer) codes

GLXMA, BSOY, Glycine max, Soybean = US

Part Rated

PLANT = plant

C = Crop is Part Rated

P = Pest is Part Rated

Rating Type

PHYGEN = phytotoxicity - general / injury

Rating Unit

% = percent

ARM Action Codes

ET6 = Excluded treatment 6

AA = Automatic arcsine square root % transformation

University of Kentucky

Gramoxone Magnum (A22102F): Burndown and Residual Weed Control - University

Trial ID: USNG0H3512019 Location: Cully Scott FS Trial Year: 2019
 Protocol ID: HPQ251A4-2019US Investigator: Scott Cully
 Master Protocol ID: Study Director:
 Conducted Under GEP: No Sponsor Contact:
 Trial Origin:

General Trial Information

Investigator: Scott Cully

Discipline: H herbicide
Trial Status: E established
Trial Status Date: 6-20-2019 12:00 AM **Last Export Date:** 12-30-1899 12:00 AM **Last Changed By:** Travis Legleiter
ARM Trial Created On: 4-8-2019 **Protocol Revision Number:** 3.0 **Protocol Revision Date:** 4-8-2019

Trial Location

City: Princeton
State/Prov.: Kentucky
Postal Code: 42445

Latitude of LL Corner °: 37.0971 N
Longitude of LL Corner °: 87.856 W

Conducted Under GLP: No
Conducted Under GEP: No

Investigator: Scott Cully
Organization: Syngenta
Address: 17256 New Dennison Rd. **Phone No.:** 618-982-9224
City+State/Prov: Marion, IL **Mobile No.:** 618-751-0715
Postal Code: 62959 **E-mail:** scott.cully@syngenta.com
Cooperator/Landowner
Cooperator: Travis Legleiter **Role:** UNVCOP
Organization: University of Kentucky
Address 1: 1205 Hopkinsville Street
City: Princeton **Phone No.:** 859-562-1323
State/Prov: KY
Postal Code: 42445
E-mail: Travis.Legleiter@uky.edu

Crop Description

Crop 1: C GLXMA Glycine max Soybean **BBCH Scale:** BSOY
Variety: AG42X6
Attributes: RR2Xtend
Planting Date: 5-23-2019 **Planting Rate:** 140000 S/A
Depth: 1 IN **Planting Method:** PLANTD planted
Rows per Plot: 7 **Planting Equipment:** VP vacuum planter
Row Spacing: 15 IN **Soil Moisture:** DRY dry
Emergence Date: 5-28-2019

Pest Description

Pest 1 Type: W **Code:** SETFA *Setaria faberi*
Common Name: Giant foxtail

Pest 2 Type: W **Code:** DIGSA *Digitaria sanguinalis*
Common Name: large crabgrass

Pest 3 Type: W **Code:** AMBTR *Ambrosia trifida*
Common Name: Giant ragweed

Pest 4 Type: W **Code:** ERICA *Erigeron canadensis*
Common Name: Canada horseweed

Pest 5 Type: W **Code:** AMARE *Amaranthus retroflexus*
Common Name: Redroot pigweed

Pest 6 Type: W **Code:** AMBEL *Ambrosia artemisiifolia*
Common Name: Common ragweed

Pest 7 Type: W **Code:** IPOSS *Ipomoea sp.*
Common Name: Morning glory

Pest 8 Type: W **Code:** SORHA *Sorghum halepense*
Common Name: Johnson grass

University of Kentucky

Site and Design Treated Plot Width: 10 FT Treated Plot Length: 30 FT Treated Plot Area: 300 FT ² Treatments: 6 Replications: 4	Site Type: FIELD field Experimental Unit: 1 PLOT plot Tillage Type: NOTILL no-till Study Design: RACOB L Randomized Complete Block (RCB)
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Maintenance									
No.	Date	Type	Maintenance Product Name	Form Conc	Form Unit	Form Type	Description	Rate	Rate Unit
1.	4-12-2019	HERB	ROUNDUP POWERMAX 4.5 SL	540	gAE/L	SL	Early spring Burndown	32	FL OZ/A

Soil Description % Sand: 4 % OM: 3 Texture: SIL silt loam % Silt: 77 Soil Name: Crider Silt Loam % Clay: 19	
---	--

Moisture and Weather Conditions Overall Moisture Conditions: ABONOR above normal Closest Weather Station: Princeton Mesonet Station Distance: 0.25 MI	
--	--

Application Description	
	A
Application Date	5-24-2019
Appl. Start Time	6:44 AM
Appl. Stop Time	7:00 AM
Application Method	SPRAY
Application Timing	PREPLA
Application Placement	BROFOL
Applied By	ZP
Air Temperature Start, Stop	72 72 F
% Relative Humidity Start, Stop	78 78
Wind Velocity+Dir. Start	0 MPH
Wind Velocity+Dir. Stop	0 MPH
Wet Leaves (Y/N)	Y yes
Soil Temperature	70 F
Soil Moisture	SLIWET
% Cloud Cover	0

Crop Stage At Each Application	
	A
Crop 1 Code, BBCH Scale	GLXMA BSOY

Pest Stage At Each Application	
	A
Pest 1 Code, Type, Scale	SETFA W DESC
Stage Majority, Percent	12
Stage Minimum, Percent	11
Stage Maximum, Percent	12
Height Average	5 IN
Height Minimum, Maximum	4 6
Density Average	9 FT ²
Density Min, Max	2 16
Pest 2 Code, Type, Scale	DIGSA W DESC
Stage Majority, Percent	13
Stage Minimum, Percent	12
Stage Maximum, Percent	13
Height Average	2.5 IN
Height Minimum, Maximum	2 3
Density Average	16 FT ²
Density Min, Max	1 32

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Pest 3 Code, Type, Scale	AMBTR W DESC
Stage Majority, Percent	14
Stage Minimum, Percent	13
Stage Maximum, Percent	14
Height Average	5.5 IN
Height Minimum, Maximum	5 6
Density Average	3 FT2
Density Min, Max	0 8
Pest 4 Code, Type, Scale	ERICA W BBCH
Height Average	4 IN
Height Minimum, Maximum	3 6
Density Average	0.5 FT2
Density Min, Max	0 1
Pest 5 Code, Type, Scale	AMARE W DESC
Stage Majority, Percent	13
Stage Minimum, Percent	12
Stage Maximum, Percent	13
Height Average	0.75 IN
Height Minimum, Maximum	0.5 1
Density Average	0.5 FT2
Density Min, Max	0 1
Pest 6 Code, Type, Scale	AMBEL W DESC
Stage Majority, Percent	12
Stage Minimum, Percent	11
Stage Maximum, Percent	13
Height Average	2 IN
Height Minimum, Maximum	1 3
Density Average	0.5 FT2
Density Min, Max	0 1
Pest 7 Code, Type, Scale	IPOSS W DESC
Stage Majority, Percent	13
Stage Minimum, Percent	11
Stage Maximum, Percent	12
Height Average	1.5 IN
Height Minimum, Maximum	1 3
Density Average	0.5 FT2
Density Min, Max	0 1
Pest 8 Code, Type, Scale	SORHA W DESC
Stage Majority, Percent	14
Stage Minimum, Percent	13
Stage Maximum, Percent	14
Height Average	6 IN
Height Minimum, Maximum	4 8
Density Average	2 FT2
Density Min, Max	0 5

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Application Equipment	
	A
Appl. Equipment	CO2 Backpack
Equipment Type	BACCAI
Operation Pressure	32 PSI
Nozzle Type	FLAFXR
Nozzle Size	02
Nozzle Spacing	20 IN
Boom Length	10 FT
Boom Height	18 IN
Ground Speed	3 MPH
Carrier	H2O
Application Amount	15 GAL/AC
Mix Overage	436 mL
Mix Size	2 L
Propellant	COMCO2

Context	Date	By	Notes
STATUS	4-8-2019	Scott Cully	Automatically added by ARM: Trial Status updated to 'S' during trial creation.
STATUS	6-20-2019	Travis Legleiter	Automatically added by ARM: Trial Status updated to 'E' when Planting Date entered.

SE Definitions		
	1.	2.
Rating Timing	1	2
SE Name	ZUSW001	ZUSX001
SE Description	%CONTR OL	%PHYTO- GENERAL
Part Rated	PLANT	PLANT
Rating Type	CONTRO	PHYGEN
Rating Unit	%	%
Sample Size	1 PLOT	1 PLOT
Collection Basis	1 PLOT	1 PLOT
Reporting Basis	1 PLOT	1 PLOT
Calculation	NC	NC
Crop Type, Code	C	C

No. Task Comment

- 1. 1
- 2. 2

University of Kentucky

Gramoxone Magnum (A22102F): Burndown and Residual Weed Control - University

Trial ID: USNG0H3512019	Location: Cully Scott FS	Trial Year: 2019
Protocol ID: HPQ251A4-2019US	Investigator: Scott Cully	
Master Protocol ID:	Study Director:	
	Sponsor Contact:	
Conducted Under GEP: No	Trial Origin:	

Pest ID Code	2 W Weed	8 W Weed	1 W Weed	4 W Weed				
Pest Code	DIGSA	SORHA	SETFA	ERICA				
Pest Scientific Name	Digitaria sanguinalis	Sorghum halepense	Setaria faberi	Erigeron canadensis				
Pest Name	large crabgrass	Johnson grass	Giant foxtail	Canada horseweed				
Rating Date	5-31-2019	5-31-2019	5-31-2019	5-31-2019				
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P				
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO				
Rating Unit	%	%	%	%				
Number of Subsamples	1	1	1	1				
Days After First/Last Applic.	7 7	7 7	7 7	7 7				
Trt-Eval Interval	7 DA-A	7 DA-A	7 DA-A	7 DA-A				
Plant-Eval Interval	8 DP-1	8 DP-1	8 DP-1	8 DP-1				
Days After Emergence	3 DE-1	3 DE-1	3 DE-1	3 DE-1				
ARM Action Codes			AA					
Trt No.	Treatment Name	Rate	Appl Unit	Code	1	2	3	4
1	UNTREATED CHECK				0.0	0.0	0.0	0.0
2	NIS GRAMOXONE MAGNUM 400 EW	0.25 % v/v 1870 g ai/ha	A A		75.0	30.0	76.0	100.0
3	NIS GRAMOXONE MAGNUM 400 EW	0.25 % v/v 2340 g ai/ha	A A		85.0	27.5	82.9	100.0
4	NIS GRAMOXONE 3 LB SL	0.25 % v/v 749 g ai/ha	A A		87.5	10.0	91.1	100.0
5	NIS METRIBUZIN 75 DF GRAMOXONE MAGNUM 400 EW	0.25 % v/v 420 g ai/ha 1870 g ai/ha	A A A		100.0	87.5	100.0	100.0
6	NIS METRIBUZIN 75 DF 2,4-D ESTER 3.8 EC (AE) GRAMOXONE MAGNUM 400 EW	0.25 % v/v 420 g ai/ha 560 g ai/ha 1870 g ai/ha	A A A A		100.0	85.0	100.0	100.0
LSD P=.05					9.83	26.82	7.17 - 18.33	.
Standard Deviation					6.52	17.80	10.31t	0.00
CV					8.74	44.49	16.33t	0.0
Replicate F					1.471	1.158	3.904	0.000
Replicate Prob(F)					0.2625	0.3584	0.0303	1.0000
Treatment F					134.216	17.779	41.650	0.000
Treatment Prob(F)					0.0001	0.0001	0.0001	1.0000

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 Could not calculate LSD (% mean diff) for columns 4,5,9,10 because error mean square = 0.

University of Kentucky

Pest ID Code	6 W Weed	2 W Weed	8 W Weed	1 W Weed		
Pest Code	AMBEL	DIGSA	SORHA	SETFA		
Pest Scientific Name	Ambrosia artemisiif>	Digitaria sanguinal>	Sorghum halepense	Setaria faberi		
Pest Name	Common ragweed	large crabgrass	Johnson grass	Giant foxtail		
Rating Date	5-31-2019	6-5-2019	6-5-2019	6-5-2019		
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%		
Number of Subsamples	1	1	1	1		
Days After First/Last Applic.	7 7	12 12	12 12	12 12		
Trt-Eval Interval	7 DA-A	12 DA-A	12 DA-A	12 DA-A		
Plant-Eval Interval	8 DP-1	13 DP-1	13 DP-1	13 DP-1		
Days After Emergence	3 DE-1	8 DE-1	8 DE-1	8 DE-1		
ARM Action Codes						
Trt Treatment No. Name	Rate Rate Unit	Appl Code	5	6	7	8
1 UNTREATED CHECK			0.0	0.0	0.0	0.0
2 NIS GRAMOXONE MAGNUM 400 EW	0.25 % v/v A 1870 g ai/ha A		100.0	75.0	55.0	75.0
3 NIS GRAMOXONE MAGNUM 400 EW	0.25 % v/v A 2340 g ai/ha A		100.0	86.3	62.5	88.8
4 NIS GRAMOXONE 3 LB SL	0.25 % v/v A 749 g ai/ha A		100.0	84.3	65.0	89.3
5 NIS METRIBUZIN 75 DF GRAMOXONE MAGNUM 400 EW	0.25 % v/v A 420 g ai/ha A 1870 g ai/ha A		100.0	100.0	94.3	100.0
6 NIS METRIBUZIN 75 DF 2,4-D ESTER 3.8 EC (AE) GRAMOXONE MAGNUM 400 EW	0.25 % v/v A 420 g ai/ha A 560 g ai/ha A 1870 g ai/ha A		100.0	100.0	96.8	100.0
LSD P=.05				8.53	18.80	11.36
Standard Deviation			0.00	5.66	12.47	7.54
CV			0.0	7.62	20.04	9.99
Replicate F			0.000	2.141	0.609	3.009
Replicate Prob(F)			1.0000	0.1378	0.6191	0.0633
Treatment F			0.000	177.094	31.617	102.273
Treatment Prob(F)			1.0000	0.0001	0.0001	0.0001

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 Could not calculate LSD (% mean diff) for columns 4,5,9,10 because error mean square = 0.

University of Kentucky

Pest ID Code	4 W Weed	6 W Weed	7 W Weed	5 W Weed
Pest Code	ERICA	AMBEL	IPOSS	AMARE
Pest Scientific Name	Erigeron canadensis	Ambrosia artemisiif>	Ipomoea sp.	Amaranthus retrofle>
Pest Name	Canada horseweed	Common ragweed	Morning glory	Redroot pigweed
Rating Date	6-5-2019	6-5-2019	6-20-2019	6-20-2019
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%
Number of Subsamples	1	1	1	1
Days After First/Last Applic.	12 12	12 12	27 27	27 27
Trt-Eval Interval	12 DA-A	12 DA-A	27 DA-A	27 DA-A
Plant-Eval Interval	13 DP-1	13 DP-1	28 DP-1	28 DP-1
Days After Emergence	8 DE-1	8 DE-1	23 DE-1	23 DE-1
ARM Action Codes				
Trt No.	Treatment Name	Rate	Appl	
		Rate Unit	Code	
				9 10 11 12
1	UNTREATED CHECK			0.0 0.0 0.0 0.0
2	NIS GRAMOXONE MAGNUM 400 EW	0.25 % v/v A 1870 g ai/ha A	A	100.0 100.0 90.0 80.0
3	NIS GRAMOXONE MAGNUM 400 EW	0.25 % v/v A 2340 g ai/ha A	A	100.0 100.0 88.8 70.0
4	NIS GRAMOXONE 3 LB SL	0.25 % v/v A 749 g ai/ha A	A	100.0 100.0 0.0 0.0
5	NIS METRIBUZIN 75 DF GRAMOXONE MAGNUM 400 EW	0.25 % v/v A 420 g ai/ha A 1870 g ai/ha A	A	100.0 100.0 88.8 60.0
6	NIS METRIBUZIN 75 DF 2,4-D ESTER 3.8 EC (AE) GRAMOXONE MAGNUM 400 EW	0.25 % v/v A 420 g ai/ha A 560 g ai/ha A 1870 g ai/ha A	A	100.0 100.0 91.3 61.3
LSD P=.05				. . 8.05 30.22
Standard Deviation				0.00 0.00 5.34 20.05
CV				0.0 0.0 8.94 44.36
Replicate F				0.000 0.000 0.328 4.879
Replicate Prob(F)				1.0000 1.0000 0.8048 0.0146
Treatment F				0.000 0.000 300.737 12.709
Treatment Prob(F)				1.0000 1.0000 0.0001 0.0001

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 Could not calculate LSD (% mean diff) for columns 4,5,9,10 because error mean square = 0.

University of Kentucky

Gramoxone Magnum (A22102F): Burndown and Residual Weed Control - University

Trial ID: USNG0H3512019	Location: Cully Scott FS	Trial Year: 2019
Protocol ID: HPQ251A4-2019US	Investigator: Scott Cully	
Master Protocol ID:	Study Director:	
	Sponsor Contact:	
Conducted Under GEP: No	Trial Origin:	

Pest ID Code

2, W, Weed, DIGSA, Digitaria sanguinalis, large crabgrass, = 2, W, Weed, DIGSA, Digitaria sanguinalis, large crabgrass,
 8, W, Weed, SORHA, Sorghum halepense, Johnson grass, = 8, W, Weed, SORHA, Sorghum halepense, Johnson grass,
 1, W, Weed, SETFA, Setaria faberi, Giant foxtail, = 1, W, Weed, SETFA, Setaria faberi, Giant foxtail,
 4, W, Weed, ERICA, Erigeron canadensis, Canada horseweed, = 4, W, Weed, ERICA, Erigeron canadensis, Canada horseweed,
 6, W, Weed, AMBEL, Ambrosia artemisiifolia, Common ragweed, = 6, W, Weed, AMBEL, Ambrosia artemisiifolia, Common ragweed,
 7, W, Weed, IPOSS, Ipomoea sp., Morning glory, = 7, W, Weed, IPOSS, Ipomoea sp., Morning glory,
 5, W, Weed, AMARE, Amaranthus retroflexus, Redroot pigweed, = 5, W, Weed, AMARE, Amaranthus retroflexus, Redroot pigweed,

Part Rated

PLANT = plant
 P = Pest is Part Rated

Rating Type

CONTRO = control / burndown or knockdown

Rating Unit

% = percent

Plant-Eval Interval

8 DP-1 = 1 GLXMA 5-23-2019
 13 DP-1 = 1 GLXMA 5-23-2019
 28 DP-1 = 1 GLXMA 5-23-2019

ARM Action Codes

AA = Automatic arcsine square root % transformation

University of Kentucky

Tavium Plus VaporGrip Technology - University testing program in RR2 Xtend soybeans

Trial ID: USNG0H3502019 Location: Cully Scott FS Trial Year: 2019
 Protocol ID: HDC050A4-2019US Investigator: Scott Cully
 Master Protocol ID: Study Director:
 Conducted Under GEP: No Sponsor Contact:
 Trial Origin:

General Trial Information

Investigator: Scott Cully

Discipline: H herbicide
Trial Status: E established
Trial Status Date: 8-27-2019 12:00 AM **Last Export Date:** 12-30-1899 12:00 AM **Last Changed By:** Travis Legleiter
ARM Trial Created On: 4-8-2019 **Protocol Revision Number:** 1.0 **Protocol Revision Date:** 4-1-2019

Trial Location

City: Hickman **Country:** USA United States
State/Prov.: Kentucky
Postal Code: 42050

Latitude of LL Corner °: 36.563756 N
Longitude of LL Corner °: 89.124908 W

Conducted Under GLP: No
Conducted Under GEP: No

Investigator: Scott Cully
Organization: Syngenta
Address: 17256 New Dennison Rd. **Phone No.:** 618-982-9224
City+State/Prov: Marion, IL **Mobile No.:** 618-751-0715
Postal Code: 62959 **E-mail:** scott.cully@syngenta.com
Cooperator/Landowner
Cooperator: Traivs Legleiter **Role:** UNVCOP
Organization: University of Kentucky
Address 1: 1205 Hopkinsville Street
City: Princeton **Phone No.:** 859-562-1323
State/Prov: KY
Postal Code: 42445

Crop Description

Crop 1: C GLXMA Glycine max Soybean **BBCH Scale:** BSOY
Entry Date: 8-27-2019
Variety: 42X6
Attributes: GLYPHOSATE-R,AUXIN-R

Planting Date: 6-4-2019 **Planting Rate:** 140000 S/A
Depth: 1 IN **Planting Method:** PLANTD planted
Rows per Plot: 7 **Planting Equipment:** VP vacuum planter
Row Spacing: 15 IN **Soil Moisture:** WET wet

Pest Description

Pest 1 Type: W **Code:** AMAPA *Amaranthus palmeri*
Common Name: Palmer amaranth **Entry Date:** 8-27-2019

Pest 2 Type: W **Code:** PANDI *Panicum dichotomiflorum*
Common Name: Fall panicum **Entry Date:** 8-27-2019

Pest 3 Type: W **Code:** ELEIN *Eleusine indica*
Common Name: Goosegrass **Entry Date:** 8-27-2019

Pest 4 Type: W **Code:** MOLVE *Mollugo verticillata*
Common Name: Carpetweed **Entry Date:** 8-27-2019

Site and Design

Treated Plot Width: 10 FT **Site Type:** FIELD field
Treated Plot Length: 30 FT **Experimental Unit:** 1 PLOT plot
Treated Plot Area: 300 FT2 **Treatments:** 6 **Tillage Type:** NOTILL no-till
Replications: 4 **Study Design:** RACOB� Randomized Complete Block (RCB)

University of Kentucky

Maintenance											
No.	Date	Type	Maintenance Product Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit	Tank Mix Code	Tank Mix	
1.	5-31-2019	HERB	ROUNDUP POWERMAX 4.5 SL	540	gAE/L	SL	32	FL OZ/A	Y	yes	
2.	5-31-2019	HERB	LIBERTY 2.34 SL	280	gA/L	SL	32	FL OZ/A	Y	yes	

Soil Description

% Sand: 6 % OM: 2.5 Texture: SIL silt loam
 % Silt: 79 Soil Name: Grenada silt loam
 % Clay: 15

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR above normal
 Closest Weather Station: Hickman Mesonet Distance: 2 MI

Application Description

	A	B
Application Date	6-4-2019	6-28-2019
Appl. Start Time	12:18 PM	8:47 AM
Appl. Stop Time	12:45 PM	9:02 AM
Interval to Prev. Appl.		24 DAYS
Application Method	BROADC	BROADC
Application Timing	PREPRE	POSPOS
Application Placement	BROSOI	BROFOL
Appl. Entry Date	8-27-2019	8-27-2019
Air Temperature Start, Stop	81 F	89 F
% Relative Humidity Start, Stop	77	47
Wind Velocity+Dir. Start	5.5 MPH S	1.9 MPH SE
Wind Velocity+Dir. Max		2.8 MPH SE
Wet Leaves (Y/N)	N no	N no
Soil Temperature	81 F	75 F
Soil Moisture	wet	wet
% Cloud Cover	25	45

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale	GLXMA BSOY	GLXMA BSOY

University of Kentucky

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale	AMAPA W	AMAPA W
Height Average		3 IN
Height Minimum, Maximum		0.5 4.5
Density Average		8 FT2
Density Min, Max		1 15
Pest 2 Code, Type, Scale	PANDI W	PANDI W
Height Average		2 IN
Height Minimum, Maximum		0.5 3
Density Average		5 FT2
Density Min, Max		1 9
Pest 3 Code, Type, Scale	ELEIN W	ELEIN W
Height Average		1 IN
Height Minimum, Maximum		0.5 2
Density Average		1 FT2
Density Min, Max		0 2
Pest 4 Code, Type, Scale	MOLVE W	MOLVE W
Height Average		0.5 IN
Height Minimum, Maximum		0.25 0.5
Density Average		10 FT2
Density Min, Max		0 40

Application Equipment

	A	B
Appl. Equipment	CO2 BACKPACK	CO2 BACKPACK
Equipment Type	BACCAI	BACCAI
Operation Pressure	32 PSI	48 PSI
Nozzle Type	FLAFXR	TTI110015
Nozzle Size	02	015
Nozzle Spacing	20 IN	20 IN
Boom Length	10 FT	10 FT
Boom Height	18 IN	18 IN
Ground Speed	3 MPH	3 MPH
Carrier	WATER	WATER
Application Amount	15 GAL/AC	15 GAL/AC
Mix Overage	436 mL	436 mL
Mix Size	2 L	2 L
Propellant	COMCO2	COMCO2

University of Kentucky

Tavium Plus VaporGrip Technology - University testing program in RR2 Xtend soybeans

Trial ID: USNG0H3502019	Location: Cully Scott FS	Trial Year: 2019
Protocol ID: HDC050A4-2019US	Investigator: Scott Cully	
Master Protocol ID:	Study Director:	
	Sponsor Contact:	
Conducted Under GEP: No	Trial Origin:	

Pest ID Code	1 W Weed	2 W Weed	1 GLXMA	1 GLXMA		
Pest Code	AMAPA	PANDI				
Pest Scientific Name	Amaranthus palmeri	Panicum dichotomifolium				
Pest Name	Palmer amaranth	Fall panicum				
Crop ID Code	1 GLXMA	1 GLXMA	1 GLXMA	1 GLXMA		
BBCH Scale	BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name	Soybean	Soybean	Soybean	Soybean		
Crop Variety	42X6	42X6	42X6	42X6		
Rating Date	6-28-2019	6-28-2019	6-28-2019	7-3-2019		
Part Rated	PLANT C	PLANT P	PLANT P	PLANT C		
Rating Type	PHYGEN	CONTRO	CONTRO	PHYGEN		
Rating Unit	%	%	%	%		
Number of Subsamples	1	1	1	1		
Data Entry Date	8-27-2019	8-27-2019	8-27-2019	8-27-2019		
Days After First/Last Applic.	24 24	24 24	24 24	29 5		
Plant-Eval Interval	24 DP-1	24 DP-1	24 DP-1	29 DP-1		
Trt Treatment No. Name	Rate Unit	Appl Code	2	3	4	5
1 UNTREATED CHECK			0.0	0.0	0.0	0.0
2 BOUNDARY 6.5 EC	1640 g ai/ha	A	0.0	78.8	95.0	0.0
INTACT	0.5 % v/v	B				
CLASS ACT RIDION	1 % v/v	B				
TAVIUM PLUS VAPORGRIP TECH	1680 g ae/ha	B				
ROUNDUP POWERMAX 4.5 SL	1120 g ae/ha	B				
3 BROADAXE XC 7 EC	1530 g ai/ha	A	0.0	87.5	81.3	0.0
INTACT	0.5 % v/v	B				
CLASS ACT RIDION	1 % v/v	B				
TAVIUM PLUS VAPORGRIP TECH	1680 g ae/ha	B				
ROUNDUP POWERMAX 4.5 SL	1120 g ae/ha	B				
4 PREFIX [F]	1480 g ai/ha	A	0.0	91.0	95.0	0.0
INTACT	0.5 % v/v	B				
CLASS ACT RIDION	1 % v/v	B				
TAVIUM PLUS VAPORGRIP TECH	1680 g ae/ha	B				
ROUNDUP POWERMAX 4.5 SL	1120 g ae/ha	B				
5 VALOR XLT 40.3 WG	85 g ai/ha	A	0.0	92.5	99.3	0.0
INTACT	0.5 % v/v	B				
CLASS ACT RIDION	1 % v/v	B				
XTENDIMAX 2.9 SL	563 g ae/ha	B				
ROUNDUP POWERMAX 4.5 SL	1120 g ae/ha	B				
6 ZIDUA PRO 4.09 SC	161 g ai/ha	A	0.0	94.3	91.3	0.0
INTACT	0.5 % v/v	B				
CLASS ACT RIDION	1 % v/v	B				
ENGENIA 5 EC	560 g ae/ha	B				
ROUNDUP POWERMAX 4.5 SL	1120 g ae/ha	B				
LSD P=.05			0.00	9.69	16.05	0.00
Standard Deviation			0.0	6.43	10.65	0.00
CV				8.69	13.84	0.0
Replicate F			0.000	2.171	1.154	0.000
Replicate Prob(F)			1.0000	0.1339	0.3597	1.0000
Treatment F			0.000	130.071	51.437	0.000
Treatment Prob(F)			1.0000	0.0001	0.0001	1.0000

Could not calculate LSD (% mean diff) for columns 2,5,8,10,11 because error mean square = 0.

University of Kentucky

	1 W Weed	2 W Weed		1 W Weed
Pest ID Code	AMAPA	PANDI		AMAPA
Pest Code	Amaranthus palmeri	Panicum dichotomifl>		Amaranthus palmeri
Pest Scientific Name	Palmer amaranth	Fall panicum		Palmer amaranth
Pest Name	1 GLXMA	1 GLXMA	1 GLXMA	1 GLXMA
Crop ID Code	BSOY	BSOY	BSOY	BSOY
BBCH Scale	Glycine max	Glycine max	Glycine max	Glycine max
Crop Scientific Name	Soybean	Soybean	Soybean	Soybean
Crop Name	42X6	42X6	42X6	42X6
Crop Variety	7-3-2019	7-3-2019	7-11-2019	7-11-2019
Rating Date	PLANT P	PLANT P	PLANT C	PLANT P
Part Rated	CONTRO	CONTRO	PHYGEN	CONTRO
Rating Type	%	%	%	%
Rating Unit	1	1	1	1
Number of Subsamples	8-27-2019	8-27-2019	8-27-2019	8-27-2019
Data Entry Date	29 5	29 5	37 13	37 13
Days After First/Last Applic.	29 DP-1	29 DP-1	37 DP-1	37 DP-1
Plant-Eval Interval				
Trt Treatment	Rate	Rate	Rate	Rate
No. Name	Unit	Unit	Unit	Unit
	Code	Code	Code	Code
	6	7	8	9
1 UNTREATED CHECK	0.0	0.0	0.0	0.0
2 BOUNDARY 6.5 EC	1640 g ai/ha A	100.0	0.0	100.0
INTACT	0.5 % v/v B			
CLASS ACT RIDION	1 % v/v B			
TAVIUM PLUS VAPORGRIP TECH	1680 g ae/ha B			
ROUNDUP POWERMAX 4.5 SL	1120 g ae/ha B			
3 BROADAXE XC 7 EC	1530 g ai/ha A	99.3	0.0	99.3
INTACT	0.5 % v/v B			
CLASS ACT RIDION	1 % v/v B			
TAVIUM PLUS VAPORGRIP TECH	1680 g ae/ha B			
ROUNDUP POWERMAX 4.5 SL	1120 g ae/ha B			
4 PREFIX [F]	1480 g ai/ha A	100.0	0.0	100.0
INTACT	0.5 % v/v B			
CLASS ACT RIDION	1 % v/v B			
TAVIUM PLUS VAPORGRIP TECH	1680 g ae/ha B			
ROUNDUP POWERMAX 4.5 SL	1120 g ae/ha B			
5 VALOR XLT 40.3 WG	85 g ai/ha A	100.0	0.0	100.0
INTACT	0.5 % v/v B			
CLASS ACT RIDION	1 % v/v B			
XTENDIMAX 2.9 SL	563 g ae/ha B			
ROUNDUP POWERMAX 4.5 SL	1120 g ae/ha B			
6 ZIDUA PRO 4.09 SC	161 g ai/ha A	100.0	0.0	98.5
INTACT	0.5 % v/v B			
CLASS ACT RIDION	1 % v/v B			
ENGENIA 5 EC	560 g ae/ha B			
ROUNDUP POWERMAX 4.5 SL	1120 g ae/ha B			
LSD P=.05	2.79	0.92	.	1.33
Standard Deviation	1.85	0.61	0.00	0.88
CV	2.29	0.74	0.0	1.06
Replicate F	2.136	1.000	0.000	1.774
Replicate Prob(F)	0.1384	0.4199	1.0000	0.1952
Treatment F	1836.146	17725.446	0.000	8526.764
Treatment Prob(F)	0.0001	0.0001	1.0000	0.0001

Could not calculate LSD (% mean diff) for columns 2,5,8,10,11 because error mean square = 0.

University of Kentucky

Pest ID Code	2 W Weed		1 W Weed		2 W Weed	
Pest Code	PANDI		AMAPA		PANDI	
Pest Scientific Name	Panicum dichotomifl>		Amaranthus palmeri		Panicum dichotomifl>	
Pest Name	Fall panicum		Palmer amaranth		Fall panicum	
Crop ID Code	1 GLXMA	1 GLXMA	1 GLXMA	1 GLXMA	1 GLXMA	1 GLXMA
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max		Glycine max		Glycine max	
Crop Name	Soybean		Soybean		Soybean	
Crop Variety	42X6		42X6		42X6	
Rating Date	7-11-2019	7-23-2019	7-23-2019	7-23-2019	7-23-2019	7-23-2019
Part Rated	PLANT P	PLANT C	PLANT P	PLANT P	PLANT P	PLANT P
Rating Type	CONTRO	PHYGEN	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%	%
Number of Subsamples	1	1	1	1	1	1
Data Entry Date	8-27-2019	8-27-2019	8-27-2019	8-27-2019	8-27-2019	8-27-2019
Days After First/Last Applic.	37 13	49 25	49 25	49 25	49 25	49 25
Plant-Eval Interval	37 DP-1	49 DP-1	49 DP-1	49 DP-1	49 DP-1	49 DP-1
Trt Treatment No. Name	Rate	Appl Code	10	11	12	13
1 UNTREATED CHECK			0.0	0.0	0.0	0.0
2 BOUNDARY 6.5 EC	1640 g ai/ha	A	100.0	0.0	99.3	100.0
INTACT	0.5 % v/v	B				
CLASS ACT RIDION	1 % v/v	B				
TAVIUM PLUS VAPORGRIP TECH	1680 g ae/ha	B				
ROUNDUP POWERMAX 4.5 SL	1120 g ae/ha	B				
3 BROADAXE XC 7 EC	1530 g ai/ha	A	100.0	0.0	100.0	100.0
INTACT	0.5 % v/v	B				
CLASS ACT RIDION	1 % v/v	B				
TAVIUM PLUS VAPORGRIP TECH	1680 g ae/ha	B				
ROUNDUP POWERMAX 4.5 SL	1120 g ae/ha	B				
4 PREFIX [F]	1480 g ai/ha	A	100.0	0.0	100.0	100.0
INTACT	0.5 % v/v	B				
CLASS ACT RIDION	1 % v/v	B				
TAVIUM PLUS VAPORGRIP TECH	1680 g ae/ha	B				
ROUNDUP POWERMAX 4.5 SL	1120 g ae/ha	B				
5 VALOR XLT 40.3 WG	85 g ai/ha	A	100.0	0.0	100.0	98.0
INTACT	0.5 % v/v	B				
CLASS ACT RIDION	1 % v/v	B				
XTENDIMAX 2.9 SL	563 g ae/ha	B				
ROUNDUP POWERMAX 4.5 SL	1120 g ae/ha	B				
6 ZIDUA PRO 4.09 SC	161 g ai/ha	A	100.0	0.0	97.3	97.3
INTACT	0.5 % v/v	B				
CLASS ACT RIDION	1 % v/v	B				
ENGENIA 5 EC	560 g ae/ha	B				
ROUNDUP POWERMAX 4.5 SL	1120 g ae/ha	B				
LSD P=.05			.	.	1.56	1.94
Standard Deviation			0.00	0.00	1.03	1.29
CV			0.0	0.0	1.25	1.56
Replicate F			0.000	0.000	1.094	1.160
Replicate Prob(F)			1.0000	1.0000	0.3822	0.3575
Treatment F			0.000	0.000	6167.063	3934.303
Treatment Prob(F)			1.0000	1.0000	0.0001	0.0001

Could not calculate LSD (% mean diff) for columns 2,5,8,10,11 because error mean square = 0.

University of Kentucky

Tavium Plus VaporGrip Technology - University testing program in RR2 Xtend soybeans

Trial ID: USNG0H3502019	Location: Cully Scott FS	Trial Year: 2019
Protocol ID: HDC050A4-2019US	Investigator: Scott Cully	
Master Protocol ID:	Study Director:	
	Sponsor Contact:	
Conducted Under GEP: No	Trial Origin:	

Pest ID Code

1, W, Weed, AMAPA, Amaranthus palmeri, Palmer amaranth, = 1, W, Weed, AMAPA, Amaranthus palmeri, Palmer amaranth,
2, W, Weed, PANDI, Panicum dichotomiflorum, Fall panicum, = 2, W, Weed, PANDI, Panicum dichotomiflorum, Fall panicum,

Crop Type Code

= EPPO species (Bayer) codes
1, GLXMA, BSOY, Glycine max, Soybean, 42X6 = GLYPHOSATE-R,AUXIN-R

Part Rated

PLANT = plant
C = Crop is Part Rated
P = Pest is Part Rated

Rating Type

PHYGEN = phytotoxicity - general / injury
CONTRO = control / burndown or knockdown

Rating Unit

% = percent

Plant-Eval Interval

24 DP-1 = 1 GLXMA 6-4-2019
29 DP-1 = 1 GLXMA 6-4-2019
37 DP-1 = 1 GLXMA 6-4-2019
49 DP-1 = 1 GLXMA 6-4-2019

University of Kentucky

Corvus / Balance Flexx / Acetochlor / Corn / Competitors 19-20

Trial ID: HP19USAWMIUZW1 TD Number: LOCALCREATED Protocol Edition No.: 1.01
Project ID: LOCAL_PROJ
Project Number(s): 100 % N-3629 % 100 % LFISX005
Protocol Developer: Waddington, Mark
License User: Jones, Joshua

General Trial Information

Trial Initiation Date: 5-1-2019 **Protocol Edition No.:** 1.01
Trial Status: I **Trial Status Date:** 9-5-2019
Last change done by: Sara Carter **Date of last export:** 9-5-2019 4:38 PM
Trial Objectives fulfilled: FULLY
External Trial: X

Final Data Due: 12-31-2019 **Interim Data Due:** 8-30-2019

	1
TD Number(s):	LOCALCREATED

	1	2
TD Keyword(s):	DEMO	EFFICACY

License User: Jones, Joshua

Protocol Developer: Waddington, Mark
Department: Bayer CropScience LP

Trial Officer: EXTERN

Cooperator (Outside service): Sara Carter
Affiliation: University of Kentucky
Street: 105 Plant Sciences Building
City: Lexington
Postal Code: 40546
Telephone: 8595596710
E-Mail: sara.carter@uky.edu

Farmer Name: -

Site and Design

City: Lexington
Postal Code: 40511
County: Fayette
State/Province: KY
Country: USA

Latitude, Longitude of Trial Corners

Lower Left
Latitude: 38.118733
Longitude: -84.49366

No. of Replicates: 3 **No. of Treatments:** 10 **No. of Plots:** 30
Plot Width: 3.048 **Plot Length:** 13.41 **Length/Width Unit:** m
Plot Area: 40.88

Unit: m2
Test Type: TT01
Trial Design: RACOBL

Site Type: FIELD
Tillage Type: CONTIL
Most relevant weather station: SPINDLETOP
Distance/Unit: 2.4 KM

Previous Crops and Agricultural Chemicals

Previous Crops		Year
ZEAMD	C BCOR	2018

Soil Description

Soil Name: MAURY SILT LOAM
Texture: SIL **% Sand:** 6 **% Silt:** 62
% Clay: 32
% Organic Matter: 2.6
pH: 6.4 **Cation Exchange Capacity:** 18
Overall Soil Moisture Condition: WEWEDR

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Crop Description	
Crop 1: ZEAMD Zea mays L. ssp. indentata STU Corn, dent	Discipline: C Crop Scale: BCOR Use Group: A2
Variety: DKC 63-55	Seed/Plant Rate/Unit: 32000 OTHER
Seed/Planting Date: 5-1-2019	Depth/Unit: 3.8 CM
Emergence Crop Date: 5-8-2019	Planting Method: PLANTD Seed Bed: SMOOTH
Row Spacing/Unit: 76.2 CM	
Rows Per Plot: 6	
Planting Implement: FE	
Soil Temperature/Unit: 16 C	
Soil Moisture (at Planting): SLIDRY	

Target Description	
Target 1: AMBTR Ambrosia trifida L. Ragweed, giant	Discipline: W Target Scale: BDIC
Target 2: SETFA Setaria faberi HERRM. Foxtail, giant	Discipline: W Target Scale: BGRM
Target 3: IPOSS Ipomoea spec. Morningglory	Discipline: W Target Scale: BDIC

Application Description	
	A
Application Date	5-1-2019
Application Timing	PREMCR
Appl. Start - Time of Day	5:30 PM
Appl. Stop	6:00 PM
% Relative Humidity	70
Air Temperature/Unit	29 C
% Cloud Cover	50
Appl. Wind Strength	LIG
Wind Velocity/Unit	12.8 KPH
Wind Direction/Degrees	SW
Soil Temperature/Unit	29 C
Soil Moisture	SLIDRY
Soil Condition (surface)	SMOOTH
Problems with Application?	No

Crop Stage at Application	
	A
Crop 1/Disc./Scale	ZEAMD C BCOR
Days after Emergence	-7
Stage Majority/Percent	00

Target Stage at Application	
	A
Target 1/Disc./Scale	AMBTR W BDIC
Target 2/Disc./Scale	SETFA W BGRM
Target 3/Disc./Scale	IPOSS W BDIC

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Application Equipment

	A
Application Method	SPRAY
Application Placement	BROSOI
Application Equipment	BELSPR
Ground Speed/Unit	6.4 KPH
Propellant Type	COMCO2
Carrier	WATER
Appl./Slurry Volume	140.3
Appl./Slurry Volume Unit	L/HA
Minimum Mix/Treatment	1.7205 L
Mix Size/Unit	2.5 L
Operating Pressure/Unit	2.069 BAR
Spray Swath Width/Unit	3.048 M
Nozzle Type	FLAFAN
Nozzle Size	8002
Nozzle Spacing/Unit	50.8 CM
Boom Height/Unit	76.2 CM

University of Kentucky

Corvus / Balance Flexx / Acetochlor / Corn / Competitors 19-20

Trial ID: HP19USAWMIUZW1 TD Number: LOCALCREATED Protocol Edition No.: 1.01
 Project ID: LOCAL_PROJ
 Project Number(s): 100 % N-3629 % 100 % LFISX005
 Protocol Developer: Waddington, Mark
 License User: Jones, Joshua

Unique Col. ID	2	3	4	5	6	7	8
Orig./Calc. Flag	O	O	O	O	O	O	O
SE Group	1	1	1	1	1	2	3
Target		1 AMBTR	3 IPOSS	2 SETFA		1 AMBTR	3 IPOSS
-Disc./Scale		W BDIC	W BDIC	W BGRM		W BDIC	W BDIC
Crop	1 ZEAMD				1 ZEAMD		
-Disc./Scale	C BCOR				C BCOR		
Variety	DKC 63-55				DKC 63-55		
Assessment Type	PHYGEN	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO	CONTRO
Assessment Unit	%	%	%	%	%	%	%
Assessment Date	5-15-2019	5-15-2019	5-15-2019	5-15-2019	5-29-2019	5-29-2019	5-29-2019
Assessment Code	A2	A2	A2	A2	A4	A4	A4
Appl.-Ass.Interval	14 DAA	14 DAA	14 DAA	14 DAA	28 DAA	28 DAA	28 DAA
Days after first Appl.	14 DAA	14 DAA	14 DAA	14 DAA	28 DAA	28 DAA	28 DAA
Days after last Appl.	14 DAA	14 DAA	14 DAA	14 DAA	28 DAA	28 DAA	28 DAA
Plant.-Ass.Interval	14 DP1	14 DP1	14 DP1	14 DP1	28 DP1	28 DP1	28 DP1
Days after Emergence	7 DE1	7 DE1	7 DE1	7 DE1	21 DE1	21 DE1	21 DE1
Entry Entry/Trt. No.	1	2	3	4	5	6	7
Description							
Dose							
Dose Unit							
Appl. Code							
1 UNTREATED	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2 CORVUS AATREX	0.0	99.0	99.0	99.0	0.0	99.0	99.0
3 BALANCE FLEXX HERBICIDE AATREX	0.0	99.0	99.0	99.0	0.0	99.0	99.0
4 DEGREE EXTRA	0.0	99.0	99.0	99.0	0.0	99.0	99.0
5 CORVUS DEGREE EXTRA	0.0	99.0	99.0	99.0	0.0	99.0	99.0
6 BALANCE FLEXX HERBICIDE DEGREE EXTRA	0.0	99.0	99.0	99.0	0.0	99.0	99.0
7 HARNESS MAX AATREX	0.0	99.0	99.0	99.0	0.0	99.0	99.0
8 ACURON HERBICIDE	0.0	99.0	99.0	99.0	0.0	99.0	99.0
9 LUMAX	0.0	99.0	99.0	99.0	0.0	99.0	99.0
10 RESICORE HERBICIDE AATREX	0.0	99.0	99.0	99.0	0.0	99.0	99.0
LSD P=.05							
Standard Deviation	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CV	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Replicate F	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Replicate Prob(F)	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Treatment F	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Treatment Prob(F)	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,8,9,10,11,12,13 because error mean square = 0.

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Unique Col. ID	9	10	11	12	13	14	15			
Orig./Calc. Flag	0	0	0	0	0	0	0			
SE Group	4	5	5	5	5	6	6			
Target	2 SETFA		1 AMBTR	3 IPOSS	2 SETFA		1 AMBTR			
-Disc./Scale	W BGRM		W BDIC	W BDIC	W BGRM		W BDIC			
Crop		1 ZEAMD				1 ZEAMD				
-Disc./Scale		C BCOR				C BCOR				
Variety		DKC 63-55				DKC 63-55				
Assessment Type	CONTRO	PHYGEN	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO			
Assessment Unit	%	%	%	%	%	%	%			
Assessment Date	5-29-2019	6-12-2019	6-12-2019	6-12-2019	6-12-2019	6-26-2019	6-26-2019			
Assessment Code	A4	A6	A6	A6	A6	A8	A8			
Appl.-Ass.Interval	28 DAA	42 DAA	42 DAA	42 DAA	42 DAA	56 DAA	56 DAA			
Days after first Appl.	28 DAA	42 DAA	42 DAA	42 DAA	42 DAA	56 DAA	56 DAA			
Days after last Appl.	28 DAA	42 DAA	42 DAA	42 DAA	42 DAA	56 DAA	56 DAA			
Plant.-Ass.Interval	28 DP1	42 DP1	42 DP1	42 DP1	42 DP1	56 DP1	56 DP1			
Days after Emergence	21 DE1	35 DE1	35 DE1	35 DE1	35 DE1	49 DE1	49 DE1			
Entry Entry/Trt.										
No. Description	Dose Unit	Dose Unit	Appl. Code	8	9	10	11	12	13	14
1 UNTREATED				0.0	0.0	0.0	0.0	0.0	0.0	0.0
2 CORVUS	140 g ai/ha A			99.0	0.0	99.0	99.0	99.0	0.0	93.3
AATREX	561 g ai/ha A									
3 BALANCE FLEXX HERBICIDE	140.3 g ai/ha A			99.0	0.0	99.0	99.0	99.0	0.0	93.3
AATREX	561 g ai/ha A									
4 DEGREE EXTRA	3403 g ai/ha A			99.0	0.0	99.0	99.0	99.0	0.0	95.0
5 CORVUS	115.5 g ai/ha A			99.0	0.0	99.0	99.0	99.0	0.0	91.7
DEGREE EXTRA	1815 g ai/ha A									
6 BALANCE FLEXX HERBICIDE	105.2 g ai/ha A			99.0	0.0	99.0	99.0	99.0	0.0	93.3
DEGREE EXTRA	1815 g ai/ha A									
7 HARNESS MAX	1857 g ai/ha A			99.0	0.0	99.0	99.0	99.0	0.0	93.3
AATREX	561 g ai/ha A									
8 ACURON HERBICIDE	2488 g ai/ha A			99.0	0.0	99.0	99.0	99.0	0.0	95.0
9 LUMAX	2774 g ai/ha A			99.0	0.0	99.0	99.0	99.0	0.0	91.7
10 RESICORE HERBICIDE	2305 g ai/ha A			99.0	0.0	99.0	99.0	99.0	0.0	91.7
AATREX	561 g ai/ha A									
LSD P=.05										4.14
Standard Deviation				0.00	0.00	0.00	0.00	0.00	0.00	2.42
CV				0.0	0.0	0.0	0.0	0.0	0.0	2.88
Replicate F				0.000	0.000	0.000	0.000	0.000	0.000	1.000
Replicate Prob(F)				1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.3874
Treatment F				0.000	0.000	0.000	0.000	0.000	0.000	447.000
Treatment Prob(F)				1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0001

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,8,9,10,11,12,13 because error mean square = 0.

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Unique Col. ID		16	17
Orig./Calc. Flag		O	O
SE Group		6	6
Target		3 IPOSS	2 SETFA
-Disc./Scale		W BDIC	W BGRM
Crop			
-Disc./Scale			
Variety			
Assessment Type		CONTRO	CONTRO
Assessment Unit		%	%
Assessment Date		6-26-2019	6-26-2019
Assessment Code		A8	A8
Appl.-Ass.Interval		56 DAA	56 DAA
Days after first Appl.		56 DAA	56 DAA
Days after last Appl.		56 DAA	56 DAA
Plant.-Ass.Interval		56 DP1	56 DP1
Days after Emergence		49 DE1	49 DE1
Entry Entry/Trt. No. Description	Dose Dose Unit Unit	Appl. Code	
		15	16
1 UNTREATED		0.0	0.0
2 CORVUS AATREX	140 g ai/ha A 561 g ai/ha A	93.3	91.7
3 BALANCE FLEXX HERBICIDE AATREX	140.3 g ai/ha A 561 g ai/ha A	91.7	91.7
4 DEGREE EXTRA	3403 g ai/ha A	91.7	95.0
5 CORVUS DEGREE EXTRA	115.5 g ai/ha A 1815 g ai/ha A	93.3	93.3
6 BALANCE FLEXX HERBICIDE DEGREE EXTRA	105.2 g ai/ha A 1815 g ai/ha A	90.0	91.7
7 HARNESS MAX AATREX	1857 g ai/ha A 561 g ai/ha A	91.7	93.3
8 ACURON HERBICIDE	2488 g ai/ha A	91.7	93.3
9 LUMAX	2774 g ai/ha A	95.0	83.3
10 RESICORE HERBICIDE AATREX	2305 g ai/ha A 561 g ai/ha A	91.7	91.7
LSD P=.05		4.27	4.40
Standard Deviation		2.49	2.56
CV		3.0	3.11
Replicate F		0.403	1.141
Replicate Prob(F)		0.6742	0.3416
Treatment F		412.179	387.958
Treatment Prob(F)		0.0001	0.0001

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,8,9,10,11,12,13 because error mean square = 0.

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Corvus / Balance Flexx / Acetochlor / Corn / Competitors 19-20

Trial ID: HP19USAWMIUZW1 TD Number: LOCALCREATED Protocol Edition No.: 1.01
Project ID: LOCAL_PROJ
Project Number(s): 100 % N-3629 % 100 % LFISX005
Protocol Developer: Waddington, Mark
License User: Jones, Joshua

Target

- 1, AMBTR, W, BDIC, , , = Ambrosia trifida L.
- 3, IPOSS, W, BDIC, , , = Ipomoea spec.
- 2, SETFA, W, BGRM, , , = Setaria faberi HERRM.

Crop

- 1, ZEAMD, C, BCOR, DKC 63-55, = Zea mays L. ssp. indentata STU

Assessment Type

- PHYGEN = Phytotoxicity - General, Injury
- CONTRO = Control

Assessment Unit

% = Percent

Plant.-Ass.Interval

- 14 DP1 = 1 ZEAMD 5-1-2019
- 28 DP1 = 1 ZEAMD 5-1-2019
- 42 DP1 = 1 ZEAMD 5-1-2019
- 56 DP1 = 1 ZEAMD 5-1-2019

University of Kentucky

Bayer Corn Herbicides / University Demo 19-21

Trial ID: HP19USAWMUUZW2 TD Number: LOCALCREATED Protocol Edition No.: 1.01
Project ID: LOCAL_PROJ
Project Number(s): 100 % N-3629 % 100 % LFISX005
Protocol Developer: Waddington, Mark
License User: Jones, Joshua

General Trial Information

Trial Initiation Date: 5-1-2019 **Protocol Edition No.:** 1.01
Trial Status: I **Trial Status Date:** 9-5-2019
Last change done by: Sara Carter **Date of last export:** 9-5-2019 4:38 PM
Trial Objectives fulfilled: FULLY
External Trial: X

Interim Data Due: 12-31-2019

	1
TD Number(s):	LOCALCREATED

	1	2
TD Keyword(s):	DEMO	EFFICACY

License User: Jones, Joshua

Protocol Developer: Waddington, Mark
Department: Bayer CropScience LP

Trial Officer: EXTERN

Cooperator (Outside service): Sara Carter
Affiliation: University of Kentucky
Street: 3250 Ironworks Pike
City: Lexington
Postal Code: 40511
Telephone: 859-559-6710
E-Mail: sara.carter@uky.edu

Farmer Name: -

Site and Design

City: LEXINGTON
Postal Code: 40511
County: FAYETTE
State/Province: KY
Country: USA

Latitude, Longitude of Trial Corners

Lower Left
Latitude: 38.1185166
Longitude: -84.4937833

No. of Replicates: 3 **No. of Treatments:** 10 **No. of Plots:** 30
Plot Width: 3.048 **Plot Length:** 13.41 **Length/Width Unit:** m
Plot Area: 40.88

Site Type: FIELD **Unit:** m2
Tillage Type: CONTIL **Test Type:** TT01
Most relevant weather station: SPINDLETOP **Trial Design:** RACOBL
Distance/Unit: 2.4 KM

Previous Crops and Agricultural Chemicals

Previous Crops		Year
ZEAMX	C BCOR	2018

Soil Description

Soil Name: MAURY SILT LOAM
Texture: SIL **% Sand:** 6 **% Silt:** 62
% Clay: 32
% Organic Matter: 2.6
pH: 6.4 **Cation Exchange Capacity:** 18
Overall Soil Moisture Condition: WEWEDR

University of Kentucky

Crop Description			
Crop 1: ZEAMX Zea mays L. Corn, common	Discipline: C	Crop Scale: BCOR	Use Group: A2
Variety: DKC 63-55			
Seed/Planting Date: 5-1-2019		Seed/Plant Rate/Unit: 32000 OTHER	
Emergence Crop Date: 5-8-2019		Depth/Unit: 3.8 CM	
Row Spacing/Unit: 76.2 CM		Planting Method: PLANTD	
Rows Per Plot: 6		Seed Bed: SMOOTH	
Planting Implement: FE			
Soil Temperature/Unit: 16 C			
Soil Moisture (at Planting): SLIDRY			

Target Description	
Target 1: AMBTR Ambrosia trifida L. Ragweed, giant	Discipline: W Target Scale: BDIC
Target 2: IPOSS Ipomoea spec. Morningglory	Discipline: W Target Scale: BDIC
Target 3: SETFA Setaria faberi HERRM. Foxtail, giant	Discipline: W Target Scale: BGRM

Crop Stage at Application		
	A	B
Crop 1/Disc./Scale	ZEAMX C BCOR	ZEAMX C BCOR
Days after Emergence	-7	26
Stage Majority/Percent	00	13 95
Majority Height/Unit		18 CM

Target Stage at Application		
	A	B
Target 1/Disc./Scale	AMBTR W BDIC	AMBTR W BDIC
Stage Majority/Percent		14
Majority Height/Unit		7.62 CM
Target 2/Disc./Scale	IPOSS W BDIC	IPOSS W BDIC
Stage Majority/Percent		12
Majority Height/Unit		3.81 CM
Target 3/Disc./Scale	SETFA W BGRM	SETFA W BGRM
Stage Majority/Percent		13
Majority Height/Unit		7.62 CM

Application Equipment		
	A	B
Application Method	SPRAY	SPRAY
Application Placement	BROSOI	BROFOL
Application Equipment	BELSPR	BELSPR
Ground Speed/Unit	6.4 KPH	6.4 KPH
Propellant Type	COMCO2	COMCO2
Carrier	WATER	WATER
Appl./Slurry Volume	140.3	140.3
Appl./Slurry Volume Unit	L/HA	L/HA
Minimum Mix/Treatment	1.7205 L	1.7205 L
Mix Size/Unit	2.5 L	2.5 L
Operating Pressure/Unit	2.069 BAR	0.1427 BAR
Spray Swath Width/Unit	3.048 M	3.048 M
Nozzle Type	FLAFAN	FLAFAN
Nozzle Size	8002	8002
Nozzle Spacing/Unit	50.8 CM	50.8 CM
Boom Height/Unit	76.2 CM	76.2 CM

University of Kentucky

Bayer Corn Herbicides / University Demo 19-21

Trial ID: HP19USAWMUUZW2 TD Number: LOCALCREATED Protocol Edition No.: 1.01
 Project ID: LOCAL_PROJ
 Project Number(s): 100 % N-3629 % 100 % LFISX005
 Protocol Developer: Waddington, Mark
 License User: Jones, Joshua

Unique Col. ID	7	8	9	10	11	12	13
Orig./Calc. Flag	O	O	O	O	O	O	O
SE Group	1	2	2	2	4	4	4
Target		1 AMBTR W BDIC	1 AMBTR W BDIC	1 AMBTR W BDIC		1 AMBTR W BDIC	2 IPOSS W BDIC
-Disc./Scale							
Crop	1 ZEAMX C BCOR				1 ZEAMX C BCOR		
-Disc./Scale							
Variety	DKC 63-55				DKC 63-55		
Assessment Type	PHYGEN	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO	CONTRO
Assessment Unit	%	%	%	%	%	%	%
Assessment Date	5-15-2019	5-15-2019	5-15-2019	5-15-2019	5-29-2019	5-29-2019	5-29-2019
Assessment Code	A2	A2	A2	A2	A4	A4	A4
Days after first Appl.	14 DAA	14 DAA	14 DAA	14 DAA	28 DAA	28 DAA	28 DAA
Days after last Appl.	14 DAA	14 DAA	14 DAA	14 DAA	28 DAA	28 DAA	28 DAA
Plant.-Ass.Interval	14 DP1	14 DP1	14 DP1	14 DP1	28 DP1	28 DP1	28 DP1
Days after Emergence	7 DE1	7 DE1	7 DE1	7 DE1	21 DE1	21 DE1	21 DE1
Entry No.	1	2	3	4	5	6	7
Entry/Trt. Description	1 UNTREATED						
	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2 BALANCE FLEXX HERBICIDE	140.3 g ai/ha A	99.0	99.0	99.0	0.0	99.0	99.0
AATREX	1122 g ai/ha A						
ROUNDUP POWER MAX	1263 g ai/ha A						
CAPRENO HERBICIDE	119.9 g ai/ha B						
AATREX	1122 g ai/ha B						
ROUNDUP POWER MAX	1263 g ai/ha B						
3 BALANCE FLEXX HERBICIDE	140.3 g ai/ha A	99.0	99.0	99.0	0.0	99.0	99.0
AATREX	1122 g ai/ha A						
ROUNDUP POWER MAX	1263 g ai/ha A						
CAPRENO HERBICIDE	119.9 g ai/ha B						
DEGREE EXTRA	1815 g ai/ha B						
ROUNDUP POWER MAX	1263 g ai/ha B						
4 BALANCE FLEXX HERBICIDE	140.3 g ai/ha A	99.0	99.0	99.0	0.0	99.0	99.0
AATREX	1122 g ai/ha A						
ROUNDUP POWER MAX	1263 g ai/ha A						
CAPRENO HERBICIDE	119.9 g ai/ha B						
AATREX	1122 g ai/ha B						
WARRANT	1049 g ai/ha B						
ROUNDUP POWER MAX	1263 g ai/ha B						
5 BALANCE FLEXX HERBICIDE	140.3 g ai/ha A	99.0	99.0	99.0	0.0	99.0	99.0
AATREX	1122 g ai/ha A						
ROUNDUP POWER MAX	1263 g ai/ha A						
LAUDIS	138.1 g ai/ha B						
AATREX	1122 g ai/ha B						
ROUNDUP POWER MAX	1263 g ai/ha B						
6 BALANCE FLEXX HERBICIDE	140.3 g ai/ha A	99.0	99.0	99.0	0.0	99.0	99.0
AATREX	1122 g ai/ha A						
ROUNDUP POWER MAX	1263 g ai/ha A						
LAUDIS	138.1 g ai/ha B						
DEGREE EXTRA	1815 g ai/ha B						
ROUNDUP POWER MAX	1263 g ai/ha B						
7 BALANCE FLEXX HERBICIDE	140.3 g ai/ha A	99.0	99.0	99.0	0.0	99.0	99.0
AATREX	1122 g ai/ha A						
ROUNDUP POWER MAX	1263 g ai/ha A						
LAUDIS	138.1 g ai/ha B						
AATREX	1122 g ai/ha B						
WARRANT	1049 g ai/ha B						
ROUNDUP POWER MAX	1263 g ai/ha B						
8 BALANCE FLEXX HERBICIDE	140.3 g ai/ha A	99.0	99.0	99.0	0.0	99.0	99.0
AATREX	1122 g ai/ha A						
ROUNDUP POWER MAX	1263 g ai/ha A						
DIFLEXX DUO	453.6 g ai/ha B						
AATREX	1122 g ai/ha B						
ROUNDUP POWER MAX	1263 g ai/ha B						

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16 because error mean square = 0.

University of Kentucky

Unique Col. ID	7	8	9	10	11	12	13
Orig./Calc. Flag	O	O	O	O	O	O	O
SE Group	1	2	2	2	4	4	4
Target		1 AMBTR	1 AMBTR	1 AMBTR		1 AMBTR	2 IPOSS
-Disc./Scale		W BDIC	W BDIC	W BDIC		W BDIC	W BDIC
Crop	1 ZEAMX				1 ZEAMX		
-Disc./Scale	C BCOR				C BCOR		
Variety	DKC 63-55				DKC 63-55		
Assessment Type	PHYGEN	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO	CONTRO
Assessment Unit	%	%	%	%	%	%	%
Assessment Date	5-15-2019	5-15-2019	5-15-2019	5-15-2019	5-29-2019	5-29-2019	5-29-2019
Assessment Code	A2	A2	A2	A2	A4	A4	A4
Days after first Appl.	14 DAA	14 DAA	14 DAA	14 DAA	28 DAA	28 DAA	28 DAA
Days after last Appl.	14 DAA	14 DAA	14 DAA	14 DAA	28 DAA	28 DAA	28 DAA
Plant.-Ass.Interval	14 DP1	14 DP1	14 DP1	14 DP1	28 DP1	28 DP1	28 DP1
Days after Emergence	7 DE1	7 DE1	7 DE1	7 DE1	21 DE1	21 DE1	21 DE1
Entry Entry/Trt. No. Description	Dose Unit	Dose Unit	Appl. Code				
	1	2	3	4	5	6	7
9 BALANCE FLEXX HERBICIDE	140.3 g ai/ha A						
AATREX	1122 g ai/ha A	0.0	99.0	99.0	99.0	0.0	99.0
ROUNDUP POWER MAX	1263 g ai/ha A						
DIFLEXX DUO	453.6 g ai/ha B						
DEGREE EXTRA	1815 g ai/ha B						
ROUNDUP POWER MAX	1263 g ai/ha B						
10 BALANCE FLEXX HERBICIDE	140.3 g ai/ha A	0.0	99.0	99.0	99.0	0.0	99.0
AATREX	1122 g ai/ha A						
ROUNDUP POWER MAX	1263 g ai/ha A						
DIFLEXX DUO	453.6 g ai/ha B						
AATREX	1122 g ai/ha B						
WARRANT	1049 g ai/ha B						
ROUNDUP POWER MAX	1263 g ai/ha B						
LSD P=.05	.	.	.	.	.	.	.
Standard Deviation	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CV	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Replicate F	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Replicate Prob(F)	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Treatment F	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Treatment Prob(F)	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16 because error mean square = 0.

University of Kentucky

Unique Col. ID	14	15	16	17	18	19	20
Orig./Calc. Flag	O	O	O	O	O	O	O
SE Group	4	5	5	5	5	6	6
Target	3 SETFA		1 AMBTR	2 IPOSS	3 SETFA		1 AMBTR
-Disc./Scale	W BGRM		W BDIC	W BDIC	W BGRM		W BDIC
Crop		1 ZEAMX				1 ZEAMX	
-Disc./Scale		C BCOR				C BCOR	
Variety		DKC 63-55				DKC 63-55	
Assessment Type	CONTRO	PHYGEN	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO
Assessment Unit	%	%	%	%	%	%	%
Assessment Date	5-29-2019	6-12-2019	6-12-2019	6-12-2019	6-12-2019	6-26-2019	6-26-2019
Assessment Code	A4	A6	A6	A6	A6	A8	A8
Days after first Appl.	28 DAA	42 DAA	42 DAA	42 DAA	42 DAA	56 DAA	56 DAA
Days after last Appl.	28 DAA	9 DAB	9 DAB	9 DAB	9 DAB	23 DAB	23 DAB
Plant.-Ass.Interval	28 DP1	42 DP1	42 DP1	42 DP1	42 DP1	56 DP1	56 DP1
Days after Emergence	21 DE1	35 DE1	35 DE1	35 DE1	35 DE1	49 DE1	49 DE1
Entry Entry/Trt.							
No. Description	8	9	10	11	12	13	14
1 UNTREATED	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2 BALANCE FLEXX HERBICIDE	140.3 g ai/ha A		99.0	99.0	99.0		99.0
AATREX	1122 g ai/ha A						
ROUNDUP POWER MAX	1263 g ai/ha A						
CAPRENO HERBICIDE	119.9 g ai/ha B						
AATREX	1122 g ai/ha B						
ROUNDUP POWER MAX	1263 g ai/ha B						
3 BALANCE FLEXX HERBICIDE	140.3 g ai/ha A	0.0	99.0	99.0	99.0	0.0	99.0
AATREX	1122 g ai/ha A						
ROUNDUP POWER MAX	1263 g ai/ha A						
CAPRENO HERBICIDE	119.9 g ai/ha B						
DEGREE EXTRA	1815 g ai/ha B						
ROUNDUP POWER MAX	1263 g ai/ha B						
4 BALANCE FLEXX HERBICIDE	140.3 g ai/ha A	0.0	99.0	99.0	99.0	0.0	99.0
AATREX	1122 g ai/ha A						
ROUNDUP POWER MAX	1263 g ai/ha A						
CAPRENO HERBICIDE	119.9 g ai/ha B						
AATREX	1122 g ai/ha B						
WARRANT	1049 g ai/ha B						
ROUNDUP POWER MAX	1263 g ai/ha B						
5 BALANCE FLEXX HERBICIDE	140.3 g ai/ha A	0.0	99.0	99.0	99.0	0.0	99.0
AATREX	1122 g ai/ha A						
ROUNDUP POWER MAX	1263 g ai/ha A						
LAUDIS	138.1 g ai/ha B						
AATREX	1122 g ai/ha B						
ROUNDUP POWER MAX	1263 g ai/ha B						
6 BALANCE FLEXX HERBICIDE	140.3 g ai/ha A	0.0	99.0	99.0	99.0	0.0	99.0
AATREX	1122 g ai/ha A						
ROUNDUP POWER MAX	1263 g ai/ha A						
LAUDIS	138.1 g ai/ha B						
DEGREE EXTRA	1815 g ai/ha B						
ROUNDUP POWER MAX	1263 g ai/ha B						
7 BALANCE FLEXX HERBICIDE	140.3 g ai/ha A	0.0	99.0	99.0	99.0	0.0	99.0
AATREX	1122 g ai/ha A						
ROUNDUP POWER MAX	1263 g ai/ha A						
LAUDIS	138.1 g ai/ha B						
AATREX	1122 g ai/ha B						
WARRANT	1049 g ai/ha B						
ROUNDUP POWER MAX	1263 g ai/ha B						
8 BALANCE FLEXX HERBICIDE	140.3 g ai/ha A	0.0	99.0	99.0	99.0	0.0	99.0
AATREX	1122 g ai/ha A						
ROUNDUP POWER MAX	1263 g ai/ha A						
DIFLEXX DUO	453.6 g ai/ha B						
AATREX	1122 g ai/ha B						
ROUNDUP POWER MAX	1263 g ai/ha B						

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16 because error mean square = 0.

University of Kentucky

Unique Col. ID	14	15	16	17	18	19	20		
Orig./Calc. Flag	O	O	O	O	O	O	O		
SE Group	4	5	5	5	5	6	6		
Target	3 SETFA		1 AMBTR	2 IPOSS	3 SETFA		1 AMBTR		
-Disc./Scale	W BGRM		W BDIC	W BDIC	W BGRM		W BDIC		
Crop		1 ZEAMX				1 ZEAMX			
-Disc./Scale		C BCOR				C BCOR			
Variety		DKC 63-55				DKC 63-55			
Assessment Type	CONTRO	PHYGEN	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO		
Assessment Unit	%	%	%	%	%	%	%		
Assessment Date	5-29-2019	6-12-2019	6-12-2019	6-12-2019	6-12-2019	6-26-2019	6-26-2019		
Assessment Code	A4	A6	A6	A6	A6	A8	A8		
Days after first Appl.	28 DAA	42 DAA	42 DAA	42 DAA	42 DAA	56 DAA	56 DAA		
Days after last Appl.	28 DAA	9 DAB	9 DAB	9 DAB	9 DAB	23 DAB	23 DAB		
Plant.-Ass.Interval	28 DP1	42 DP1	42 DP1	42 DP1	42 DP1	56 DP1	56 DP1		
Days after Emergence	21 DE1	35 DE1	35 DE1	35 DE1	35 DE1	49 DE1	49 DE1		
Entry No.	8	9	10	11	12	13	14		
Entry Description	9 BALANCE FLEXX HERBICIDE AATREX ROUNDUP POWER MAX DIFLEXX DUO DEGREE EXTRA ROUNDUP POWER MAX	140.3 g ai/ha A 1122 g ai/ha A 1263 g ai/ha A 453.6 g ai/ha B 1815 g ai/ha B 1263 g ai/ha B	99.0	0.0	99.0	99.0	99.0	0.0	99.0
Entry Description	10 BALANCE FLEXX HERBICIDE AATREX ROUNDUP POWER MAX DIFLEXX DUO AATREX WARRANT ROUNDUP POWER MAX	140.3 g ai/ha A 1122 g ai/ha A 1263 g ai/ha A 453.6 g ai/ha B 1122 g ai/ha B 1049 g ai/ha B 1263 g ai/ha B	99.0	0.0	99.0	99.0	99.0	0.0	99.0
LSD P=.05	
Standard Deviation	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
CV	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Replicate F	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
Replicate Prob(F)	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000		
Treatment F	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
Treatment Prob(F)	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000		

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16 because error mean square = 0.

University of Kentucky

Unique Col. ID		21	22
Orig./Calc. Flag		O	O
SE Group		6	6
Target		2 IPOSS	3 SETFA
-Disc./Scale		W BDIC	W BGRM
Crop			
-Disc./Scale			
Variety			
Assessment Type		CONTRO	CONTRO
Assessment Unit		%	%
Assessment Date		6-26-2019	6-26-2019
Assessment Code		A8	A8
Days after first Appl.		56 DAA	56 DAA
Days after last Appl.		23 DAB	23 DAB
Plant.-Ass.Interval		56 DP1	56 DP1
Days after Emergence		49 DE1	49 DE1
Entry Entry/Trt.			
No. Description	Dose Dose	Appl.	
	Unit	Code	
			15 16
1 UNTREATED			0.0 0.0
2 BALANCE FLEXX HERBICIDE	140.3 g ai/ha A		99.0 99.0
AATREX	1122 g ai/ha A		
ROUNDUP POWER MAX	1263 g ai/ha A		
CAPRENO HERBICIDE	119.9 g ai/ha B		
AATREX	1122 g ai/ha B		
ROUNDUP POWER MAX	1263 g ai/ha B		
3 BALANCE FLEXX HERBICIDE	140.3 g ai/ha A		99.0 99.0
AATREX	1122 g ai/ha A		
ROUNDUP POWER MAX	1263 g ai/ha A		
CAPRENO HERBICIDE	119.9 g ai/ha B		
DEGREE EXTRA	1815 g ai/ha B		
ROUNDUP POWER MAX	1263 g ai/ha B		
4 BALANCE FLEXX HERBICIDE	140.3 g ai/ha A		99.0 99.0
AATREX	1122 g ai/ha A		
ROUNDUP POWER MAX	1263 g ai/ha A		
CAPRENO HERBICIDE	119.9 g ai/ha B		
AATREX	1122 g ai/ha B		
WARRANT	1049 g ai/ha B		
ROUNDUP POWER MAX	1263 g ai/ha B		
5 BALANCE FLEXX HERBICIDE	140.3 g ai/ha A		99.0 99.0
AATREX	1122 g ai/ha A		
ROUNDUP POWER MAX	1263 g ai/ha A		
LAUDIS	138.1 g ai/ha B		
AATREX	1122 g ai/ha B		
ROUNDUP POWER MAX	1263 g ai/ha B		
6 BALANCE FLEXX HERBICIDE	140.3 g ai/ha A		99.0 99.0
AATREX	1122 g ai/ha A		
ROUNDUP POWER MAX	1263 g ai/ha A		
LAUDIS	138.1 g ai/ha B		
DEGREE EXTRA	1815 g ai/ha B		
ROUNDUP POWER MAX	1263 g ai/ha B		
7 BALANCE FLEXX HERBICIDE	140.3 g ai/ha A		99.0 99.0
AATREX	1122 g ai/ha A		
ROUNDUP POWER MAX	1263 g ai/ha A		
LAUDIS	138.1 g ai/ha B		
AATREX	1122 g ai/ha B		
WARRANT	1049 g ai/ha B		
ROUNDUP POWER MAX	1263 g ai/ha B		
8 BALANCE FLEXX HERBICIDE	140.3 g ai/ha A		99.0 99.0
AATREX	1122 g ai/ha A		
ROUNDUP POWER MAX	1263 g ai/ha A		
DIFLEXX DUO	453.6 g ai/ha B		
AATREX	1122 g ai/ha B		
ROUNDUP POWER MAX	1263 g ai/ha B		

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16 because error mean square = 0.

University of Kentucky

Unique Col. ID		21	22
Orig./Calc. Flag		O	O
SE Group		6	6
Target		2 IPOSS	3 SETFA
-Disc./Scale		W BDIC	W BGRM
Crop			
-Disc./Scale			
Variety			
Assessment Type		CONTRO	CONTRO
Assessment Unit		%	%
Assessment Date		6-26-2019	6-26-2019
Assessment Code		A8	A8
Days after first Appl.		56 DAA	56 DAA
Days after last Appl.		23 DAB	23 DAB
Plant.-Ass.Interval		56 DP1	56 DP1
Days after Emergence		49 DE1	49 DE1
Entry Entry/Trt. No. Description	Dose Dose Unit Unit	Appl. Code	
		15	16
9 BALANCE FLEXX HERBICIDE	140.3 g ai/ha A		99.0
AATREX	1122 g ai/ha A		
ROUNDUP POWER MAX	1263 g ai/ha A		
DIFLEXX DUO	453.6 g ai/ha B		
DEGREE EXTRA	1815 g ai/ha B		
ROUNDUP POWER MAX	1263 g ai/ha B		
10 BALANCE FLEXX HERBICIDE	140.3 g ai/ha A		99.0
AATREX	1122 g ai/ha A		
ROUNDUP POWER MAX	1263 g ai/ha A		
DIFLEXX DUO	453.6 g ai/ha B		
AATREX	1122 g ai/ha B		
WARRANT	1049 g ai/ha B		
ROUNDUP POWER MAX	1263 g ai/ha B		
LSD P=.05			.
Standard Deviation		0.00	0.00
CV		0.0	0.0
Replicate F		0.000	0.000
Replicate Prob(F)		1.0000	1.0000
Treatment F		0.000	0.000
Treatment Prob(F)		1.0000	1.0000

University of Kentucky

Bayer Corn Herbicides / University Demo 19-21

Trial ID: HP19USAWMUUZW2 TD Number: LOCALCREATED Protocol Edition No.: 1.01
Project ID: LOCAL_PROJ
Project Number(s): 100 % N-3629 % 100 % LFISX005
Protocol Developer: Waddington, Mark
License User: Jones, Joshua

Target

- 1, AMBTR, W, BDIC, , , = Ambrosia trifida L.
- 2, IPOSS, W, BDIC, , , = Ipomoea spec.
- 3, SETFA, W, BGRM, , , = Setaria faberi HERRM.

Crop

- 1, ZEAMX, C, BCOR, DKC 63-55, = Zea mays L.

Assessment Type

- PHYGEN = Phytotoxicity - General, Injury
- CONTRO = Control

Assessment Unit

% = Percent

Plant.-Ass.Interval

- 14 DP1 = 1 ZEAMD 5-1-2019
- 28 DP1 = 1 ZEAMD 5-1-2019
- 42 DP1 = 1 ZEAMD 5-1-2019
- 56 DP1 = 1 ZEAMD 5-1-2019

University of Kentucky

Capreno / Acetochlor / Rate Titration / Competitors 19-22

Trial ID: HP19USAWMJUZW3 TD Number: LOCALCREATED Protocol Edition No.: 1.01
Project ID: LOCAL_PROJ
Project Number(s): 100 % N-3629 % 100 % LFAEY003
Protocol Developer: Waddington, Mark
License User: Jones, Joshua

General Trial Information

Trial Initiation Date: 5-1-2019 **Protocol Edition No.:** 1.01
Trial Status: I **Trial Status Date:** 9-5-2019
Last change done by: Sara Carter **Date of last export:** 9-5-2019 4:40 PM
Trial Objectives fulfilled: FULLY
External Trial: X

Final Data Due: 12-31-2019 **Interim Data Due:** 8-30-2019

	1
TD Number(s):	LOCALCREATED

	1	2
TD Keyword(s):	DEMO	EFFICACY

License User: Jones, Joshua

Protocol Developer: Waddington, Mark
Department: Bayer CropScience LP

Trial Officer: EXTERN

Cooperator (Outside service): Sara Carter
Affiliation: University of Kentucky
Street: 3250 Ironworks Pike
City: Lexington
Postal Code: 40511
Telephone: 859-559-6710
E-Mail: sara.carter@uky.edu

Farmer Name: -

Site and Design

City: Lexington
Postal Code: 40511
County: Fayette
State/Province: KY
Country: USA

Latitude, Longitude of Trial Corners

Lower Left
Latitude: 38.11833
Longitude: -84.4939166

No. of Replicates: 3 **No. of Treatments:** 10 **No. of Plots:** 30
Plot Width: 3.048 **Plot Length:** 13.41 **Length/Width Unit:** m
Plot Area: 40.88

Unit: m2
Test Type: TT01
Trial Design: RACOBL

Site Type: FIELD
Tillage Type: CONTIL
Most relevant weather station: Spindletop
Distance/Unit: 2.4 KM

Previous Crops and Agricultural Chemicals

Previous Crops		Year
ZEAMX	C BCOR	2018

Soil Description

Soil Name: MAURY SILT LOAM
Texture: SIL **% Sand:** 6 **% Silt:** 62
% Clay: 32
% Organic Matter: 2.6
pH: 6.4 **Cation Exchange Capacity:** 18
Overall Soil Moisture Condition: WEWEDR

University of Kentucky

Crop Description	
Crop 1: ZEAMD Zea mays L. ssp. indentata STU Corn, dent	Discipline: C Crop Scale: BCOR Use Group: A2
Variety: DKC 63-55	Seed/Plant Rate/Unit: 32000 OTHER
Seed/Planting Date: 5-1-2019	Depth/Unit: 3.86 CM
Emergence Crop Date: 5-8-2019	Planting Method: PLANTD Seed Bed: SMOOTH
Row Spacing/Unit: 76.2 CM	
Rows Per Plot: 6	
Planting Implement: FE	
Soil Temperature/Unit: 16 C	
Soil Moisture (at Planting): SLIDRY	

Target Description	
Target 1: AMBTR Ambrosia trifida L. Ragweed, giant	Discipline: W Target Scale: BDIC
Target 2: IPOSS Ipomoea spec. Morningglory	Discipline: W Target Scale: BDIC
Target 3: SETFA Setaria faberi HERRM. Foxtail, giant	Discipline: W Target Scale: BGRM

Application Description	
	A
Application Date	5-23-2019
Application Timing	POEMW1
Appl. Start - Time of Day	2:00 PM
Appl. Stop	2:30 PM
% Relative Humidity	65
Air Temperature/Unit	31.11 C
% Cloud Cover	80
Appl. Wind Strength	LIG
Wind Velocity/Unit	6.43 KPH
Wind Direction/Degrees	W
Soil Temperature/Unit	20.5 C
Soil Moisture	SLIDRY
Soil Condition (surface)	SMOOTH
Problems with Application?	No

Crop Stage at Application	
	A
Crop 1/Disc./Scale	ZEAMD C BCOR
Days after Emergence	15
Stage Majority/Percent	12
Majority Height/Unit	17.78 CM

Target Stage at Application	
	A
Target 1/Disc./Scale	AMBTR W BDIC
Stage Majority/Percent	14
Majority Height/Unit	10.16 CM
Target 2/Disc./Scale	IPOSS W BDIC
Stage Majority/Percent	12
Majority Height/Unit	5.08 CM
Target 3/Disc./Scale	SETFA W BGRM
Stage Majority/Percent	13
Majority Height/Unit	7.62 CM

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Application Equipment

	A
Application Method	SPRAY
Application Placement	BROFOL
Application Equipment	BELSPR
Ground Speed/Unit	6.4 KPH
Propellant Type	COMCO2
Carrier	WATER
Appl./Slurry Volume	140.3
Appl./Slurry Volume Unit	L/HA
Minimum Mix/Treatment	1.7205 L
Mix Size/Unit	2.5 L
Operating Pressure/Unit	2.069 BAR
Spray Swath Width/Unit	3.048 M
Nozzle Type	FLAFAN
Nozzle Size	8002
Nozzle Spacing/Unit	50.8 CM
Boom Height/Unit	76.2 CM

University of Kentucky

Capreno / Acetochlor / Rate Titration / Competitors 19-22

Trial ID: HP19USAWMJUZW3 TD Number: LOCALCREATED Protocol Edition No.: 1.01
 Project ID: LOCAL_PROJ
 Project Number(s): 100 % N-3629 % 100 % LFAEY003
 Protocol Developer: Waddington, Mark
 License User: Jones, Joshua

Unique Col. ID	2	3	4	5	6	7	8
Orig./Calc. Flag	O	O	O	O	O	O	O
SE Group	1	1	2	3	4	4	4
Target		1 AMBTR	2 IPOSS	3 SETFA		1 AMBTR	2 IPOSS
-Disc./Scale		W BDIC	W BDIC	W BGRM		W BDIC	W BDIC
Crop	1 ZEAMD				1 ZEAMD		
-Disc./Scale	C BCOR				C BCOR		
Variety	DKC 63-55				DKC 63-55		
Assessment Type	PHYGEN	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO	CONTRO
Assessment Unit	%	%	%	%	%	%	%
Assessment Date	6-6-2019	6-6-2019	6-6-2019	6-6-2019	6-20-2019	6-20-2019	6-20-2019
Assessment Code	A2	A2	A2	A2	A4	A4	A4
Appl.-Ass.Interval	14 DAA	14 DAA	14 DAA	14 DAA	28 DAA	28 DAA	28 DAA
Days after first Appl.	14 DAA	14 DAA	14 DAA	14 DAA	28 DAA	28 DAA	28 DAA
Days after last Appl.	14 DAA	14 DAA	14 DAA	14 DAA	28 DAA	28 DAA	28 DAA
Plant.-Ass.Interval	36 DP1	36 DP1	36 DP1	36 DP1	50 DP1	50 DP1	50 DP1
Days after Emergence	29 DE1	29 DE1	29 DE1	29 DE1	43 DE1	43 DE1	43 DE1
Entry No.	1	2	3	4	5	6	7
Entry Description							
Dose							
Dose Unit							
Appl. Code							
1 UNTREATED	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2 CAPRENO HERBICIDE	0.0	99.0	99.0	99.0	0.0	99.0	99.0
AATREX							
ROUNDUP POWER MAX							
3 DEGREE EXTRA	0.0	99.0	99.0	99.0	0.0	99.0	99.0
ROUNDUP POWER MAX							
4 DEGREE EXTRA	0.0	99.0	99.0	99.0	0.0	99.0	99.0
ROUNDUP POWER MAX							
5 CAPRENO HERBICIDE	0.0	99.0	99.0	99.0	0.0	99.0	99.0
DEGREE EXTRA							
ROUNDUP POWER MAX							
6 CAPRENO HERBICIDE	0.0	99.0	99.0	99.0	0.0	99.0	99.0
DEGREE EXTRA							
ROUNDUP POWER MAX							
7 ACURON HERBICIDE	0.0	99.0	99.0	99.0	0.0	99.0	99.0
ROUNDUP POWER MAX							
8 RESICORE HERBICIDE	0.0	99.0	99.0	99.0	0.0	99.0	99.0
AATREX							
ROUNDUP POWER MAX							
9 HALEX GT	0.0	99.0	99.0	99.0	0.0	99.0	99.0
AATREX							
10 HARNESS MAX	0.0	99.0	99.0	99.0	0.0	99.0	99.0
AATREX							
ROUNDUP POWER MAX							
LSD P=.05	.	.	.	.	.	.	.
Standard Deviation	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CV	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Replicate F	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Replicate Prob(F)	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Treatment F	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Treatment Prob(F)	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,8,9,13 because error mean square = 0.

University of Kentucky

Unique Col. ID	9	10	11	12	13	14	15
Orig./Calc. Flag	O	O	O	O	O	O	O
SE Group	4	5	5	5	5	6	6
Target	3 SETFA		1 AMBTR	2 IPOSS	3 SETFA		1 AMBTR
-Disc./Scale	W BGRM		W BDIC	W BDIC	W BGRM		W BDIC
Crop		1 ZEAMD				1 ZEAMD	
-Disc./Scale		C BCOR				C BCOR	
Variety		DKC 63-55				DKC 63-55	
Assessment Type	CONTRO	PHYGEN	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO
Assessment Unit	%	%	%	%	%	%	%
Assessment Date	6-20-2019	7-8-2019	7-8-2019	7-8-2019	7-8-2019	7-22-2019	7-22-2019
Assessment Code	A4	A6	A6	A6	A6	A8	A8
Appl.-Ass.Interval	28 DAA	46 DAA	46 DAA	46 DAA	46 DAA	60 DAA	60 DAA
Days after first Appl.	28 DAA	46 DAA	46 DAA	46 DAA	46 DAA	60 DAA	60 DAA
Days after last Appl.	28 DAA	46 DAA	46 DAA	46 DAA	46 DAA	60 DAA	60 DAA
Plant.-Ass.Interval	50 DP1	68 DP1	68 DP1	68 DP1	68 DP1	82 DP1	82 DP1
Days after Emergence	43 DE1	61 DE1	61 DE1	61 DE1	61 DE1	75 DE1	75 DE1
Entry Entry/Trt.							
No. Description	Dose	Dose	Appl.				
	Unit	Unit	Code	8	9	10	11
				12	13	14	
1 UNTREATED				0.0	0.0	0.0	0.0
2 CAPRENO HERBICIDE	119.9 g ai/ha A			99.0	0.0	93.3	93.3
AATREX	1122 g ai/ha A						
ROUNDUP POWER MAX	1263 g ai/ha A						95.0
3 DEGREE EXTRA	3403 g ai/ha A			99.0	0.0	93.3	91.7
ROUNDUP POWER MAX	1263 g ai/ha A						91.7
4 DEGREE EXTRA	1701 g ai/ha A			99.0	0.0	93.3	93.3
ROUNDUP POWER MAX	1263 g ai/ha A						91.7
5 CAPRENO HERBICIDE	119.9 g ai/ha A			99.0	0.0	93.3	93.3
DEGREE EXTRA	3403 g ai/ha A						
ROUNDUP POWER MAX	1263 g ai/ha A						95.0
6 CAPRENO HERBICIDE	119.9 g ai/ha A			99.0	0.0	93.3	91.7
DEGREE EXTRA	1701 g ai/ha A						
ROUNDUP POWER MAX	1263 g ai/ha A						93.3
7 ACURON HERBICIDE	1552 g ai/ha A			99.0	0.0	93.3	91.7
ROUNDUP POWER MAX	1263 g ai/ha A						93.3
8 RESICORE HERBICIDE	1150 g ai/ha A			99.0	0.0	91.7	93.3
AATREX	1122 g ai/ha A						
ROUNDUP POWER MAX	1263 g ai/ha A						91.7
9 HALEX GT	2213 g ai/ha A			99.0	0.0	93.3	93.3
AATREX	1122 g ai/ha A						
10 HARNESS MAX	1857 g ai/ha A			99.0	0.0	93.3	93.3
AATREX	1122 g ai/ha A						
ROUNDUP POWER MAX	1263 g ai/ha A						93.3
LSD P=.05							
Standard Deviation	0.00	0.00		4.58	4.34	4.14	
CV	0.0	0.0		2.67	2.53	2.42	0.00
Replicate F	0.000	0.000		3.19	3.03	2.88	0.0
Replicate Prob(F)	1.0000	1.0000		4.58	4.34	4.14	4.58
Treatment F	0.000	0.000		2.67	2.53	2.42	2.67
Treatment Prob(F)	1.0000	1.0000		3.19	3.03	2.88	3.37
				1.519	2.739	1.000	0.000
				0.2456	0.0915	0.3874	1.0000
				365.208	404.478	447.000	0.000
				0.0001	0.0001	0.0001	1.0000
				0.0001	0.0001	0.0001	0.0001

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,8,9,13 because error mean square = 0.

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Unique Col. ID		16	17
Orig./Calc. Flag		0	0
SE Group		6	6
Target		2 IPOSS	3 SETFA
-Disc./Scale		W BDIC	W BGRM
Crop			
-Disc./Scale			
Variety			
Assessment Type		CONTRO	CONTRO
Assessment Unit		%	%
Assessment Date		7-22-2019	7-22-2019
Assessment Code		A8	A8
Appl.-Ass.Interval		60 DAA	60 DAA
Days after first Appl.		60 DAA	60 DAA
Days after last Appl.		60 DAA	60 DAA
Plant.-Ass.Interval		82 DP1	82 DP1
Days after Emergence		75 DE1	75 DE1
Entry Entry/Trt.	Dose Dose	Appl.	
No. Description	Unit	Code	
		15	16
1 UNTREATED		0.0	0.0
2 CAPRENO HERBICIDE	119.9 g ai/ha A	88.3	90.0
AATREX	1122 g ai/ha A		
ROUNDUP POWER MAX	1263 g ai/ha A		
3 DEGREE EXTRA	3403 g ai/ha A	86.7	86.7
ROUNDUP POWER MAX	1263 g ai/ha A		
4 DEGREE EXTRA	1701 g ai/ha A	88.3	86.7
ROUNDUP POWER MAX	1263 g ai/ha A		
5 CAPRENO HERBICIDE	119.9 g ai/ha A	88.3	90.0
DEGREE EXTRA	3403 g ai/ha A		
ROUNDUP POWER MAX	1263 g ai/ha A		
6 CAPRENO HERBICIDE	119.9 g ai/ha A	86.7	88.3
DEGREE EXTRA	1701 g ai/ha A		
ROUNDUP POWER MAX	1263 g ai/ha A		
7 ACURON HERBICIDE	1552 g ai/ha A	86.7	88.3
ROUNDUP POWER MAX	1263 g ai/ha A		
8 RESICORE HERBICIDE	1150 g ai/ha A	88.3	86.7
AATREX	1122 g ai/ha A		
ROUNDUP POWER MAX	1263 g ai/ha A		
9 HALEX GT	2213 g ai/ha A	88.3	88.3
AATREX	1122 g ai/ha A		
10 HARNESS MAX	1857 g ai/ha A	88.3	88.3
AATREX	1122 g ai/ha A		
ROUNDUP POWER MAX	1263 g ai/ha A		
LSD P=.05		4.34	4.14
Standard Deviation		2.53	2.42
CV		3.2	3.04
Replicate F		2.739	1.000
Replicate Prob(F)		0.0915	0.3874
Treatment F		362.087	400.381
Treatment Prob(F)		0.0001	0.0001

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,8,9,13 because error mean square = 0.

University of Kentucky

Capreno / Acetochlor / Rate Titration / Competitors 19-22

Trial ID: HP19USAWMJUZW3 TD Number: LOCALCREATED Protocol Edition No.: 1.01
Project ID: LOCAL_PROJ
Project Number(s): 100 % N-3629 % 100 % LFAEY003
Protocol Developer: Waddington, Mark
License User: Jones, Joshua

Target

- 1, AMBTR, W, BDIC, , , = Ambrosia trifida L.
- 2, IPOSS, W, BDIC, , , = Ipomoea spec.
- 3, SETFA, W, BGRM, , , = Setaria faberi HERRM.

Crop

- 1, ZEAMD, C, BCOR, DKC 63-55, = Zea mays L. ssp. indentata STU

Assessment Type

- PHYGEN = Phytotoxicity - General, Injury
- CONTRO = Control

Assessment Unit

% = Percent

Plant.-Ass.Interval

- 36 DP1 = 1 ZEAMD 5-1-2019
- 50 DP1 = 1 ZEAMD 5-1-2019
- 68 DP1 = 1 ZEAMD 5-1-2019
- 82 DP1 = 1 ZEAMD 5-1-2019

University of Kentucky

Integrated Corn Herbicide Programs

Trial ID: 19-24 Location: LEXINGTON, KY Trial Year: 2019
 Protocol ID: MON 24-08 Investigator: Sara Carter
 Project ID: Study Director: David J Mayonado
 Sponsor Contact:

General Trial Information

Study Director: David J Mayonado
Investigator: Sara Carter **Title:** RESEARCH SPECIALIST

Discipline: H herbicide
Trial Status: I one-year/interim
ARM Trial Created On: 5-1-2019
Initiation Date: 5-1-2019

Trial Location

City: LEXINGTON **Country:** USA United States
State/Prov.: KENTUCKY
Postal Code: 40511

Conducted Under GLP: No

Conducted Under GEP: No

Contacts

Study Director: David J Mayonado

Investigator: Sara Carter **Title:** RESEARCH SPECIALIST
Organization: UNIVERSITY OF KENTUCKY
Address: 105 PLANT SCIENCE BUILDING **Phone No.:** 859-259-1914
City+State/Prov.: LEXINGTON, KY **Mobile No.:** 859-559-6710
Postal Code: 40546-0312 **E-mail:** sara.carter@uky.edu

Crop Description

Crop 1: C ZEAMX Zea mays Corn **BBCH Scale:** BCOR
Variety: DKC 63-55
Planting Date: 5-1-2019 **Planting Rate:** 32000 S/A
Depth: 1.5 IN
Rows per Plot: 6 **Planting Method:** PLANTD planted
Row Spacing: 30 IN **Planting Equipment:** FE field equipment
Seed Bed: SMOOTH smooth
Soil Temperature: 61 F **Soil Moisture:** WET wet
Emergence Date: 5-8-2019

Pest Description

Pest 1 Type: W **Code:** SETFA *Setaria faberi*
Common Name: Giant foxtail
Crop: 1 ZEAMX

Pest 2 Type: W **Code:** AMBTR *Ambrosia trifida*
Common Name: Giant ragweed
Crop: 1 ZEAMX

Pest 3 Type: W **Code:** IPOSS *Ipomoea* sp.
Common Name: Morning glory
Crop: 1 ZEAMX

Site and Design

Treated Plot Width: 10 FT **Site Type:** FIELD field
Treated Plot Length: 44 FT
Treated Plot Area: 440 FT² **Treatments:** 18 **Tillage Type:** CONTIL conventional-till
Replications: 3 **Study Design:** RACOB� Randomized Complete Block (RCB)

Soil Description

Description Name: MAURY
% Sand: 6 **% OM:** 2.6 **Texture:** SIL silt loam
% Silt: 62 **pH:** 6.4 **Soil Name:** MAURY SILT LOAM
% Clay: 32 **CEC:** 18 **Fert. Level:** E excellent
Soil Drainage: E excellent

Moisture and Weather Conditions

Overall Moisture Conditions: WEWEDR wet-wet-dry
Closest Weather Station: SPINDLETOP **Distance:** 1.5 MI

University of Kentucky

Application Description			
	A	B	C
Application Date	5-1-2019	5-23-2019	6-3-2019
Interval to Prev. Appl.		22 DAYS	11 DAYS
Application Method	SPRAY	SPRAY	SPRAY
Application Timing	PRE	2-4"W	V4
Application Placement	BROSOI	BROFOL	BROFOL
Applied By	SARA	SARA	SARA
Air Temperature Start, Stop	80 F	88 F	76 F
% Relative Humidity Start, Stop	68	65	46
Wind Velocity+Dir. Start	6 MPH SW	4 MPH W	4 MPH S
Soil Temperature	61 F	69 F	70 F
Soil Moisture	WET	GOOD	WET
Soil Surface Condition	SMOOTH	SMOOTH	SMOOTH
% Cloud Cover	50	60	10
Next Moisture Occurred On	5-2-2019	5-26-2019	6-5-2019

Crop Stage At Each Application			
	A	B	C
Crop 1 Code, BBCH Scale	ZEAMX BCOR	ZEAMX BCOR	ZEAMX BCOR
Days after Emergence	-7	15	26
Height Average		8 IN	10 IN

Pest Stage At Each Application			
	A	B	C
Pest 1 Code, Type, Scale	SETFA W	SETFA W	SETFA W
Height Average		2 IN	3 IN
Pest 2 Code, Type, Scale	AMBTR W	AMBTR W	AMBTR W
Height Average		4 IN	6 IN
Pest 3 Code, Type, Scale	IPOSS W	IPOSS W	IPOSS W
Height Average		2 IN	2.5 IN

Application Equipment			
	A	B	C
Appl. Equipment	BACKPACK	BACKPACK	BACKPACK
Equipment Type	BELSPR	BELSPR	BELSPR
Operation Pressure	30 PSI	30 PSI	30 PSI
Nozzle Type	FLAT FAN	FLAT FAN	FLAT FAN
Nozzle Size	8002 DG	8002 DG	8002 DG
Nozzle Spacing	20 IN	20 IN	20 IN
Boom Length	10 FT	10 FT	10 FT
Boom Height	30 IN	30 IN	30 IN
Boom Flow Rate	IN	IN	IN
Ground Speed	4 MPH	4 MPH	4 MPH
Carrier	WATER	WATER	WATER
Application Amount	15 GPA	15 GPA	15 GPA
Mix Size	2.5 liters	2.5 liters	2.5 liters
Propellant	CO2	CO2	CO2

Context	Date	By	Notes
STATUS	5-1-2019	Sara Carter	Automatically added by ARM: Trial Status updated to 'S' during trial creation.

SE Definitions	
	1.
Crop Type, Code	C

University of Kentucky

Integrated Corn Herbicide Programs

Trial ID: 19-24 Location: LEXINGTON, KY Trial Year: 2019
 Protocol ID: MON 24-08 Investigator: Sara Carter
 Project ID: Study Director: David J Mayonado
 Sponsor Contact:

Pest Type		W Weed	W Weed	W Weed		W Weed			
Pest Code		SETFA	AMBTR	IPOSS		SETFA			
Pest Scientific Name		Setaria faberi	Ambrosia trifida	Ipomoea sp.		Setaria faberi			
Pest Name		Giant foxtail	Giant ragweed	Morning glory		Giant foxtail			
Crop Type, Code	C ZEAMX	C -	C -	C -	C ZEAMX	C -			
BBCH Scale	BCOR				BCOR				
Crop Scientific Name	Zea mays				Zea mays				
Crop Name	Corn				Corn				
Rating Date	5-16-2019	5-16-2019	5-16-2019	5-16-2019	5-30-2019	5-30-2019			
Rating Type	PHYGEN	EFICI	EFICI	EFICI	PHYGEN	EFICI			
Rating Unit	percent	percent	percent	percent	percent	percent			
Number of Subsamples	1	1	1	1	1	1			
Rating Timing	2 WEEK	2 WEEK	2 WEEK	2 WEEK	4 WK A/1WKB	4 WK A/1WKB			
Days After First/Last Applic.	15 15	15 15	15 15	15 15	29 7	29 7			
Plant-Eval Interval	15 DP-1	15 DP-1	15 DP-1	15 DP-1	29 DP-1	29 DP-1			
Days After Emergence	8 DE-1	8 DE-1	8 DE-1	8 DE-1	22 DE-1	22 DE-1			
Trt Treatment	Rate	Appl							
No. Name	Rate	Unit	Code	1	2	3	4	5	6
1 HARNESS XTRA 5.6L	3.36 lb ai/a	A	A	0.0	99.0	99.0	99.0	0.0	99.0
2 HARNESS XTRA 5.6L	2.8 lb ai/a	A	A	0.0	99.0	99.0	99.0	0.0	99.0
BALANCE FLEXX	0.047 lb ai/a	A	A						
3 HARNESS XTRA 5.6L	2.8 lb ai/a	A	A	0.0	99.0	99.0	99.0	0.0	99.0
CORVUS	0.068 lb ai/a	A	A						
4 CORVUS	0.0925 lb ai/a	A	A	0.0	99.0	99.0	99.0	0.0	99.0
ATRAZINE	1 lb ai/a	A	A						
5 CORVUS	0.0925 lb ai/a	A	A	0.0	99.0	99.0	99.0	0.0	99.0
HARNESS XTRA 5.6L	2.24 lb ai/a	A	A						
6 HARNESS MAX	1.92 lb ai/a	A	A	0.0	99.0	99.0	99.0	0.0	99.0
ATRAZINE	1 lb ai/a	A	A						
7 ACURON	2.15 lb ai/a	A	A	0.0	99.0	99.0	99.0	0.0	99.0
8 RESICORE	2.1 lb ai/a	A	A	0.0	99.0	99.0	99.0	0.0	99.0
ATRAZINE	1 lb ai/a	A	A						
9 HARNESS MAX	1.92 lb ai/a	A	A	0.0	99.0	99.0	99.0	0.0	99.0
ATRAZINE	1 lb ai/a	A	A						
DIFLEXX	0.25 lb ai/a	C	C						
METHYLATED OIL	1 % v/v	C	C						
N-PAK AMS LIQUID	2.5 % v/v	C	C						
10 HARNESS MAX	1.92 lb ai/a	A	A	0.0	99.0	99.0	99.0	0.0	99.0
ATRAZINE	1 lb ai/a	A	A						
DIFLEXX DUO	0.4 lb ai/a	C	C						
METHYLATED OIL	1 % v/v	C	C						
N-PAK AMS LIQUID	2.5 % v/v	C	C						
11 HARNESS MAX	1.92 lb ai/a	A	A	0.0	99.0	99.0	99.0	0.0	99.0
ATRAZINE	1 lb ai/a	A	A						
CAPRENO	0.0664 lb ai/a	C	C						
NI SURFACTANT	0.25 % v/v	C	C						
N-PAK AMS LIQUID	2.5 % v/v	C	C						
12 CORVUS	0.068 lb ai/a	A	A	0.0	99.0	99.0	99.0	0.0	99.0
ATRAZINE	1 lb ai/a	A	A						
HARNESS MAX	1.68 lb ai/a	B	B						
NI SURFACTANT	0.25 % v/v	B	B						
N-PAK AMS LIQUID	2.5 % v/v	B	B						
13 HARNESS XTRA 5.6L	2.8 lb ai/a	A	A	0.0	99.0	99.0	99.0	0.0	99.0
BALANCE FLEXX	0.047 lb ai/a	A	A						
DIFLEXX	0.25 lb ai/a	C	C						
METHYLATED OIL	1 % v/v	C	C						
N-PAK AMS LIQUID	2.5 % v/v	C	C						
14 HARNESS XTRA 5.6L	2.8 lb ai/a	A	A	0.0	99.0	99.0	99.0	0.0	99.0
BALANCE FLEXX	0.047 lb ai/a	A	A						
CAPRENO	0.0664 lb ai/a	C	C						
NI SURFACTANT	0.25 % v/v	C	C						
N-PAK AMS LIQUID	2.5 % v/v	C	C						

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,8,9,13,14,15,16,17,18,19,20,21 because error mean square = 0.

University of Kentucky

Pest Type		W Weed	W Weed	W Weed	W Weed			
Pest Code		SETFA	AMBTR	IPOSS		SETFA		
Pest Scientific Name		Setaria faberi	Ambrosia trifida	Ipomoea sp.		Setaria faberi		
Pest Name		Giant foxtail	Giant ragweed	Morning glory		Giant foxtail		
Crop Type, Code	C ZEAMX	C -	C -	C -	C ZEAMX	C -		
BBCH Scale	BCOR				BCOR			
Crop Scientific Name	Zea mays				Zea mays			
Crop Name	Corn				Corn			
Rating Date	5-16-2019	5-16-2019	5-16-2019	5-16-2019	5-30-2019	5-30-2019		
Rating Type	PHYGEN	EFICI	EFICI	EFICI	PHYGEN	EFICI		
Rating Unit	percent	percent	percent	percent	percent	percent		
Number of Subsamples	1	1	1	1	1	1		
Rating Timing	2 WEEK	2 WEEK	2 WEEK	2 WEEK	4 WK A/1WKB	4 WK A/1WKB		
Days After First/Last Applic.	15 15	15 15	15 15	15 15	29 7	29 7		
Plant-Eval Interval	15 DP-1	15 DP-1	15 DP-1	15 DP-1	29 DP-1	29 DP-1		
Days After Emergence	8 DE-1	8 DE-1	8 DE-1	8 DE-1	22 DE-1	22 DE-1		
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	1	2	3	4	5	6
15 HARNESS MAX	1.2 lb ai/a	A	0.0	99.0	99.0	99.0	0.0	99.0
HARNESS MAX	1.2 lb ai/a	B						
NI SURFACTANT	0.25 % v/v	B						
N-PAK AMS LIQUID	2.5 % v/v	B						
16 DEGREE XTRA	3.03 lb ai/a	B	0.0	0.0	0.0	0.0	0.0	99.0
CAPRENO	0.0664 lb ai/a	B						
NI SURFACTANT	0.25 % v/v	B						
N-PAK AMS LIQUID	2.5 % v/v	B						
17 HALEX GT	1.98 lb ai/a	B	0.0	0.0	0.0	0.0	0.0	99.0
ATRAZINE	1 lb ai/a	B						
NI SURFACTANT	0.25 % v/v	B						
N-PAK AMS LIQUID	2.5 % v/v	B						
18 ACURON	1.5 qt/a	A	0.0	99.0	99.0	99.0	0.0	99.0
HALEX GT	3.6 pt/a	B						
AATREX	1 pt/a	B						
NIS	0.25 % v/v	B						
AMS	8.5 lb/100 gal	B						
LSD P=.05								
Standard Deviation			0.00	0.00	0.00	0.00	0.00	0.00
CV			0.0	0.0	0.0	0.0	0.0	0.0
Replicate F			0.000	0.000	0.000	0.000	0.000	0.000
Replicate Prob(F)			1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Treatment F			0.000	0.000	0.000	0.000	0.000	0.000
Treatment Prob(F)			1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,8,9,13,14,15,16,17,18,19,20,21 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	AMBTR	IPOSS		SETFA	AMBTR		
Pest Scientific Name	Ambrosia trifi>	Ipomoea sp.		Setaria faberi	Ambrosia trifi>		
Pest Name	Giant ragweed	Morning glory		Giant foxtail	Giant ragweed		
Crop Type, Code	C -	C -	C	C -	C -		
BBCH Scale			ZEAMX				
Crop Scientific Name			BCOR				
Crop Name			Zea mays				
Rating Date	5-30-2019	5-30-2019	Corn	6-13-2019	6-13-2019		
Rating Type	EFICI	EFICI	PHYGEN	EFICI	EFICI		
Rating Unit	percent	percent	percent	percent	percent		
Number of Subsamples	1	1	1	1	1		
Rating Timing	4 WK A/1WK B	4 WK A/1WK B	2 WK B/1WK C	2 WK B/1WK C	2 WK B/1WK C		
Days After First/Last Applic.	29 7	29 7	43 10	43 10	43 10		
Plant-Eval Interval	29 DP-1	29 DP-1	43 DP-1	43 DP-1	43 DP-1		
Days After Emergence	22 DE-1	22 DE-1	36 DE-1	36 DE-1	36 DE-1		
Trt Treatment	Rate	Rate	Rate	Rate	Rate		
No. Name	Unit	Unit	Unit	Unit	Unit		
Appl Code	7	8	9	10	11		
1 HARNESS XTRA 5.6L	3.36 lb ai/a	A	99.0	99.0	0.0	91.7	91.7
2 HARNESS XTRA 5.6L	2.8 lb ai/a	A	99.0	99.0	0.0	91.7	91.7
BALANCE FLEXX	0.047 lb ai/a	A					
3 HARNESS XTRA 5.6L	2.8 lb ai/a	A	99.0	99.0	0.0	91.7	91.7
CORVUS	0.068 lb ai/a	A					
4 CORVUS	0.0925 lb ai/a	A	99.0	99.0	0.0	93.3	93.3
ATRAZINE	1 lb ai/a	A					
5 CORVUS	0.0925 lb ai/a	A	99.0	99.0	0.0	91.7	91.7
HARNESS XTRA 5.6L	2.24 lb ai/a	A					
6 HARNESS MAX	1.92 lb ai/a	A	99.0	99.0	0.0	95.0	95.0
ATRAZINE	1 lb ai/a	A					
7 ACURON	2.15 lb ai/a	A	99.0	99.0	0.0	91.7	91.7
8 RESICORE	2.1 lb ai/a	A	99.0	99.0	0.0	93.3	93.3
ATRAZINE	1 lb ai/a	A					
9 HARNESS MAX	1.92 lb ai/a	A	99.0	99.0	0.0	93.3	93.3
ATRAZINE	1 lb ai/a	A					
DIFLEXX	0.25 lb ai/a	C					
METHYLATED OIL	1 % v/v	C					
N-PAK AMS LIQUID	2.5 % v/v	C					
10 HARNESS MAX	1.92 lb ai/a	A	99.0	99.0	0.0	90.0	90.0
ATRAZINE	1 lb ai/a	A					
DIFLEXX DUO	0.4 lb ai/a	C					
METHYLATED OIL	1 % v/v	C					
N-PAK AMS LIQUID	2.5 % v/v	C					
11 HARNESS MAX	1.92 lb ai/a	A	99.0	99.0	0.0	95.0	95.0
ATRAZINE	1 lb ai/a	A					
CAPRENO	0.0664 lb ai/a	C					
NI SURFACTANT	0.25 % v/v	C					
N-PAK AMS LIQUID	2.5 % v/v	C					
12 CORVUS	0.068 lb ai/a	A	99.0	99.0	0.0	91.7	91.7
ATRAZINE	1 lb ai/a	A					
HARNESS MAX	1.68 lb ai/a	B					
NI SURFACTANT	0.25 % v/v	B					
N-PAK AMS LIQUID	2.5 % v/v	B					
13 HARNESS XTRA 5.6L	2.8 lb ai/a	A	99.0	99.0	0.0	93.3	93.3
BALANCE FLEXX	0.047 lb ai/a	A					
DIFLEXX	0.25 lb ai/a	C					
METHYLATED OIL	1 % v/v	C					
N-PAK AMS LIQUID	2.5 % v/v	C					
14 HARNESS XTRA 5.6L	2.8 lb ai/a	A	99.0	99.0	0.0	91.7	91.7
BALANCE FLEXX	0.047 lb ai/a	A					
CAPRENO	0.0664 lb ai/a	C					
NI SURFACTANT	0.25 % v/v	C					
N-PAK AMS LIQUID	2.5 % v/v	C					

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,8,9,13,14,15,16,17,18,19,20,21 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed	W Weed
Pest Code	AMBTR	IPOSS	SETFA	AMBTR
Pest Scientific Name	Ambrosia trifi>	Ipomoea sp.	Setaria faberi	Ambrosia trifi>
Pest Name	Giant ragweed	Morning glory	Giant foxtail	Giant ragweed
Crop Type, Code	C -	C -	C -	C -
BBCH Scale			C ZEAMX	
Crop Scientific Name			BCOR	
Crop Name			Zea mays	
Rating Date	5-30-2019	5-30-2019	Corn	6-13-2019
Rating Type	EFICI	EFICI	PHYGEN	EFICI
Rating Unit	percent	percent	percent	percent
Number of Subsamples	1	1	1	1
Rating Timing	4 WK A/1WKB	4 WK A/1WKB	2 WK B/1WK C	2 WK B/1WK C
Days After First/Last Applic.	29 7	29 7	43 10	43 10
Plant-Eval Interval	29 DP-1	29 DP-1	43 DP-1	43 DP-1
Days After Emergence	22 DE-1	22 DE-1	36 DE-1	36 DE-1
Trt Treatment	Rate	Rate	Rate	Rate
No. Name	Unit	Unit	Unit	Unit
	Code	Code	Code	Code
	7	8	9	10
15 HARNESS MAX	1.2 lb ai/a			
HARNESS MAX	1.2 lb ai/a			
NI SURFACTANT	0.25 % v/v			
N-PAK AMS LIQUID	2.5 % v/v			
16 DEGREE XTRA	3.03 lb ai/a			
CAPRENO	0.0664 lb ai/a			
NI SURFACTANT	0.25 % v/v			
N-PAK AMS LIQUID	2.5 % v/v			
17 HALEX GT	1.98 lb ai/a			
ATRAZINE	1 lb ai/a			
NI SURFACTANT	0.25 % v/v			
N-PAK AMS LIQUID	2.5 % v/v			
18 ACURON	1.5 qt/a			
HALEX GT	3.6 pt/a			
AATREX	1 pt/a			
NIS	0.25 % v/v			
AMS	8.5 lb/100 gal			
LSD P=.05				4.36
Standard Deviation	0.00	0.00	0.00	2.63
CV	0.0	0.0	0.0	2.84
Replicate F	0.000	0.000	0.000	1.071
Replicate Prob(F)	1.0000	1.0000	1.0000	0.3540
Treatment F	0.000	0.000	0.000	0.728
Treatment Prob(F)	1.0000	1.0000	1.0000	0.7536

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,8,9,13,14,15,16,17,18,19,20,21 because error mean square = 0.

University of Kentucky

Pest Type	W Weed		W Weed	W Weed	W Weed			
Pest Code	IPOSS		SETFA	AMBTR	IPOSS			
Pest Scientific Name	Ipomoea sp.		Setaria faberi	Ambrosia trifi>	Ipomoea sp.			
Pest Name	Morning glory		Giant foxtail	Giant ragweed	Morning glory			
Crop Type, Code	C -	C ZEAMX	C -	C -	C -			
BBCH Scale		BCOR						
Crop Scientific Name		Zea mays						
Crop Name		Corn						
Rating Date	6-13-2019	6-27-2019	6-27-2019	6-27-2019	6-27-2019			
Rating Type	EFICI	PHYGEN	EFICI	EFICI	EFICI			
Rating Unit	percent	percent	percent	percent	percent			
Number of Subsamples	1	1	1	1	1			
Rating Timing	2 WK B/1WK C	4WK B/3 WK C	4 WK B/3WK/C	4WK B/3 WKC	4WK B/3WK C			
Days After First/Last Applic.	43 10	57 24	57 24	57 24	57 24			
Plant-Eval Interval	43 DP-1	57 DP-1	57 DP-1	57 DP-1	57 DP-1			
Days After Emergence	36 DE-1	50 DE-1	50 DE-1	50 DE-1	50 DE-1			
Trt Treatment	Rate	Rate	Rate	Rate	Rate			
No. Name	Unit	Unit	Unit	Unit	Unit			
Appl Code	12	13	14	15	16			
1 HARNESS XTRA 5.6L	3.36 lb ai/a	A	91.7	0.0	90.0	90.0	90.0	90.0
2 HARNESS XTRA 5.6L	2.8 lb ai/a	A	91.7	0.0	90.0	90.0	90.0	90.0
BALANCE FLEXX	0.047 lb ai/a	A						
3 HARNESS XTRA 5.6L	2.8 lb ai/a	A	91.7	0.0	90.0	90.0	90.0	90.0
CORVUS	0.068 lb ai/a	A						
4 CORVUS	0.0925 lb ai/a	A	93.3	0.0	90.0	90.0	90.0	90.0
ATRAZINE	1 lb ai/a	A						
5 CORVUS	0.0925 lb ai/a	A	91.7	0.0	90.0	90.0	90.0	90.0
HARNESS XTRA 5.6L	2.24 lb ai/a	A						
6 HARNESS MAX	1.92 lb ai/a	A	95.0	0.0	90.0	90.0	90.0	90.0
ATRAZINE	1 lb ai/a	A						
7 ACURON	2.15 lb ai/a	A	91.7	0.0	90.0	90.0	90.0	90.0
8 RESICORE	2.1 lb ai/a	A	93.3	0.0	90.0	90.0	90.0	90.0
ATRAZINE	1 lb ai/a	A						
9 HARNESS MAX	1.92 lb ai/a	A	93.3	0.0	90.0	90.0	90.0	90.0
ATRAZINE	1 lb ai/a	A						
DIFLEXX	0.25 lb ai/a	C						
METHYLATED OIL	1 % v/v	C						
N-PAK AMS LIQUID	2.5 % v/v	C						
10 HARNESS MAX	1.92 lb ai/a	A	90.0	0.0	90.0	90.0	90.0	90.0
ATRAZINE	1 lb ai/a	A						
DIFLEXX DUO	0.4 lb ai/a	C						
METHYLATED OIL	1 % v/v	C						
N-PAK AMS LIQUID	2.5 % v/v	C						
11 HARNESS MAX	1.92 lb ai/a	A	95.0	0.0	99.0	99.0	99.0	99.0
ATRAZINE	1 lb ai/a	A						
CAPRENO	0.0664 lb ai/a	C						
NI SURFACTANT	0.25 % v/v	C						
N-PAK AMS LIQUID	2.5 % v/v	C						
12 CORVUS	0.068 lb ai/a	A	91.7	0.0	99.0	99.0	99.0	99.0
ATRAZINE	1 lb ai/a	A						
HARNESS MAX	1.68 lb ai/a	B						
NI SURFACTANT	0.25 % v/v	B						
N-PAK AMS LIQUID	2.5 % v/v	B						
13 HARNESS XTRA 5.6L	2.8 lb ai/a	A	93.3	0.0	99.0	99.0	99.0	99.0
BALANCE FLEXX	0.047 lb ai/a	A						
DIFLEXX	0.25 lb ai/a	C						
METHYLATED OIL	1 % v/v	C						
N-PAK AMS LIQUID	2.5 % v/v	C						
14 HARNESS XTRA 5.6L	2.8 lb ai/a	A	91.7	0.0	99.0	99.0	99.0	99.0
BALANCE FLEXX	0.047 lb ai/a	A						
CAPRENO	0.0664 lb ai/a	C						
NI SURFACTANT	0.25 % v/v	C						
N-PAK AMS LIQUID	2.5 % v/v	C						

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,8,9,13,14,15,16,17,18,19,20,21 because error mean square = 0.

University of Kentucky

				W Weed IPOSS Ipomoea sp. Morning glory C -	C ZEAMX BCOR Zea mays Corn 6-27-2019 PHYGEN percent 1 4WK B/3 WK C	W Weed SETFA Setaria faberi Giant foxtail C - 6-27-2019 EFICI percent 1 4 WK B/3WK/C	W Weed AMBTR Ambrosia trifida Giant ragweed C - 6-27-2019 EFICI percent 1 4WK B/3 WKC	W Weed IPOSS Ipomoea sp. Morning glory C - 6-27-2019 EFICI percent 1 4WK B/3WK C	
Trt	Treatment	Rate	Appl						
No.	Name	Rate	Unit	Code	12	13	14	15	16
15	HARNESS MAX	1.2 lb ai/a	A		93.3	0.0	99.0	99.0	99.0
	HARNESS MAX	1.2 lb ai/a	B						
	NI SURFACTANT	0.25 % v/v	B						
	N-PAK AMS LIQUID	2.5 % v/v	B						
16	DEGREE XTRA	3.03 lb ai/a	B		93.3	0.0	99.0	99.0	99.0
	CAPRENO	0.0664 lb ai/a	B						
	NI SURFACTANT	0.25 % v/v	B						
	N-PAK AMS LIQUID	2.5 % v/v	B						
17	HALEX GT	1.98 lb ai/a	B		93.3	0.0	99.0	99.0	99.0
	ATRAZINE	1 lb ai/a	B						
	NI SURFACTANT	0.25 % v/v	B						
	N-PAK AMS LIQUID	2.5 % v/v	B						
18	ACURON	1.5 qt/a	A		93.3	0.0	99.0	99.0	99.0
	HALEX GT	3.6 pt/a	B						
	AATREX	1 pt/a	B						
	NIS	0.25 % v/v	B						
	AMS	8.5 lb/100 gal	B						
LSD	P=.05				4.36	.	.	.	.
	Standard Deviation				2.63	0.00	0.00	0.00	0.00
	CV				2.84	0.0	0.0	0.0	0.0
	Replicate F				1.071	0.000	0.000	0.000	0.000
	Replicate Prob(F)				0.3540	1.0000	1.0000	1.0000	1.0000
	Treatment F				0.728	0.000	0.000	0.000	0.000
	Treatment Prob(F)				0.7536	1.0000	1.0000	1.0000	1.0000

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,8,9,13,14,15,16,17,18,19,20,21 because error mean square = 0.

University of Kentucky

Pest Type		W Weed SETFA	W Weed AMBTR	W Weed IPOSS		W Weed SETFA		
Pest Code		Setaria faberi	Ambrosia trifi>	Ipomoea sp.		Setaria faberi		
Pest Scientific Name		Giant foxtail	Giant ragweed	Morning glory		Giant foxtail		
Pest Name		C -	C -	C -		C -		
Crop Type, Code	C ZEAMX				C ZEAMX			
BBCH Scale	BCOR				BCOR			
Crop Scientific Name	Zea mays				Zea mays			
Crop Name	Corn				Corn			
Rating Date	7-11-2019	7-11-2019	7-11-2019	7-11-2019	7-25-2019	7-25-2019		
Rating Type	PHYGEN	EFICI	EFICI	EFICI	PHYGEN	EFICI		
Rating Unit	percent	percent	percent	percent	percent	percent		
Number of Subsamples	1	1	1	1	1	1		
Rating Timing	6 WEEK C	6 WEEK C	6 WEEK C	6 WEEK C	8 WEEK C	8 WEEK C		
Days After First/Last Applic.	71 38	71 38	71 38	71 38	85 52	85 52		
Plant-Eval Interval	71 DP-1	71 DP-1	71 DP-1	71 DP-1	85 DP-1	85 DP-1		
Days After Emergence	64 DE-1	64 DE-1	64 DE-1	64 DE-1	78 DE-1	78 DE-1		
Trt Treatment	Rate	Rate	Rate	Rate	Rate	Rate		
No. Name	Unit	Unit	Unit	Unit	Unit	Unit		
Appl Code	17	18	19	20	21	22		
1 HARNESS XTRA 5.6L	3.36 lb ai/a	A	0.0	90.0	90.0	90.0	0.0	81.7
2 HARNESS XTRA 5.6L	2.8 lb ai/a	A	0.0	90.0	90.0	90.0	0.0	81.7
BALANCE FLEXX	0.047 lb ai/a	A						
3 HARNESS XTRA 5.6L	2.8 lb ai/a	A	0.0	90.0	90.0	90.0	0.0	85.0
CORVUS	0.068 lb ai/a	A						
4 CORVUS	0.0925 lb ai/a	A	0.0	90.0	90.0	90.0	0.0	91.7
ATRAZINE	1 lb ai/a	A						
5 CORVUS	0.0925 lb ai/a	A	0.0	90.0	90.0	90.0	0.0	86.7
HARNESS XTRA 5.6L	2.24 lb ai/a	A						
6 HARNESS MAX	1.92 lb ai/a	A	0.0	90.0	90.0	90.0	0.0	86.7
ATRAZINE	1 lb ai/a	A						
7 ACURON	2.15 lb ai/a	A	0.0	90.0	90.0	90.0	0.0	90.0
8 RESICORE	2.1 lb ai/a	A	0.0	90.0	90.0	90.0	0.0	83.3
ATRAZINE	1 lb ai/a	A						
9 HARNESS MAX	1.92 lb ai/a	A	0.0	90.0	90.0	90.0	0.0	90.0
ATRAZINE	1 lb ai/a	A						
DIFLEXX	0.25 lb ai/a	C						
METHYLATED OIL	1 % v/v	C						
N-PAK AMS LIQUID	2.5 % v/v	C						
10 HARNESS MAX	1.92 lb ai/a	A	0.0	90.0	90.0	90.0	0.0	86.7
ATRAZINE	1 lb ai/a	A						
DIFLEXX DUO	0.4 lb ai/a	C						
METHYLATED OIL	1 % v/v	C						
N-PAK AMS LIQUID	2.5 % v/v	C						
11 HARNESS MAX	1.92 lb ai/a	A	0.0	99.0	99.0	99.0	0.0	85.0
ATRAZINE	1 lb ai/a	A						
CAPRENO	0.0664 lb ai/a	C						
NI SURFACTANT	0.25 % v/v	C						
N-PAK AMS LIQUID	2.5 % v/v	C						
12 CORVUS	0.068 lb ai/a	A	0.0	99.0	99.0	99.0	0.0	88.3
ATRAZINE	1 lb ai/a	A						
HARNESS MAX	1.68 lb ai/a	B						
NI SURFACTANT	0.25 % v/v	B						
N-PAK AMS LIQUID	2.5 % v/v	B						
13 HARNESS XTRA 5.6L	2.8 lb ai/a	A	0.0	99.0	99.0	99.0	0.0	88.3
BALANCE FLEXX	0.047 lb ai/a	A						
DIFLEXX	0.25 lb ai/a	C						
METHYLATED OIL	1 % v/v	C						
N-PAK AMS LIQUID	2.5 % v/v	C						
14 HARNESS XTRA 5.6L	2.8 lb ai/a	A	0.0	99.0	99.0	99.0	0.0	91.7
BALANCE FLEXX	0.047 lb ai/a	A						
CAPRENO	0.0664 lb ai/a	C						
NI SURFACTANT	0.25 % v/v	C						
N-PAK AMS LIQUID	2.5 % v/v	C						

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,8,9,13,14,15,16,17,18,19,20,21 because error mean square = 0.

University of Kentucky

Pest Type		W Weed SETFA	W Weed AMBTR	W Weed IPOSS		W Weed SETFA		
Pest Code		Setaria faberi	Ambrosia trifi>	Ipomoea sp.		Setaria faberi		
Pest Scientific Name		Giant foxtail	Giant ragweed	Morning glory		Giant foxtail		
Pest Name		C -	C -	C -		C -		
Crop Type, Code	C ZEAMX				C ZEAMX			
BBCH Scale	BCOR				BCOR			
Crop Scientific Name	Zea mays				Zea mays			
Crop Name	Corn				Corn			
Rating Date	7-11-2019	7-11-2019	7-11-2019	7-11-2019	7-25-2019	7-25-2019		
Rating Type	PHYGEN	EFICI	EFICI	EFICI	PHYGEN	EFICI		
Rating Unit	percent	percent	percent	percent	percent	percent		
Number of Subsamples	1	1	1	1	1	1		
Rating Timing	6 WEEK C	6 WEEK C	6 WEEK C	6 WEEK C	8 WEEK C	8 WEEK C		
Days After First/Last Applic.	71 38	71 38	71 38	71 38	85 52	85 52		
Plant-Eval Interval	71 DP-1	71 DP-1	71 DP-1	71 DP-1	85 DP-1	85 DP-1		
Days After Emergence	64 DE-1	64 DE-1	64 DE-1	64 DE-1	78 DE-1	78 DE-1		
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	17	18	19	20	21	22
15 HARNESS MAX	1.2 lb ai/a	A	0.0	99.0	99.0	99.0	0.0	81.7
HARNESS MAX	1.2 lb ai/a	B						
NI SURFACTANT	0.25 % v/v	B						
N-PAK AMS LIQUID	2.5 % v/v	B						
16 DEGREE XTRA	3.03 lb ai/a	B	0.0	99.0	99.0	99.0	0.0	88.3
CAPRENO	0.0664 lb ai/a	B						
NI SURFACTANT	0.25 % v/v	B						
N-PAK AMS LIQUID	2.5 % v/v	B						
17 HALEX GT	1.98 lb ai/a	B	0.0	99.0	99.0	99.0	0.0	88.3
ATRAZINE	1 lb ai/a	B						
NI SURFACTANT	0.25 % v/v	B						
N-PAK AMS LIQUID	2.5 % v/v	B						
18 ACURON	1.5 qt/a	A	0.0	99.0	99.0	99.0	0.0	85.0
HALEX GT	3.6 pt/a	B						
AATREX	1 pt/a	B						
NIS	0.25 % v/v	B						
AMS	8.5 lb/100 gal	B						
LSD P=.05								6.09
Standard Deviation			0.00	0.00	0.00	0.00	0.00	3.67
CV			0.0	0.0	0.0	0.0	0.0	4.24
Replicate F			0.000	0.000	0.000	0.000	0.000	0.309
Replicate Prob(F)			1.0000	1.0000	1.0000	1.0000	1.0000	0.7362
Treatment F			0.000	0.000	0.000	0.000	0.000	2.327
Treatment Prob(F)			1.0000	1.0000	1.0000	1.0000	1.0000	0.0177

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,8,9,13,14,15,16,17,18,19,20,21 because error mean square = 0.

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				W Weed AMBTR Ambrosia trifidi> Giant ragweed C -	W Weed IPOSS Ipomoea sp. Morning glory C -	
Pest Type						
Pest Code						
Pest Scientific Name						
Pest Name						
Crop Type, Code						
BBCH Scale						
Crop Scientific Name						
Crop Name						
Rating Date				7-25-2019	7-25-2019	
Rating Type				EFICI	EFICI	
Rating Unit				percent	percent	
Number of Subsamples				1	1	
Rating Timing				8 WEEK C	8 WEEK C	
Days After First/Last Applic.				85 52	85 52	
Plant-Eval Interval				85 DP-1	85 DP-1	
Days After Emergence				78 DE-1	78 DE-1	
Trt No.	Treatment Name	Rate	Rate Unit	Appl Code	23	24
1	HARNESX XTRA 5.6L	3.36	lb ai/a	A	81.7	81.7
2	HARNESX XTRA 5.6L BALANCE FLEXX	2.8 0.047	lb ai/a lb ai/a	A A	81.7	81.7
3	HARNESX XTRA 5.6L CORVUS	2.8 0.068	lb ai/a lb ai/a	A A	85.0	85.0
4	CORVUS ATRAZINE	0.0925 1	lb ai/a lb ai/a	A A	91.7	91.7
5	CORVUS HARNESX XTRA 5.6L	0.0925 2.24	lb ai/a lb ai/a	A A	86.7	86.7
6	HARNESX MAX ATRAZINE	1.92 1	lb ai/a lb ai/a	A A	85.0	83.3
7	ACURON	2.15	lb ai/a	A	90.0	90.0
8	RESICORE ATRAZINE	2.1 1	lb ai/a lb ai/a	A A	83.3	83.3
9	HARNESX MAX ATRAZINE DIFLEXX METHYLATED OIL N-PAK AMS LIQUID	1.92 1 0.25 1 2.5	lb ai/a lb ai/a lb ai/a % v/v % v/v	A A C C C	90.0	90.0
10	HARNESX MAX ATRAZINE DIFLEXX DUO METHYLATED OIL N-PAK AMS LIQUID	1.92 1 0.4 1 2.5	lb ai/a lb ai/a lb ai/a % v/v % v/v	A A C C C	86.7	86.7
11	HARNESX MAX ATRAZINE CAPRENO NI SURFACTANT N-PAK AMS LIQUID	1.92 1 0.0664 0.25 2.5	lb ai/a lb ai/a lb ai/a % v/v % v/v	A A C C C	85.0	85.0
12	CORVUS ATRAZINE HARNESX MAX NI SURFACTANT N-PAK AMS LIQUID	0.068 1 1.68 0.25 2.5	lb ai/a lb ai/a lb ai/a % v/v % v/v	A A B B B	88.3	88.3
13	HARNESX XTRA 5.6L BALANCE FLEXX DIFLEXX METHYLATED OIL N-PAK AMS LIQUID	2.8 0.047 0.25 1 2.5	lb ai/a lb ai/a lb ai/a % v/v % v/v	A A C C C	88.3	88.3
14	HARNESX XTRA 5.6L BALANCE FLEXX CAPRENO NI SURFACTANT N-PAK AMS LIQUID	2.8 0.047 0.0664 0.25 2.5	lb ai/a lb ai/a lb ai/a % v/v % v/v	A A C C C	91.7	91.7

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,8,9,13,14,15,16,17,18,19,20,21 because error mean square = 0.

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Pest Type				W Weed	W Weed
Pest Code				AMBTR	IPOSS
Pest Scientific Name				Ambrosia trifi>	Ipomoea sp.
Pest Name				Giant ragweed	Morning glory
Crop Type, Code				C -	C -
BBCH Scale					
Crop Scientific Name					
Crop Name					
Rating Date				7-25-2019	7-25-2019
Rating Type				EFICI	EFICI
Rating Unit				percent	percent
Number of Subsamples				1	1
Rating Timing				8 WEEK C	8 WEEK C
Days After First/Last Applic.				85 52	85 52
Plant-Eval Interval				85 DP-1	85 DP-1
Days After Emergence				78 DE-1	78 DE-1
Trt Treatment		Rate	Appl		
No. Name		Rate	Unit Code	23	24
15 HARNESS MAX		1.2 lb ai/a	A	81.7	81.7
HARNESS MAX		1.2 lb ai/a	B		
NI SURFACTANT		0.25 % v/v	B		
N-PAK AMS LIQUID		2.5 % v/v	B		
16 DEGREE XTRA		3.03 lb ai/a	B	88.3	88.3
CAPRENO		0.0664 lb ai/a	B		
NI SURFACTANT		0.25 % v/v	B		
N-PAK AMS LIQUID		2.5 % v/v	B		
17 HALEX GT		1.98 lb ai/a	B	88.3	88.3
ATRAZINE		1 lb ai/a	B		
NI SURFACTANT		0.25 % v/v	B		
N-PAK AMS LIQUID		2.5 % v/v	B		
18 ACURON		1.5 qt/a	A	85.0	85.0
HALEX GT		3.6 pt/a	B		
AATREX		1 pt/a	B		
NIS		0.25 % v/v	B		
AMS		8.5 lb/100 gal	B		
LSD P=.05				5.61	5.32
Standard Deviation				3.38	3.20
CV				3.9	3.71
Replicate F				0.527	0.857
Replicate Prob(F)				0.5949	0.4335
Treatment F				2.790	3.236
Treatment Prob(F)				0.0053	0.0017

University of Kentucky

Integrated Corn Herbicide Programs

Trial ID: 19-24 Location: LEXINGTON, KY Trial Year: 2019
Protocol ID: MON 24-08 Investigator: Sara Carter
Project ID: Study Director: David J Mayonado
Sponsor Contact:

Pest Type

W, Weed = Weed or volunteer crop

Pest Code

SETFA, Setaria faberi, Giant foxtail = US

AMBTR, Ambrosia trifida, Giant ragweed = US

IPOSS, Ipomoea sp., Morning glory = US

Crop Type, Code

C = EPPO species (Bayer) codes

ZEAMX, BCOR, Zea mays, Corn = US

Rating Type

PHYGEN = phytotoxicity - general / injury

Plant-Eval Interval

15 DP-1 = 1 ZEAMX 5-1-2019

29 DP-1 = 1 ZEAMX 5-1-2019

43 DP-1 = 1 ZEAMX 5-1-2019

57 DP-1 = 1 ZEAMX 5-1-2019

71 DP-1 = 1 ZEAMX 5-1-2019

85 DP-1 = 1 ZEAMX 5-1-2019

University of Kentucky

Tavium Plus VaporGrip Technology - University testing program in RR2 Xtend soybeans

Trial ID: USNG0H6502019 Location: Cully Scott FS Trial Year: 2019
 Protocol ID: HDC050A4-2019US Investigator: Scott Cully
 Master Protocol ID: Study Director:
 Conducted Under GEP: No Sponsor Contact:
 Trial Origin:

General Trial Information

Study Director: Sara Carter **Title:** Research Specialist
Investigator: Scott Cully

Discipline: H herbicide
Trial Status: F one-year/final
Trial Status Date: 10-23-2019 12:00 AM **Last Export Date:** 12-30-1899 12:00 AM **Last Changed By:** Sara Carter
ARM Trial Created On: 4-1-2019
Initiation Date: 5-22-2019 **Planned Completion Date:** 10-1-2019
Completion Date: 10-3-2019 **Protocol Revision Number:** 1.0 **Protocol Revision Date:** 4-1-2019

Trial Location

City: Lexington **Country:** USA United States
State/Prov.: Kentucky
Postal Code: 40511

Conducted Under GLP: No
Conducted Under GEP: No

Contacts

Study Director: Sara Carter **Title:** Research Specialist
Organization: University of Kentucky
Address: 105 Plant Science Building
City+State/Prov.: Lexington, KY
Postal Code: 40546-0312 **E-mail:** sara.carter@uky.edu

Investigator: Scott Cully
Organization: Syngenta
Address: 17256 New Dennison Rd. **Phone No.:** 618-982-9224
City+State/Prov.: Marion, IL **Mobile No.:** 618-751-0715
Postal Code: 62959 **E-mail:** scott.cully@syngenta.com

Crop Description

Crop 1: C GLXMA Glycine max Soybean **BBCH Scale:** BSOY
Variety: AG 42X6
Attributes: DTS
Planting Rate: 150000 S/A
Planting Date: 5-22-2019
Depth: 1.25 IN **Planting Method:** PLANTD planted
Rows per Plot: 6 **Planting Equipment:** FE field equipment
Row Spacing: 30 IN **Seed Bed:** MEDIUM medium
Soil Moisture: GOOD good
Emergence Date: 5-27-2019
Harvest Date: 10-3-2019 **Harvest Equipment:** Hege
Harvested Width: 5 FT
Harvested Length: 40 FT
% Standard Moisture: 13.0

Pest Description

Pest 1 Type: W **Code:** SETFA Setaria faberi
Common Name: Giant foxtail
Crop: 1 GLXMA
Pest 2 Type: W **Code:** AMBTR Ambrosia trifida
Common Name: Giant ragweed
Crop: 1 GLXMA
Pest 3 Type: W **Code:** IPOSS Ipomoea sp.
Common Name: Morning glory
Crop: 1 GLXMA
Pest 4 Type: W **Code:** ERICA Erigeron canadensis
Common Name: Canada horseweed

Site and Design

Treated Plot Width: 10 FT **Site Type:** FIELD field
Treated Plot Length: 44 FT PLOT plot
Treated Plot Area: 440 FT2 **Treatments:** 6 **Tillage Type:** NOTILL no-till
Replications: 3 **Study Design:** RACOB� Randomized Complete Block (RCB)

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Soil Description
Description Name: LANTON

 % Sand: 7 % OM: 4 **Texture:** SIL silt loam

 % Silt: 63 **pH:** 6.5 **Soil Name:** LANTON SILT LOAM

 % Clay: 30 **CEC:** 22 **Fert. Level:** E excellent

Soil Drainage: E excellent

Moisture and Weather Conditions
Overall Moisture Conditions: WEWEDR wet-wet-dry

Closest Weather Station: SPINDLETOP **Distance:** 2 MI

Application Description

	A	B
Application Date	5-22-2019	6-26-2019
Appl. Start Time	5:00 PM	10:00 AM
Application Method	SPRAY	SPRAY
Application Timing	PREPRE	MIPOWE
Application Placement	BROFOL	BROFOL
Applied By	SARA	SARA
Air Temperature Start, Stop	86 F	91 F
% Relative Humidity Start, Stop	53	60
Wind Velocity+Dir. Start	2 MPH S	1 MPH SE
Soil Temperature	64 F	72 F
Soil Moisture	GOOD	WET
% Cloud Cover	90	5
Next Moisture Occurred On	5-26-2019	7-3-2019

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale	GLXMA BSOY	GLXMA BSOY
Height Average		7 IN

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale	SETFA W	SETFA W
Height Average	2 IN	5 IN
Pest 2 Code, Type, Scale	AMBTR W	AMBTR W
Height Average	4 IN	8 IN
Pest 3 Code, Type, Scale	IPOSS W	IPOSS W
Height Average	1.5 IN	3 IN
Pest 4 Code, Type, Scale	ERICA W	ERICA W
Height Average	3 IN	6 IN

Application Equipment

	A	B
Appl. Equipment	BELTSPRAYER	BELTSPRAYER
Equipment Type	SPRBEL	SPRBEL
Operation Pressure	30 PSI	40 PSI
Nozzle Type	FLAFDG	TEEJAI
Nozzle Size	8002	11002
Nozzle Spacing	30 IN	30 IN
Boom ID	6-TIP	6-TIP
Boom Length	10 FT	10 FT
Boom Height	24 IN	24 IN
Ground Speed	4 MPH	4 MPH
Carrier	WATER	WATER
Application Amount	15 GAL/AC	15 GAL/AC
Mix Size	2.5 L	2.5 L
Propellant	COMCO2	COMCO2
Tank Mix (Y/N)	N no	Y yes

University of Kentucky

Context	Date	By	Notes
STATUS	4-1-2019	Scott Cully	Automatically added by ARM: Trial Status updated to 'S' during trial creation.
APPLIC	5-22-2019	Sara Carter	Added glyphosate to all pre treatments for burndown

SE Definitions			
	1.	2.	3.
Rating Timing	1	2	3
SE Name	ZUSX052	ZUSW001	ZUSX001
SE Description	Yield/A	%Control	%Phyto- General
Part Rated		PLANT	PLANT
Rating Type	YIELD	CONTRO	PHYGEN
Rating Unit	BU	%	%
Sample Size	FT2	1 PLOT	1 PLOT
Collection Basis	1 PLOT	1 PLOT	1 PLOT
Reporting Basis	1 A	1 PLOT	1 PLOT
Calculation	IN	NC	NC
Number of Subsamples	1		
Crop Type, Code	C	C	C
No. Task Comment			
1. 1			
2. 2			
3. 3			

University of Kentucky

Tavium Plus VaporGrip Technology - University testing program in RR2 Xtend soybeans

Trial ID: USNG0H6502019	Location: Cully Scott FS	Trial Year: 2019
Protocol ID: HDC050A4-2019US	Investigator: Scott Cully	
Master Protocol ID:	Study Director:	
	Sponsor Contact:	
Conducted Under GEP: No	Trial Origin:	

Pest ID Code	1 W Weed	2 W Weed	3 W Weed	4 W Weed					
Pest Code	SETFA	AMBTR	IPOSS	ERICA					
Pest Scientific Name	Setaria faberi	Ambrosia trifida	Ipomoea sp.	Erigeron canadensis					
Pest Name	Giant foxtail	Giant ragweed	Morning glory	Canada horseweed					
Crop ID Code	1 GLXMA								
BBCH Scale	BSOY								
Crop Scientific Name	Glycine max								
Crop Name	Soybean								
Rating Date	6-4-2019	6-4-2019	6-4-2019	6-4-2019					
Rating Type	PHYGEN	CONTRO	CONTRO	CONTRO					
Rating Unit	%	%	%	%					
Number of Subsamples	1	1	1	1					
Days After First/Last Applic.	13 13	13 13	13 13	13 13					
Plant-Eval Interval	13 DP-1	13 DP-1	13 DP-1	13 DP-1					
Days After Emergence	8 DE-1	8 DE-1	8 DE-1	8 DE-1					
ARM Action Codes									
Number of Decimals									
Trt No.	Treatment Name	Rate	Unit	Appl Code	1	2	3	4	5
1	UNTREATED CHECK				0.0	0.0	0.0	0.0	0.0
2	BOUNDARY 6.5 EC	1640 g ai/ha	A		0.0	96.3	96.3	96.3	96.3
	INTACT	0.5 % v/v	B						
	CLASS ACT RIDION	1 % v/v	B						
	TAVIUM PLUS VAPORGRIP TECH	1680 g ae/ha	B						
	ROUNDUP POWERMAX 4.5 SL	1120 g ae/ha	B						
3	BROADAXE XC 7 EC	1530 g ai/ha	A		0.0	97.7	97.7	97.7	97.7
	INTACT	0.5 % v/v	B						
	CLASS ACT RIDION	1 % v/v	B						
	TAVIUM PLUS VAPORGRIP TECH	1680 g ae/ha	B						
	ROUNDUP POWERMAX 4.5 SL	1120 g ae/ha	B						
4	PREFIX [F]	1480 g ai/ha	A		0.0	97.3	97.3	97.3	97.3
	INTACT	0.5 % v/v	B						
	CLASS ACT RIDION	1 % v/v	B						
	TAVIUM PLUS VAPORGRIP TECH	1680 g ae/ha	B						
	ROUNDUP POWERMAX 4.5 SL	1120 g ae/ha	B						
5	VALOR XLT 40.3 WG	85 g ai/ha	A		0.0	97.3	97.3	97.3	97.3
	INTACT	0.5 % v/v	B						
	CLASS ACT RIDION	1 % v/v	B						
	XTENDIMAX 2.9 SL	563 g ae/ha	B						
	ROUNDUP POWERMAX 4.5 SL	1120 g ae/ha	B						
6	ZIDUA PRO 4.09 SC	161 g ai/ha	A		0.0	97.3	97.3	97.3	97.3
	INTACT	0.5 % v/v	B						
	CLASS ACT RIDION	1 % v/v	B						
	ENGENIA 5 EC	560 g ae/ha	B						
	ROUNDUP POWERMAX 4.5 SL	1120 g ae/ha	B						
LSD P=.05					.	3.94	3.94	3.94	3.94
Standard Deviation					0.00	2.17	2.17	2.17	2.17
CV					0.0	2.68	2.68	2.68	2.68
Replicate F					0.000	0.035	0.035	0.035	0.035
Replicate Prob(F)					1.0000	0.9653	0.9653	0.9653	0.9653
Treatment F					0.000	1005.220	1005.220	1005.220	1005.220
Treatment Prob(F)					1.0000	0.0001	0.0001	0.0001	0.0001

Could not calculate LSD (% mean diff) for columns 1,6,7,8,9,10,11,12,13,14,15,16 because error mean square = 0.

University of Kentucky

Pest ID Code		1 W Weed	2 W Weed	3 W Weed	4 W Weed			
Pest Code		SETFA	AMBTR	IPOSS	ERICA			
Pest Scientific Name		Setaria faberi	Ambrosia trifida	Ipomoea sp.	Erigeron canadensis			
Pest Name		Giant foxtail	Giant ragweed	Morning glory	Canada horseweed			
Crop ID Code	1 GLXMA							
BBCH Scale	BSOY							
Crop Scientific Name	Glycine max							
Crop Name	Soybean							
Rating Date	6-12-2019	6-12-2019	6-12-2019	6-12-2019	6-12-2019			
Rating Type	PHYGEN	CONTRO	CONTRO	CONTRO	CONTRO			
Rating Unit	%	%	%	%	%			
Number of Subsamples	1	1	1	1	1			
Days After First/Last Applic.	21 21	21 21	21 21	21 21	21 21			
Plant-Eval Interval	21 DP-1	21 DP-1	21 DP-1	21 DP-1	21 DP-1			
Days After Emergence	16 DE-1	16 DE-1	16 DE-1	16 DE-1	16 DE-1			
ARM Action Codes								
Number of Decimals								
Trt No.	Treatment Name	Rate	Appl Code	6	7	8	9	10
1	UNTREATED CHECK			0.0	0.0	0.0	0.0	0.0
2	BOUNDARY 6.5 EC	1640 g ai/ha	A	0.0	99.0	99.0	99.0	99.0
	INTACT	0.5 % v/v	B					
	CLASS ACT RIDION	1 % v/v	B					
	TAVIUM PLUS VAPORGRIP TECH	1680 g ae/ha	B					
	ROUNDUP POWERMAX 4.5 SL	1120 g ae/ha	B					
3	BROADAXE XC 7 EC	1530 g ai/ha	A	0.0	99.0	99.0	99.0	99.0
	INTACT	0.5 % v/v	B					
	CLASS ACT RIDION	1 % v/v	B					
	TAVIUM PLUS VAPORGRIP TECH	1680 g ae/ha	B					
	ROUNDUP POWERMAX 4.5 SL	1120 g ae/ha	B					
4	PREFIX [F]	1480 g ai/ha	A	0.0	99.0	99.0	99.0	99.0
	INTACT	0.5 % v/v	B					
	CLASS ACT RIDION	1 % v/v	B					
	TAVIUM PLUS VAPORGRIP TECH	1680 g ae/ha	B					
	ROUNDUP POWERMAX 4.5 SL	1120 g ae/ha	B					
5	VALOR XLT 40.3 WG	85 g ai/ha	A	0.0	99.0	99.0	99.0	99.0
	INTACT	0.5 % v/v	B					
	CLASS ACT RIDION	1 % v/v	B					
	XTENDIMAX 2.9 SL	563 g ae/ha	B					
	ROUNDUP POWERMAX 4.5 SL	1120 g ae/ha	B					
6	ZIDUA PRO 4.09 SC	161 g ai/ha	A	0.0	99.0	99.0	99.0	99.0
	INTACT	0.5 % v/v	B					
	CLASS ACT RIDION	1 % v/v	B					
	ENGENIA 5 EC	560 g ae/ha	B					
	ROUNDUP POWERMAX 4.5 SL	1120 g ae/ha	B					
LSD P=.05				.	.	.	.	.
Standard Deviation				0.00	0.00	0.00	0.00	0.00
CV				0.0	0.0	0.0	0.0	0.0
Replicate F				0.000	0.000	0.000	0.000	0.000
Replicate Prob(F)				1.0000	1.0000	1.0000	1.0000	1.0000
Treatment F				0.000	0.000	0.000	0.000	0.000
Treatment Prob(F)				1.0000	1.0000	1.0000	1.0000	1.0000

Could not calculate LSD (% mean diff) for columns 1,6,7,8,9,10,11,12,13,14,15,16 because error mean square = 0.

University of Kentucky

Pest ID Code		1 W Weed	2 W Weed	3 W Weed	4 W Weed		
Pest Code		SETFA	AMBTR	IPOSS	ERICA		
Pest Scientific Name		Setaria faberi	Ambrosia trifida	Ipomoea sp.	Erigeron canadensis		
Pest Name		Giant foxtail	Giant ragweed	Morning glory	Canada horseweed		
Crop ID Code	1 GLXMA						
BBCH Scale	BSOY						
Crop Scientific Name	Glycine max						
Crop Name	Soybean						
Rating Date	6-25-2019	6-25-2019	6-25-2019	6-25-2019	6-25-2019		
Rating Type	PHYGEN	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1		
Days After First/Last Applic.	34 34	34 34	34 34	34 34	34 34		
Plant-Eval Interval	34 DP-1	34 DP-1	34 DP-1	34 DP-1	34 DP-1		
Days After Emergence	29 DE-1	29 DE-1	29 DE-1	29 DE-1	29 DE-1		
ARM Action Codes							
Number of Decimals							
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code	11	12	13	14	15
1 UNTREATED CHECK			0.0	0.0	0.0	0.0	0.0
2 BOUNDARY 6.5 EC	1640 g ai/ha	A	0.0	99.0	99.0	99.0	99.0
INTACT	0.5 % v/v	B					
CLASS ACT RIDION	1 % v/v	B					
TAVIUM PLUS VAPORGRIP TECH	1680 g ae/ha	B					
ROUNDUP POWERMAX 4.5 SL	1120 g ae/ha	B					
3 BROADAXE XC 7 EC	1530 g ai/ha	A	0.0	99.0	99.0	99.0	99.0
INTACT	0.5 % v/v	B					
CLASS ACT RIDION	1 % v/v	B					
TAVIUM PLUS VAPORGRIP TECH	1680 g ae/ha	B					
ROUNDUP POWERMAX 4.5 SL	1120 g ae/ha	B					
4 PREFIX [F]	1480 g ai/ha	A	0.0	99.0	99.0	99.0	99.0
INTACT	0.5 % v/v	B					
CLASS ACT RIDION	1 % v/v	B					
TAVIUM PLUS VAPORGRIP TECH	1680 g ae/ha	B					
ROUNDUP POWERMAX 4.5 SL	1120 g ae/ha	B					
5 VALOR XLT 40.3 WG	85 g ai/ha	A	0.0	99.0	99.0	99.0	99.0
INTACT	0.5 % v/v	B					
CLASS ACT RIDION	1 % v/v	B					
XTENDIMAX 2.9 SL	563 g ae/ha	B					
ROUNDUP POWERMAX 4.5 SL	1120 g ae/ha	B					
6 ZIDUA PRO 4.09 SC	161 g ai/ha	A	0.0	99.0	99.0	99.0	99.0
INTACT	0.5 % v/v	B					
CLASS ACT RIDION	1 % v/v	B					
ENGENIA 5 EC	560 g ae/ha	B					
ROUNDUP POWERMAX 4.5 SL	1120 g ae/ha	B					
LSD P=.05			.	.	.	.	.
Standard Deviation			0.00	0.00	0.00	0.00	0.00
CV			0.0	0.0	0.0	0.0	0.0
Replicate F			0.000	0.000	0.000	0.000	0.000
Replicate Prob(F)			1.0000	1.0000	1.0000	1.0000	1.0000
Treatment F			0.000	0.000	0.000	0.000	0.000
Treatment Prob(F)			1.0000	1.0000	1.0000	1.0000	1.0000

Could not calculate LSD (% mean diff) for columns 1,6,7,8,9,10,11,12,13,14,15,16 because error mean square = 0.

University of Kentucky

Pest ID Code		1 W Weed	2 W Weed	3 W Weed	4 W Weed			
Pest Code		SETFA	AMBTR	IPOSS	ERICA			
Pest Scientific Name		Setaria faberi	Ambrosia trifida	Ipomoea sp.	Erigeron canadensis			
Pest Name		Giant foxtail	Giant ragweed	Morning glory	Canada horseweed			
Crop ID Code	1 GLXMA							
BBCH Scale	BSOY							
Crop Scientific Name	Glycine max							
Crop Name	Soybean							
Rating Date	10-1-2019	10-1-2019	10-1-2010	10-1-2019	10-1-2019			
Rating Type	PHYGEN	CONTRO	CONTRO	CONTRO	CONTRO			
Rating Unit	%	%	%	%	%			
Number of Subsamples	1	1	1	1	1			
Days After First/Last Applic.	132 97	132 97	-3155 -3155	132 97	132 97			
Plant-Eval Interval	132 DP-1	132 DP-1	-3155 DP-1	132 DP-1	132 DP-1			
Days After Emergence	127 DE-1	127 DE-1	-3160 DE-1	127 DE-1	127 DE-1			
ARM Action Codes								
Number of Decimals								
Trt No.	Treatment Name	Rate	Appl Code	16	17	18	19	20
1	UNTREATED CHECK			0.0	0.0	0.0	0.0	0.0
2	BOUNDARY 6.5 EC	1640 g ai/ha	A	0.0	81.7	58.3	80.0	88.3
	INTACT	0.5 % v/v	B					
	CLASS ACT RIDION	1 % v/v	B					
	TAVIUM PLUS VAPORGRIP TECH	1680 g ae/ha	B					
	ROUNDUP POWERMAX 4.5 SL	1120 g ae/ha	B					
3	BROADAXE XC 7 EC	1530 g ai/ha	A	0.0	81.7	71.7	87.7	87.7
	INTACT	0.5 % v/v	B					
	CLASS ACT RIDION	1 % v/v	B					
	TAVIUM PLUS VAPORGRIP TECH	1680 g ae/ha	B					
	ROUNDUP POWERMAX 4.5 SL	1120 g ae/ha	B					
4	PREFIX [F]	1480 g ai/ha	A	0.0	80.0	56.7	84.3	88.7
	INTACT	0.5 % v/v	B					
	CLASS ACT RIDION	1 % v/v	B					
	TAVIUM PLUS VAPORGRIP TECH	1680 g ae/ha	B					
	ROUNDUP POWERMAX 4.5 SL	1120 g ae/ha	B					
5	VALOR XLT 40.3 WG	85 g ai/ha	A	0.0	80.0	85.0	85.0	87.7
	INTACT	0.5 % v/v	B					
	CLASS ACT RIDION	1 % v/v	B					
	XTENDIMAX 2.9 SL	563 g ae/ha	B					
	ROUNDUP POWERMAX 4.5 SL	1120 g ae/ha	B					
6	ZIDUA PRO 4.09 SC	161 g ai/ha	A	0.0	77.7	61.7	40.0	87.7
	INTACT	0.5 % v/v	B					
	CLASS ACT RIDION	1 % v/v	B					
	ENGENIA 5 EC	560 g ae/ha	B					
	ROUNDUP POWERMAX 4.5 SL	1120 g ae/ha	B					
LSD P=.05				.	5.80	11.10	7.57	3.25
Standard Deviation				0.00	3.19	6.10	4.16	1.79
CV				0.0	4.77	10.98	6.62	2.44
Replicate F				0.000	0.115	1.940	0.645	3.958
Replicate Prob(F)				1.0000	0.8927	0.1941	0.5449	0.0542
Treatment F				0.000	316.967	68.657	219.690	1210.167
Treatment Prob(F)				1.0000	0.0001	0.0001	0.0001	0.0001

Could not calculate LSD (% mean diff) for columns 1,6,7,8,9,10,11,12,13,14,15,16 because error mean square = 0.

University of Kentucky

Pest ID Code				
Pest Code				
Pest Scientific Name				
Pest Name				
Crop ID Code	1 GLXMA	1 GLXMA	1 GLXMA	
BBCH Scale	BSOY	BSOY	BSOY	
Crop Scientific Name	Glycine max	Glycine max	Glycine max	
Crop Name	Soybean	Soybean	Soybean	
Rating Date	10-3-2019	10-3-2019	10-3-2019	
Rating Type	YIELD	MOICON	YIELD	
Rating Unit	lb/plot	%	BU	
Number of Subsamples	1	1	1	
Days After First/Last Applic.	134 99	134 99	134 99	
Plant-Eval Interval	134 DP-1	134 DP-1	134 DP-1	
Days After Emergence	129 DE-1	129 DE-1	129 DE-1	
ARM Action Codes			TY1	
Number of Decimals			1	
Trt No.	Treatment	Rate	Appl Code	
		Rate Unit		
1	UNTREATED CHECK			22
				23
				24
2	BOUNDARY 6.5 EC	1640 g ai/ha	A	2.143
	INTACT	0.5 % v/v	B	2.60
	CLASS ACT RIDION	1 % v/v	B	8.4
	TAVIUM PLUS VAPORGRIP TECH	1680 g ae/ha	B	6.247
	ROUNDUP POWERMAX 4.5 SL	1120 g ae/ha	B	7.47
3	BROADAXE XC 7 EC	1530 g ai/ha	A	5.077
	INTACT	0.5 % v/v	B	7.03
	CLASS ACT RIDION	1 % v/v	B	19.7
	TAVIUM PLUS VAPORGRIP TECH	1680 g ae/ha	B	5.783
	ROUNDUP POWERMAX 4.5 SL	1120 g ae/ha	B	7.10
4	PREFIX [F]	1480 g ai/ha	A	7.813
	INTACT	0.5 % v/v	B	7.10
	CLASS ACT RIDION	1 % v/v	B	30.3
	TAVIUM PLUS VAPORGRIP TECH	1680 g ae/ha	B	7.273
	ROUNDUP POWERMAX 4.5 SL	1120 g ae/ha	B	6.63
5	VALOR XLT 40.3 WG	85 g ai/ha	A	7.273
	INTACT	0.5 % v/v	B	6.63
	CLASS ACT RIDION	1 % v/v	B	28.3
	XTENDIMAX 2.9 SL	563 g ae/ha	B	7.273
	ROUNDUP POWERMAX 4.5 SL	1120 g ae/ha	B	6.63
6	ZIDUA PRO 4.09 SC	161 g ai/ha	A	5.883
	INTACT	0.5 % v/v	B	6.73
	CLASS ACT RIDION	1 % v/v	B	22.9
	ENGENIA 5 EC	560 g ae/ha	B	5.883
	ROUNDUP POWERMAX 4.5 SL	1120 g ae/ha	B	6.73
LSD P=.05				3.1650
Standard Deviation				1.7397
CV				30.31
Replicate F				0.369
Replicate Prob(F)				0.7005
Treatment F				4.025
Treatment Prob(F)				0.0291
				3.627
				1.993
				31.84
				0.728
				0.5067
				2.494
				0.1026

Could not calculate LSD (% mean diff) for columns 1,6,7,8,9,10,11,12,13,14,15,16 because error mean square = 0.

University of Kentucky

Tavium Plus VaporGrip Technology - University testing program in RR2 Xtend soybeans

Trial ID: USNG0H6502019	Location: Cully Scott FS	Trial Year: 2019
Protocol ID: HDC050A4-2019US	Investigator: Scott Cully	
Master Protocol ID:	Study Director:	
	Sponsor Contact:	
Conducted Under GEP: No	Trial Origin:	

Pest ID Code

1, W, Weed, SETFA, Setaria faberi, Giant foxtail, = 1, W, Weed, SETFA, Setaria faberi, Giant foxtail,
 2, W, Weed, AMBTR, Ambrosia trifida, Giant ragweed, = 2, W, Weed, AMBTR, Ambrosia trifida, Giant ragweed,
 3, W, Weed, IPOSS, Ipomoea sp., Morning glory, = 3, W, Weed, IPOSS, Ipomoea sp., Morning glory,
 4, W, Weed, ERICA, Erigeron canadensis, Canada horseweed, = 4, W, Weed, ERICA, Erigeron canadensis, Canada horseweed,

Crop Type Code

= EPPO species (Bayer) codes
 1, GLXMA, BSOY, Glycine max, Soybean, AG 42X6 = DTS

Rating Type

PHYGEN = phytotoxicity - general / injury
 CONTRO = control / burndown or knockdown
 YIELD = yield
 MOICON = moisture content

Rating Unit

% = percent
 lb/plot = pounds per plot
 BU = bushel

Plant-Eval Interval

13 DP-1 = 1 GLXMA 5-22-2019
 21 DP-1 = 1 GLXMA 5-22-2019
 34 DP-1 = 1 GLXMA 5-22-2019
 132 DP-1 = 1 GLXMA 5-22-2019
 -3155 DP-1 = 1 GLXMA 5-22-2019
 134 DP-1 = 1 GLXMA 5-22-2019

ARM Action Codes

TY1 = 3.63*[22]*(100-[23])/87

University of Kentucky

Gramoxone 3LB evaluation of new paraquat formulation in row crops

Trial ID: 19-26 Location: LEXINGTON, KY Trial Year: 2019
 Protocol ID: HPQ250A4-2019-CORN Investigator: Sara Carter
 Project ID: Study Director: SARA CARTER
 Sponsor Contact: SCOTT CULLY

General Trial Information

Study Director: Sara Carter **Title:** Research Specialist
Investigator: Sara Carter

Discipline: H herbicide
Trial Status: F one-year/final

ARM Trial Created On: 4-25-2019
Initiation Date: 4-30-2019 **Planned Completion Date:** 10-1-2019

Trial Location

City: LEXINGTON **Country:** USA United States
State/Prov.: KENTUCKY
Postal Code: 40511

Conducted Under GLP: No
Conducted Under GEP: No

Contacts

Study Director: Sara Carter **Title:** Research Specialist
Organization: University of Kentucky
Address: 105 Plant Science Building
City+State/Prov.: Lexington, KY
Postal Code: 40546-0312 **E-mail:** sara.carter@uky.edu

Investigator: Sara Carter

Crop Description

Crop 1: C ZEAMX Zea mays Corn
Variety: DKC 63-55
Planting Date: 5-1-2019 **Planting Rate:** 32000 S/A
Depth: 1.5 IN
Rows per Plot: 6 **Planting Method:** PLANTD planted
Row Spacing: 30 IN **Planting Equipment:** FE field equipment
Seed Bed: MEDIUM medium
Soil Temperature: 61 F **Soil Moisture:** WET wet
Emergence Date: 5-9-2019

Pest Description

Pest 1 Type: W **Code:** ERICA Erigeron canadensis
Common Name: Marehail

Pest 2 Type: W **Code:** TAROF Taraxacum officinale
Common Name: Common dandelion

Pest 3 Type: W **Code:** GERCA Geranium carolinianum
Common Name: Carolina geranium

Site and Design

Treated Plot Width: 10 FT **Site Type:** FIELD field
Treated Plot Length: 44 FT
Treated Plot Area: 440 FT² **Treatments:** 7 **Tillage Type:** NOTILL no-till
Replications: 3 **Study Design:** RACOB L Randomized Complete Block (RCB)

Soil Description

Description Name: MAURY SILT LOAM
% Sand: 6 **% OM:** 2.6 **Texture:** SIL silt loam
% Silt: 32 **pH:** 6.4 **Soil Name:** Maury
% Clay: 62 **CEC:** 18

Moisture and Weather Conditions

Overall Moisture Conditions: WEWEDR wet-wet-dry
Closest Weather Station: SPINDLETOP **Distance:** 1.25 MI

University of Kentucky

Application Description

	A
Application Date	4-30-2019
Appl. Start Time	9:00 AM
Appl. Stop Time	9:35 AM
Application Method	SPRAY
Application Timing	PREPLA
Application Placement	BROFOL
Applied By	SARA
Air Temperature Start, Stop	67 67 F
% Relative Humidity Start, Stop	81 81
Wind Velocity+Dir. Start	0 MPH ESE
Wind Velocity+Dir. Stop	0 MPH ESE
Soil Temperature	60 F
Soil Moisture	GOOD
Soil Surface Condition	MEDTRA
% Cloud Cover	70
Next Moisture Occurred On	5-1-2019

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale	ZEAMX BCOR
Days after Emergence	-9

Pest Stage At Each Application

	A
Pest 1 Code, Type, Scale	ERICA W
Height Average	3 IN
Pest 2 Code, Type, Scale	TAROF W
Height Average	6 IN
Pest 3 Code, Type, Scale	GERCA W
Height Average	6 IN

Application Equipment

	A
Appl. Equipment	BACKPACK
Equipment Type	BELSPR
Operation Pressure	30 PSI
Nozzle Type	FLAT FAN
Nozzle Size	8002 DG
Nozzle Spacing	20 IN
Boom Length	10 FT
Boom Height	30 IN
Ground Speed	4 MPH
Carrier	WATER
Application Amount	15 GPA
Mix Size	2.5 liters
Propellant	CO2

Context	Date	By	Notes
STATUS	4-25-2019	Sara Carter	Automatically added by ARM: Trial Status updated to 'S' during trial creation.
STATUS	4-30-2019	Sara Carter	Automatically added by ARM: Trial Status updated to 'E' when Initiation Date entered.

SE Definitions

	1.
Crop Type, Code	C

University of Kentucky

Gramoxone 3LB evaluation of new paraquat formulation in row crops

Trial ID: 19-26
 Protocol ID: HPQ250A4-2019-CORN
 Project ID:

Location: LEXINGTON, KY Trial Year: 2019
 Investigator: Sara Carter
 Study Director: SARA CARTER
 Sponsor Contact: SCOTT CULLY

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed			
Pest Code	ERICA	TAROF	GERCA	ERICA	TAROF			
Pest Scientific Name	Erigeron canad>	Taraxacum offi>	Geranium carol>	Erigeron canad>	Taraxacum offi>			
Pest Name	Marestail	Dandelion	Carolina geran>	Marestail	Dandelion			
Crop Type, Code	C -	C -	C -	C -	C -			
Rating Date	5-7-2019	5-7-2019	5-7-2019	5-16-2019	5-16-2019			
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO			
Rating Unit	%	%	%	%	%			
Number of Subsamples	1	1	1	1	1			
Days After First/Last Applic.	7 7	7 7	7 7	16 16	16 16			
Trt-Eval Interval	7 DA-A	7 DA-A	7 DA-A	16 DA-A	16 DA-A			
Plant-Eval Interval	6 DP-1	6 DP-1	6 DP-1	15 DP-1	15 DP-1			
Days After Emergence	-2 DE-1	-2 DE-1	-2 DE-1	7 DE-1	7 DE-1			
Trt Treatment	Rate	Appl						
No. Name	Rate	Unit	Code	1	2	3	4	5
1 UNTREATED CHECK	0.0			0.0	0.0	0.0	0.0	0.0
2 NIS GRAMOXONE 3LB	0.25 % v/v A 2 pt/a A			93.0	98.3	99.7	91.7	98.3
3 NIS GRAMOXONE 3LB	0.25 % v/v A 2.71 pt/a A			98.0	98.0	99.7	99.0	99.7
4 NIS AATREX GRAMOXONE 3LB	0.25 % v/v A 1 qt/a A 2 pt/a A			100.0	100.0	100.0	100.0	100.0
5 NIS BICEP II MAGNUM GRAMOXONE 3LB	0.25 % v/v A 2.4 qt/a A 2 pt/a A			95.0	100.0	100.0	97.3	100.0
6 NIS AATREX GRAMOXONE	0.25 % v/v A 1 qt/a A 3 pt/a A			100.0	100.0	100.0	96.7	100.0
7 NIS BICEP II MAGNUM GRAMOXONE	0.25 % v/v A 2.4 qt/a A 3 pt/a A			100.0	100.0	100.0	99.3	100.0
LSD P=.05	5.39			2.70	0.50	3.97	2.01	
Standard Deviation	3.03			1.52	0.28	2.23	1.13	
CV	3.62			1.78	0.33	2.68	1.32	
Replicate F	0.420			0.639	2.400	3.697	0.783	
Replicate Prob(F)	0.6665			0.5448	0.1328	0.0561	0.4792	
Treatment F	447.280			1834.041	53881.005	819.284	3332.584	
Treatment Prob(F)	0.0001			0.0001	0.0001	0.0001	0.0001	

University of Kentucky

Pest Type		W Weed	W Weed	W Weed	W Weed
Pest Code		GERCA	ERICA	TAROF	GERCA
Pest Scientific Name		Geranium carol>	Erigeron canad>	Taraxacum offi>	Geranium carol>
Pest Name		Carolina geran>	Marestail	Dandelion	Carolina geran>
Crop Type, Code		C -	C -	C -	C -
Rating Date		5-16-2019	5-30-2019	5-30-2019	5-30-2019
Rating Type		CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit		%	%	%	%
Number of Subsamples		1	1	1	1
Days After First/Last Applic.		16 16	30 30	30 30	30 30
Trt-Eval Interval		16 DA-A	30 DA-A	30 DA-A	30 DA-A
Plant-Eval Interval		15 DP-1	29 DP-1	29 DP-1	29 DP-1
Days After Emergence		7 DE-1	21 DE-1	21 DE-1	21 DE-1
Trt Treatment	Rate Appl				
No. Name	Rate Unit Code	6	7	8	9
1 UNTREATED CHECK		0.0	0.0	0.0	0.0
2 NIS GRAMOXONE 3LB	0.25 % v/v A 2 pt/a A	97.7	86.7	93.3	93.3
3 NIS GRAMOXONE 3LB	0.25 % v/v A 2.71 pt/a A	99.0	95.0	95.0	95.0
4 NIS AATREX GRAMOXONE 3LB	0.25 % v/v A 1 qt/a A 2 pt/a A	96.7	95.0	95.0	91.7
5 NIS BICEP II MAGNUM GRAMOXONE 3LB	0.25 % v/v A 2.4 qt/a A 2 pt/a A	99.3	90.0	95.0	95.0
6 NIS AATREX GRAMOXONE	0.25 % v/v A 1 qt/a A 3 pt/a A	100.0	91.7	95.0	95.0
7 NIS BICEP II MAGNUM GRAMOXONE	0.25 % v/v A 2.4 qt/a A 3 pt/a A	98.7	95.0	95.0	95.0
LSD P=.05		4.43	6.49	1.94	4.48
Standard Deviation		2.49	3.65	1.09	2.52
CV		2.95	4.61	1.34	3.12
Replicate F		0.973	2.776	1.000	0.563
Replicate Prob(F)		0.4058	0.1021	0.3966	0.5841
Treatment F		670.460	276.418	3231.000	599.313
Treatment Prob(F)		0.0001	0.0001	0.0001	0.0001

University of Kentucky

Gramoxone 3LB evaluation of new paraquat formulation in row crops	
Trial ID: 19-26	Location: LEXINGTON, KY Trial Year: 2019
Protocol ID: HPQ250A4-2019-CORN	Investigator: Sara Carter
Project ID:	Study Director: SARA CARTER
	Sponsor Contact: SCOTT CULLY

<u>Pest Type</u> W, Weed = Weed or volunteer crop <u>Pest Code</u> ERICA, Erigeron canadensis, Marestalk = US TAROF, Taraxacum officinale, Dandelion = US GERCA, Geranium carolinianum, Carolina geranium = US <u>Crop Type, Code</u> C = EPPO species (Bayer) codes <u>Rating Type</u> CONTRO = control / burndown or knockdown <u>Rating Unit</u> % = percent <u>Plant-Eval Interval</u> 6 DP-1 = 1 ZEAMX 5-1-2019 15 DP-1 = 1 ZEAMX 5-1-2019 29 DP-1 = 1 ZEAMX 5-1-2019

University of Kentucky

Gramoxone 3LB Evaluation of new solo paraquat formulation in row crops-University

Trial ID: 19-27 Location: LEXINGTON, KY Trial Year: 2019
 Protocol ID: HPQ250A4-2019-SOY Investigator: Sara Carter
 Project ID: Study Director: SARA CARTER
 Sponsor Contact: SCOTT CULLY

General Trial Information

Study Director: Sara Carter **Title:** Research Specialist
Investigator: Sara Carter

Discipline: H herbicide
Trial Status: F one-year/final

ARM Trial Created On: 4-25-2019
Initiation Date: 5-20-2019 **Planned Completion Date:** 10-1-2019

Trial Location

City: Lexington **Country:** USA United States
State/Prov.: Kentucky
Postal Code: 40511

Conducted Under GLP: No
Conducted Under GEP: No

Contacts

Study Director: Sara Carter **Title:** Research Specialist
Organization: University of Kentucky
Address: 105 Plant Science Building
City+State/Prov.: Lexington, KY
Postal Code: 40546-0312 **E-mail:** sara.carter@uky.edu

Investigator: Sara Carter

Crop Description

Crop 1: C GLXMA Glycine max Soybean
Variety: AG 42X6
Attributes: DTS
Planting Date: 5-22-2019 **Planting Rate:** 150000 S/A
Depth: 1.25 IN
Rows per Plot: 6 **Planting Method:** PLANTD planted
Row Spacing: 30 IN **Planting Equipment:** FE field equipment
Seed Bed: MEDIUM medium
Soil Temperature: 64 F **Soil Moisture:** GOOD good
Emergence Date: 5-26-2019

Pest Description

Pest 1 Type: W **Code:** SETFA *Setaria faberi*
Common Name: Giant foxtail
Crop: 1 GLXMA

Pest 2 Type: W **Code:** AMBTR *Ambrosia trifida*
Common Name: Giant ragweed
Crop: 1 GLXMA

Pest 3 Type: W **Code:** IPOSS *Ipomoea sp.*
Common Name: Morning glory

Pest 4 Type: W **Code:** ERICA *Erigeron canadensis*
Common Name: Marestail

Site and Design

Treated Plot Width: 10 FT **Site Type:** FIELD field
Treated Plot Length: 44 FT
Treated Plot Area: 440 FT2 **Treatments:** 7 **Tillage Type:** NOTILL no-till
Replications: 3 **Study Design:** RACOB L Randomized Complete Block (RCB)

Soil Description

Description Name: LANTON
% Sand: 7 **% OM:** 4 **Texture:** SIL silt loam
% Silt: 63 **pH:** 6.5 **Soil Name:** LANTON SILT LOAM
% Clay: 30 **CEC:** 22 **Fert. Level:** E excellent
Soil Drainage: E excellent

Moisture and Weather Conditions

Overall Moisture Conditions: WEWEDR wet-wet-dry
Closest Weather Station: SPINDLETOP **Distance:** 2 MI

University of Kentucky

Application Description	
	A
Application Date	5-20-2019
Appl. Start Time	11:10 AM
Appl. Stop Time	11:30 AM
Application Method	SPRAY
Application Timing	PREPLA
Application Placement	BROFOL
Applied By	SARA
Air Temperature Start, Stop	72 F
% Relative Humidity Start, Stop	65
Wind Velocity+Dir. Start	3 MPH SSW
Soil Temperature	67 F
Soil Moisture	GOOD
Soil Surface Condition	MEDIUM
% Cloud Cover	5
Next Moisture Occurred On	5-20-2019

Crop Stage At Each Application	
	A
Crop 1 Code, BBCH Scale	GLXMA BSOY
Days after Emergence	-6

Pest Stage At Each Application	
	A
Pest 1 Code, Type, Scale	SETFA W
Height Average	2 IN
Pest 2 Code, Type, Scale	AMBTR W
Height Average	3 IN
Pest 3 Code, Type, Scale	IPOSS W
Height Average	1.5 IN
Pest 4 Code, Type, Scale	ERICA W
Height Average	3 IN

Application Equipment	
	A
Appl. Equipment	BELTSPRAYER
Equipment Type	SPRBEL
Operation Pressure	30 PSI
Nozzle Type	FLAFDG
Nozzle Size	8002
Nozzle Spacing	30 IN
Boom ID	6-TIP
Boom Length	10 FT
Boom Height	24 IN
Ground Speed	4 MPH
Carrier	WATER
Application Amount	15 GAL/AC
Mix Size	2.5 L
Propellant	COMCO2
Tank Mix (Y/N)	N no

Context	Date	By	Notes
STATUS	4-25-2019	Sara Carter	Automatically added by ARM: Trial Status updated to 'S' during trial creation.

University of Kentucky

SE Definitions	
	1.
Crop Type, Code	C

University of Kentucky

Syngenta soybean variety X fungicide

Trial ID: 19-28 Location: Trial Year: 2019
 Protocol ID: syn soy var Investigator: Sara Carter
 Project ID: Study Director:
 Sponsor Contact:

General Trial Information

Study Director: Sara Carter **Title:** Research Specialist
Investigator: Sara Carter

Discipline: F/F fungicide, foliar treatment
Trial Status: F one-year/final

ARM Trial Created On: 5-21-2019
Initiation Date: 5-17-2019 **Planned Completion Date:** 10-1-2019
Completion Date: 10-3-2019

Trial Location

City: Lexington **Country:** USA United States
State/Prov.: Kentucky
Postal Code: 40511

Conducted Under GLP: No
Conducted Under GEP: No

Contacts

Study Director: Sara Carter **Title:** Research Specialist
Organization: University of Kentucky
Address: 105 Plant Science Building
City+State/Prov: Lexington, KY
Postal Code: 40546-0312 **E-mail:** sara.carter@uky.edu

Investigator: Sara Carter

Crop Description

Crop 1: C GLXMA Glycine max Soybean
Variety: see trt list
Planting Date: 5-17-2019 **Planting Rate:** 150000 S/A
Depth: 1.25 IN
Rows per Plot: 6 **Planting Method:** PLANTD planted
Row Spacing: 30 IN **Planting Equipment:** FE field equipment
Seed Bed: MEDIUM medium
Soil Temperature: 67 F **Soil Moisture:** WET wet
Emergence Date: 5-21-2019
Harvest Date: 10-3-2019 **Harvest Equipment:** Hege
Harvested Width: 5 FT
Harvested Length: 125 FT
% Standard Moisture: 13.0

Site and Design

Treated Plot Width: 15 FT **Site Type:** FIELD field
Treated Plot Length: 130 FT
Treated Plot Area: 1950 FT² **Treatments:** 18 **Tillage Type:** NOTILL no-till
Replications: 1 **Study Design:** RACOB L Randomized Complete Block (RCB)

Soil Description

Description Name: MAURY SILT LOAM
% Sand: 6 **% OM:** 2.6 **Texture:** SIL silt loam
% Silt: 32 **pH:** 6.4 **Soil Name:** Maury
% Clay: 62 **CEC:** 18

Moisture and Weather Conditions

Overall Moisture Conditions: WEWEDR wet-wet-dry
Closest Weather Station: SPINDLETOP **Distance:** 2.25 MI

University of Kentucky

Application Description

	A	B	C
Application Date	5-17-2019	6-29-2019	8-30-2019
Application Method	SPRAY	SPRAY	SPRAY
Application Timing	PRE	21DAP	R3
Application Placement	BROFOL	BROFOL	BROFOL
Applied By	SARA	SARA	SARA
Air Temperature Start, Stop	82 F	88 F	88 F
% Relative Humidity Start, Stop	60	55	70
Wind Velocity+Dir. Start	4 MPH SW	2 MPH SE	6 MPH SSW
Soil Temperature	63 F	75 F	71 F
Soil Moisture	GOOD	SLIWET	WET
Soil Surface Condition	MEDIUM	MEDIUM	MEDIUM
% Cloud Cover	20	30	30
Next Moisture Occurred On	5-20-2019	7-3-2019	8-31-2019

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Days after Emergence	-4	39	101
Height Average		6 IN	36 IN

Application Equipment

	A	B	C
Appl. Equipment	BELTSPRAYER	BELTSPRAYER	BELTSPRAYER
Equipment Type	SPRBEL	SPRBEL	SPRBEL
Operation Pressure	30 PSI	30 PSI	30 PSI
Nozzle Type	FLAFDG	FLAFDG	FLAFDG
Nozzle Size	8002	8002	8002
Nozzle Spacing	30 IN	30 IN	30 IN
Boom ID	6-TIP	6-TIP	6-TIP
Boom Length	10 FT	10 FT	10 FT
Boom Height	24 IN	24 IN	24 IN
Ground Speed	4 MPH	4 MPH	4 MPH
Carrier	WATER	WATER	WATER
Application Amount	15 GAL/AC	15 GAL/AC	15 GAL/AC
Mix Size	3 GAL	3 GAL	3 GAL
Propellant	COMCO2	COMCO2	COMCO2
Tank Mix (Y/N)	N no	Y yes	Y yes

Context	Date	By	Notes
STATUS	5-21-2019	Sara Carter	Automatically added by ARM: Trial Status updated to 'S' during trial creation.

SE Definitions

	1.
Crop Type, Code	C

University of Kentucky

Gramoxone 3LB Evaluation of new solo paraquat formulation in row crops-University

Trial ID: 19-27 Location: LEXINGTON, KY Trial Year: 2019
Protocol ID: HPQ250A4-2019-SOY Investigator: Sara Carter
Project ID: Study Director: SARA CARTER
Sponsor Contact: SCOTT CULLY

Pest Type

W, Weed = Weed or volunteer crop

Pest Code

SETFA, Setaria faberi, Giant foxtail = US
AMBTR, Ambrosia trifida, Giant ragweed = US
IPOSS, Ipomoea sp., Morning glory = US
ERICA, Erigeron canadensis, Marestail = US

Crop Type, Code

C = EPPO species (Bayer) codes

Rating Type

CONTRO = control / burndown or knockdown

Rating Unit

% = percent

Plant-Eval Interval

6 DP-1 = 1 GLXMA 5-22-2019
13 DP-1 = 1 GLXMA 5-22-2019
27 DP-1 = 1 GLXMA 5-22-2019

University of Kentucky

COMPARE TWO PASS PROGRAMS WITH VARIED POST EMERGE MIX OPTIONS IN LL SOYBEAN

Trial ID: 19-29 Location: LEXINGTON, KY Trial Year: 2019
 Protocol ID: SYN SOY LL Investigator: Sara Carter
 Project ID: Study Director: SARA CARTER
 Sponsor Contact: SCOTT CULLY

General Trial Information

Study Director: Sara Carter **Title:** Research Specialist
Investigator: Sara Carter

Discipline: H herbicide
Trial Status: F one-year/final

ARM Trial Created On: 5-14-2019
Initiation Date: 5-14-2019 **Planned Completion Date:** 10-1-2019
Completion Date: 10-3-2019

Trial Location

City: Lexington **Country:** USA United States
State/Prov.: Kentucky
Postal Code: 40511

Conducted Under GLP: No
Conducted Under GEP: No

Contacts

Study Director: Sara Carter **Title:** Research Specialist
Organization: University of Kentucky
Address: 105 Plant Science Building
City+State/Prov: Lexington, KY
Postal Code: 40546-0312 **E-mail:** sara.carter@uky.edu

Investigator: Sara Carter

Crop Description

Crop 1: C GLXMA Glycine max Soybean
Variety: P 37T09
Attributes: LL
Planting Date: 5-14-2019 **Planting Rate:** 150000 S/A
Depth: 1.25 IN
Rows per Plot: 6 **Planting Method:** PLANTD planted
Row Spacing: 30 IN **Planting Equipment:** FE field equipment
Seed Bed: SMOOTH smooth
Soil Temperature: 61 F **Soil Moisture:** WET wet
Emergence Date: 5-19-2019
Harvest Date: 10-3-2019 **Harvest Equipment:** Hege
Harvested Width: 5 FT
Harvested Length: 38 FT
% Standard Moisture: 13.0

Pest Description

Pest 1 Type: W **Code:** SETFA *Setaria faberi*
Common Name: Giant foxtail
Crop: 1 GLXMA

Pest 2 Type: W **Code:** AMBTR *Ambrosia trifida*
Common Name: Giant ragweed

Site and Design

Treated Plot Width: 10 FT **Site Type:** FIELD field
Treated Plot Length: 40 FT
Treated Plot Area: 400 FT² **Treatments:** 4 **Tillage Type:** CONTIL conventional-till
Replications: 3 **Study Design:** RACOB Randomized Complete Block (RCB)

Soil Description

Description Name: MAURY SILT LOAM
% Sand: 6 **% OM:** 2.6 **Texture:** SIL silt loam
% Silt: 32 **pH:** 6.4 **Soil Name:** Maury
% Clay: 62 **CEC:** 18

Moisture and Weather Conditions

Overall Moisture Conditions: WEWEDR wet-wet-dry
Closest Weather Station: SPINDLETOP **Distance:** 2.25 MI

University of Kentucky

Application Description		
	A	B
Application Date	5-14-2019	6-4-2019
Appl. Start Time	4:30 PM	
Application Method	SPRAY	SPRAY
Application Timing	PRE	4"WEEDS
Application Placement	BROSOI	BROFOL
Applied By	SARA	SARA
Air Temperature Start, Stop	73 F	76 F
% Relative Humidity Start, Stop	54	50
Wind Velocity+Dir. Start	4 MPH SSE	1 MPH S
Soil Temperature	61 F	67 F
Soil Moisture	WET	GOOD
Soil Surface Condition	SMOOTH	SMOOTH
% Cloud Cover	90	0
Next Moisture Occurred On	5-16-2019	6-5-2019

Crop Stage At Each Application		
	A	B
Crop 1 Code, BBCH Scale	GLXMA BSOY	GLXMA BSOY
Days after Emergence	-5	16
Height Average		4 IN

Pest Stage At Each Application		
	A	B
Pest 1 Code, Type, Scale	SETFA W	SETFA W
Height Average		2 IN
Pest 2 Code, Type, Scale	AMBTR W	AMBTR W
Height Average		4 IN

Application Equipment		
	A	B
Appl. Equipment	BELTSPRAYER	BELTSPRAYER
Equipment Type	SPRBEL	SPRBEL
Operation Pressure	30 PSI	30 PSI
Nozzle Type	FLAFDG	FLAFDG
Nozzle Size	8002	8002
Nozzle Spacing	30 IN	30 IN
Boom ID	6-TIP	6-TIP
Boom Length	10 FT	10 FT
Boom Height	24 IN	24 IN
Ground Speed	4 MPH	4 MPH
Carrier	WATER	WATER
Application Amount	15 GAL/AC	15 GAL/AC
Mix Size	2.5 L	2.5 L
Propellant	COMCO2	COMCO2
Tank Mix (Y/N)	N no	N no

Context	Date	By	Notes
STATUS	5-14-2019	Sara Carter	Automatically added by ARM: Trial Status updated to 'S' during trial creation.

SE Definitions	
	1.
Crop Type, Code	C

University of Kentucky

Syngenta soybean variety X fungicide

Trial ID: 19-28 Location: Trial Year: 2019
 Protocol ID: syn soy var Investigator: Sara Carter
 Project ID: Study Director:
 Sponsor Contact:

Crop Type, Code	C	GLXMA	C	GLXMA	C	GLXMA	C	GLXMA
BBCH Scale	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean
Rating Date	10-3-2019	10-3-2019	10-3-2019	10-3-2019	10-3-2019	10-3-2019	10-3-2019	10-3-2019
Rating Type	YIELD	MOICON	WEITES	YIELD	MOICON	WEITES	YIELD	MOICON
Rating Unit	LB/P	%	BU	LB/P	%	BU	LB/P	%
Number of Subsamples	1	1	1	1	1	1	1	1
Days After First/Last Applic.	139 34	139 34	139 34	139 34	139 34	139 34	139 34	139 34
Plant-Eval Interval	139 DP-1	139 DP-1	139 DP-1	139 DP-1	139 DP-1	139 DP-1	139 DP-1	139 DP-1
Days After Emergence	135 DE-1	135 DE-1	135 DE-1	135 DE-1	135 DE-1	135 DE-1	135 DE-1	135 DE-1
ARM Action Codes								
Number of Decimals								
Trt Treatment	Rate	Appl	1	2	3	4		
No. Name	Rate Unit	Code						
1 BOUNDARY	1 qt/a	A	16.310	6.80	20.60	20.3		
PREFIX	1 qt/a	B						
ROUNDUP POWERMAX	32 fl oz/a	B						
MSO	0.5 % v/v	B						
AMS	8.5 lb/100 gal	B						
AG 38X8								
2 BOUNDARY	1 qt/a	A	18.420	6.60	22.20	23.0		
PREFIX	1 qt/a	B						
ROUNDUP POWERMAX	32 fl oz/a	B						
MSO	0.5 % v/v	B						
AMS	8.5 lb/100 gal	B						
AG 42X6								
3 BOUNDARY	1 qt/a	A	20.340	7.10	20.40	25.2		
PREFIX	1 qt/a	B						
ROUNDUP POWERMAX	32 fl oz/a	B						
MSO	0.5 % v/v	B						
AMS	8.5 lb/100 gal	B						
AG 43X0								
4 BOUNDARY	1 qt/a	A	23.580	8.10	21.70	28.9		
PREFIX	1 qt/a	B						
ROUNDUP POWERMAX	32 fl oz/a	B						
MSO	0.5 % v/v	B						
AMS	8.5 lb/100 gal	B						
BECKS 3486 FP								
5 BOUNDARY	1 qt/a	A	27.580	7.10	20.40	34.2		
PREFIX	1 qt/a	B						
ROUNDUP POWERMAX	32 fl oz/a	B						
MSO	0.5 % v/v	B						
AMS	8.5 lb/100 gal	B						
BECKS 387R4								
6 BOUNDARY	1 qt/a	A	20.960	7.00	22.00	26.0		
PREFIX	1 qt/a	B						
ROUNDUP POWERMAX	32 fl oz/a	B						
MSO	0.5 % v/v	B						
AMS	8.5 lb/100 gal	B						
BECKS 4476 FP								
7 BOUNDARY	1 qt/a	A	25.930	6.30	20.10	32.4		
PREFIX	1 qt/a	B						
ROUNDUP POWERMAX	32 fl oz/a	B						
MSO	0.5 % v/v	B						
AMS	8.5 lb/100 gal	B						
P 38T42R								
8 BOUNDARY	1 qt/a	A	24.560	6.80	22.10	30.6		
PREFIX	1 qt/a	B						
ROUNDUP POWERMAX	32 fl oz/a	B						
MSO	0.5 % v/v	B						
AMS	8.5 lb/100 gal	B						
P 40A47X								

Could not calculate LSD (% mean diff) for columns 1,2,3,4 because error mean square = 0.

University of Kentucky

Crop Type, Code			C GLXMA	C GLXMA	C GLXMA	C GLXMA	
BBCH Scale			BSOY	BSOY	BSOY	BSOY	
Crop Scientific Name			Glycine max	Glycine max	Glycine max	Glycine max	
Crop Name			Soybean	Soybean	Soybean	Soybean	
Rating Date			10-3-2019	10-3-2019	10-3-2019	10-3-2019	
Rating Type			YIELD	MOICON	WEITES	YIELD	
Rating Unit			LB/P	%		BU	
Number of Subsamples			1	1	1	1	
Days After First/Last Applic.			139 34	139 34	139 34	139 34	
Plant-Eval Interval			139 DP-1	139 DP-1	139 DP-1	139 DP-1	
Days After Emergence			135 DE-1	135 DE-1	135 DE-1	135 DE-1	
ARM Action Codes						TY1	
Number of Decimals						1	
Trt No.	Treatment Name	Rate Rate Unit	Appl Code	1	2	3	4
9	BOUNDARY PREFIX ROUNDUP POWERMAX MSO AMS P 44A72BX	1 qt/a 1 qt/a 32 fl oz/a 0.5 % v/v 8.5 lb/100 gal	A B B B B	22.590	8.40	20.60	27.6
10	BOUNDARY PREFIX ROUNDUP POWERMAX MSO AMS MIRAVIS TOP ENDIGO NIS AG 38X8	1 qt/a 1 qt/a 32 fl oz/a 0.5 % v/v 8.5 lb/100 gal 13.7 oz/a 4 oz/a 0.25 % v/v	A B B B B C C C	18.870	6.70	20.60	23.5
11	BOUNDARY PREFIX ROUNDUP POWERMAX MSO AMS MIRAVIS TOP ENDIGO NIS AG 42X6	1 qt/a 1 qt/a 32 fl oz/a 0.5 % v/v 8.5 lb/100 gal 13.7 oz/a 4 oz/a 0.25 % v/v	A B B B B C C C	19.460	6.80	22.50	24.2
12	BOUNDARY PREFIX ROUNDUP POWERMAX MSO AMS MIRAVIS TOP ENDIGO NIS AG 43X0	1 qt/a 1 qt/a 32 fl oz/a 0.5 % v/v 8.5 lb/100 gal 13.7 oz/a 4 oz/a 0.25 % v/v	A B B B B C C C	23.510	7.30	21.10	29.1
13	BOUNDARY PREFIX ROUNDUP POWERMAX MSO AMS MIRAVIS TOP ENDIGO NIS BECKS 3486 FP	1 qt/a 1 qt/a 32 fl oz/a 0.5 % v/v 8.5 lb/100 gal 13.7 oz/a 4 oz/a 0.25 % v/v	A B B B B C C C	25.440	8.30	21.90	31.1
14	BOUNDARY PREFIX ROUNDUP POWERMAX MSO AMS MIRAVIS TOP ENDIGO NIS BECKS 387R4	1 qt/a 1 qt/a 32 fl oz/a 0.5 % v/v 8.5 lb/100 gal 13.7 oz/a 4 oz/a 0.25 % v/v	A B B B B C C C	26.530	7.40	20.30	32.8

Could not calculate LSD (% mean diff) for columns 1,2,3,4 because error mean square = 0.

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Crop Type, Code	C	GLXMA	C	GLXMA	C
BBCH Scale		BSOY		BSOY	
Crop Scientific Name		Glycine max		Glycine max	
Crop Name		Soybean		Soybean	
Rating Date		10-3-2019		10-3-2019	
Rating Type		YIELD		MOICON	
Rating Unit		LB/P		%	
Number of Subsamples		1		1	
Days After First/Last Applic.		139 34		139 34	
Plant-Eval Interval		139 DP-1		139 DP-1	
Days After Emergence		135 DE-1		135 DE-1	
ARM Action Codes					
Number of Decimals					
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	1	2	3
15 BOUNDARY	1 qt/a	A	23.380	7.60	22.40
PREFIX	1 qt/a	B			
ROUNDUP POWERMAX	32 fl oz/a	B			
MSO	0.5 % v/v	B			
AMS	8.5 lb/100 gal	B			
MIRAVIS TOP	13.7 oz/a	C			
ENDIGO	4 oz/a	C			
NIS	0.25 % v/v	C			
BECKS 4476 FP		C			
16 BOUNDARY	1 qt/a	A	27.150	6.50	20.60
PREFIX	1 qt/a	B			
ROUNDUP POWERMAX	32 fl oz/a	B			
MSO	0.5 % v/v	B			
AMS	8.5 lb/100 gal	B			
MIRAVIS TOP	13.7 oz/a	C			
ENDIGO	4 oz/a	C			
NIS	0.25 % v/v	C			
P 38T42R		C			
17 BOUNDARY	1 qt/a	A	30.210	7.10	22.20
PREFIX	1 qt/a	B			
ROUNDUP POWERMAX	32 fl oz/a	B			
MSO	0.5 % v/v	B			
AMS	8.5 lb/100 gal	B			
MIRAVIS TOP	13.7 oz/a	C			
ENDIGO	4 oz/a	C			
NIS	0.25 % v/v	C			
P 40A47X		C			
18 BOUNDARY	1 qt/a	A	25.070	8.50	20.60
PREFIX	1 qt/a	B			
ROUNDUP POWERMAX	32 fl oz/a	B			
MSO	0.5 % v/v	B			
AMS	8.5 lb/100 gal	B			
MIRAVIS TOP	13.7 oz/a	C			
ENDIGO	4 oz/a	C			
NIS	0.25 % v/v	C			
P 44A72BX		C			
LSD P=.05			.	.	.
Standard Deviation			.	.	.
CV			.	.	.

Crop Type, Code
 C = EPPO species (Bayer) codes
 GLXMA, BSOY, Glycine max, Soybean = US
Rating Type
 YIELD = yield
 MOICON = moisture content
 WEITES = weight - test
Rating Unit
 % = percent
 BU = bushel
Plant-Eval Interval
 139 DP-1 = 1 GLXMA 5-17-2019
ARM Action Codes
 TY1 = 1.1616*[1]*(100-[2])/87

Could not calculate LSD (% mean diff) for columns 1,2,3,4 because error mean square = 0.

University of Kentucky

COMPARE TWO PASS PROGRAMS WITH VARIED POST EMERGE MIX OPTIONS IN LL SOYBEAN

Trial ID: 19-29 Location: LEXINGTON, KY Trial Year: 2019
 Protocol ID: SYN SOY LL Investigator: Sara Carter
 Project ID: Study Director: SARA CARTER
 Sponsor Contact: SCOTT CULLY

Pest Type		W Weed SETFA	W Weed AMBTR		W Weed SETFA	W Weed AMBTR		
Pest Code		Setaria faberi	Ambrosia trifi>		Setaria faberi	Ambrosia trifi>		
Pest Scientific Name		Giant foxtail	Giant ragweed		Giant foxtail	Giant ragweed		
Pest Name		C -	C -		C -	C -		
Crop Type, Code	C GLXMA			C GLXMA				
BBCH Scale	BSOY			BSOY				
Crop Scientific Name	Glycine max			Glycine max				
Crop Name	Soybean			Soybean				
Rating Date	5-28-2019	5-28-2019	5-28-2019	6-18-2019	6-18-2019	6-18-2019		
Rating Type	PHYGEN	CONTRO	CONTRO	PHYGEN	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1		
Days After First/Last Applic.	14 14	14 14	14 14	35 14	35 14	35 14		
Plant-Eval Interval	14 DP-1	14 DP-1	14 DP-1	35 DP-1	35 DP-1	35 DP-1		
Days After Emergence	9 DE-1	9 DE-1	9 DE-1	30 DE-1	30 DE-1	30 DE-1		
ARM Action Codes								
Number of Decimals								
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	1	2	3	4	5	6
1 UNTREATED CHECK			0.0	0.0	0.0	0.0	0.0	0.0
2 LIBERTY 280	32 fl oz/a B		0.0	0.0	0.0	0.0	99.0	99.0
AMS	2.5 % v/v B							
3 BOUNDARY	2 pt/a A		0.0	95.0	95.0	0.0	99.0	99.0
PREFIX	2 pt/a B							
LIBERTY 280	32 fl oz/a B							
AMS	2.5 % v/v B							
4 BROADAXE XC	25 oz/a A		0.0	95.0	95.0	0.0	99.0	99.0
PREFIX	2 pt/a B							
LIBERTY	32 fl oz/a B							
AMS	2.5 % v/v B							
LSD P=.05			0.00	0.00	0.00	0.00	0.00	0.00
Standard Deviation			0.0	0.0	0.0	0.0	0.0	0.0
CV								
Replicate F			0.000	0.000	0.000	0.000	0.000	0.000
Replicate Prob(F)			1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Treatment F			0.000	0.000	0.000	0.000	0.000	0.000
Treatment Prob(F)			1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,8,9,10,11,12 because error mean square = 0.

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Pest Type		W Weed	W Weed		W Weed	W Weed		
Pest Code		SETFA	AMBTR		SETFA	AMBTR		
Pest Scientific Name		Setaria faberi	Ambrosia trifi>		Setaria faberi	Ambrosia trifi>		
Pest Name		Giant foxtail	Giant ragweed		Giant foxtail	Giant ragweed		
Crop Type, Code	C GLXMA	C -	C -	C GLXMA	C -	C -		
BBCH Scale	BSOY			BSOY				
Crop Scientific Name	Glycine max			Glycine max				
Crop Name	Soybean			Soybean				
Rating Date	7-2-2019	7-2-2019	7-2-2019	7-16-2019	7-16-2019	7-16-2019		
Rating Type	PHYGEN	CONTRO	CONTRO	PHYGEN	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1		
Days After First/Last Applic.	49 28	49 28	49 28	63 42	63 42	63 42		
Plant-Eval Interval	49 DP-1	49 DP-1	49 DP-1	63 DP-1	63 DP-1	63 DP-1		
Days After Emergence	44 DE-1	44 DE-1	44 DE-1	58 DE-1	58 DE-1	58 DE-1		
ARM Action Codes								
Number of Decimals								
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	7	8	9	10	11	12
1 UNTREATED CHECK			0.0	0.0	0.0	0.0	0.0	0.0
2 LIBERTY 280	32 fl oz/a B		0.0	99.0	99.0	0.0	99.0	99.0
AMS	2.5 % v/v B							
3 BOUNDARY	2 pt/a A		0.0	99.0	99.0	0.0	99.0	99.0
PREFIX	2 pt/a B							
LIBERTY 280	32 fl oz/a B							
AMS	2.5 % v/v B							
4 BROADAXE XC	25 oz/a A		0.0	99.0	99.0	0.0	99.0	99.0
PREFIX	2 pt/a B							
LIBERTY	32 fl oz/a B							
AMS	2.5 % v/v B							
LSD P=.05			0.00	0.00	0.00	0.00	0.00	0.00
Standard Deviation			0.0	0.0	0.0	0.0	0.0	0.0
CV								
Replicate F			0.000	0.000	0.000	0.000	0.000	0.000
Replicate Prob(F)			1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Treatment F			0.000	0.000	0.000	0.000	0.000	0.000
Treatment Prob(F)			1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,8,9,10,11,12 because error mean square = 0.

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Pest Type			
Pest Code			
Pest Scientific Name			
Pest Name			
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA
BBCH Scale	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean
Rating Date	10-3-2019	10-3-2019	10-3-2019
Rating Type	YIELD	MOICON	YIELD
Rating Unit	lb/plot	%	BU
Number of Subsamples	1	1	1
Days After First/Last Applic.	142 121	142 121	142 121
Plant-Eval Interval	142 DP-1	142 DP-1	142 DP-1
Days After Emergence	137 DE-1	137 DE-1	137 DE-1
ARM Action Codes			TY1
Number of Decimals			1
Trt Treatment	Rate	Appl	
No. Name	Rate Unit	Code	
			14 15 16
1 UNTREATED CHECK			0.847 0.00 3.7
2 LIBERTY 280	32 fl oz/a B		5.563 6.23 22.9
AMS	2.5 % v/v B		
3 BOUNDARY	2 pt/a A		6.883 5.73 28.5
PREFIX	2 pt/a B		
LIBERTY 280	32 fl oz/a B		
AMS	2.5 % v/v B		
4 BROADAXE XC	25 oz/a A		7.673 6.07 31.7
PREFIX	2 pt/a B		
LIBERTY	32 fl oz/a B		
AMS	2.5 % v/v B		
LSD P=.05	1.6867	0.528	7.30
Standard Deviation	0.8442	0.264	3.65
CV	16.11	5.86	16.83
Replicate F	1.677	2.020	1.703
Replicate Prob(F)	0.2639	0.2134	0.2596
Treatment F	39.325	390.546	35.267
Treatment Prob(F)	0.0002	0.0001	0.0003

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,8,9,10,11,12 because error mean square = 0.

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COMPARE TWO PASS PROGRAMS WITH VARIED POST EMERGE MIX OPTIONS IN LL SOYBEAN

Trial ID: 19-29 Location: LEXINGTON, KY Trial Year: 2019
 Protocol ID: SYN SOY LL Investigator: Sara Carter
 Project ID: Study Director: SARA CARTER
 Sponsor Contact: SCOTT CULLY

Pest Type

W, Weed = Weed or volunteer crop

Pest Code

SETFA, Setaria faberi, Giant foxtail = US
 AMBTR, Ambrosia trifida, Giant ragweed = US

Crop Type, Code

C = EPPO species (Bayer) codes
 GLXMA, BSOY, Glycine max, Soybean = US

Rating Type

PHYGEN = phytotoxicity - general / injury
 CONTRO = control / burndown or knockdown
 YIELD = yield
 MOICON = moisture content

Rating Unit

% = percent
 lb/plot = pounds per plot
 BU = bushel

Plant-Eval Interval

14 DP-1 = 1 GLXMA 5-14-2019
 35 DP-1 = 1 GLXMA 5-14-2019
 49 DP-1 = 1 GLXMA 5-14-2019
 63 DP-1 = 1 GLXMA 5-14-2019
 142 DP-1 = 1 GLXMA 5-14-2019

ARM Action Codes

TY1 = 3.821053*[14]*(100-[15])/87

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XTEND SOYBEAN SHOOTOUT /SHOWCASE

Trial ID: 19-30 Location: LEXINGTON, KY Trial Year: 2019
 Protocol ID: SYN SOY1 Investigator: Sara Carter
 Project ID: Study Director: SARA CARTER
 Sponsor Contact: SCOTT CULLY

General Trial Information

Study Director: Sara Carter **Title:** Research Specialist
Investigator: Sara Carter

Discipline: H herbicide
Trial Status: F one-year/final

ARM Trial Created On: 5-21-2019

Initiation Date: 5-22-2019 **Planned Completion Date:** 10-1-2019 **Interim Data Due:** 10-3-2019

Trial Location

City: Lexington **Country:** USA United States
State/Prov.: Kentucky
Postal Code: 40511

Conducted Under GLP: No
Conducted Under GEP: No

Contacts

Study Director: Sara Carter **Title:** Research Specialist
Organization: University of Kentucky
Address: 105 Plant Science Building
City+State/Prov.: Lexington, KY
Postal Code: 40546-0312 **E-mail:** sara.carter@uky.edu

Investigator: Sara Carter

Crop Description

Crop 1: C GLXMA Glycine max Soybean
Variety: AG 42X6

Attributes: DTS

Planting Date: 5-22-2019

Depth: 1.25 IN

Rows per Plot: 6

Row Spacing: 30 IN

Soil Temperature: 64 F

Emergence Date: 5-27-2019

Harvest Date: 10-3-2019

Planting Rate: 150000 S/A

Planting Method: PLANTD planted
Planting Equipment: FE field equipment

Seed Bed: MEDIUM medium

Soil Moisture: GOOD good

Harvest Equipment: Hege

Harvested Width: 5 FT

Harvested Length: 38 FT

% Standard Moisture: 13.0

Pest Description

Pest 1 Type: W **Code:** SETFA *Setaria faberi*
Common Name: Giant foxtail
Crop: 1 GLXMA

Pest 2 Type: W **Code:** AMBTR *Ambrosia trifida*
Common Name: Giant ragweed
Crop: 1 GLXMA

Pest 3 Type: W **Code:** IPOSS *Ipomoea* sp.
Common Name: Morning glory
Crop: 1 GLXMA

Pest 4 Type: W **Code:** ERICA *Erigeron canadensis*
Common Name: Marestail

Site and Design

Treated Plot Width: 10 FT

Treated Plot Length: 44 FT

Treated Plot Area: 440 FT²

Replications: 3

Site Type: FIELD field

Treatments: 8

Tillage Type: NOTILL no-till

Study Design: RACOB Randomized Complete Block (RCB)

Soil Description

Description Name: LANTON

% Sand: 7

% OM: 4

Texture: SIL silt loam

% Silt: 63

pH: 6.5

Soil Name: LANTON SILT LOAM

% Clay: 30

CEC: 22

Fert. Level: E excellent

Soil Drainage: E

excellent

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Moisture and Weather Conditions
Overall Moisture Conditions: WEWEDR wet-wet-dry

Closest Weather Station: SPINDLETOP

Distance: 2.25 MI

Application Description

	A	B
Application Date	5-22-2019	6-26-2019
Application Method	SPRAY	SPRAY
Application Timing	PRE	25DAP
Application Placement	BROFOL	BROFOL
Applied By	SARA	SARA
Air Temperature Start, Stop	86 F	91 F
% Relative Humidity Start, Stop	53	60
Wind Velocity+Dir. Start	2 MPH S	1 MPH SE
Soil Temperature	64 F	75 F
Soil Moisture	GOOD	WET
Soil Surface Condition	MEDIUM	MEDIUM
% Cloud Cover	90	5
Next Moisture Occurred On	5-26-2019	7-3-2019

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale	GLXMA BSOY	GLXMA BSOY
Days after Emergence	-5	30
Height Average		8 IN

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale	SETFA W	SETFA W
Height Average	2 N	5 IN
Pest 2 Code, Type, Scale	AMBTR W	AMBTR W
Height Average	3 IN	6 IN
Pest 3 Code, Type, Scale	IPOSS W	IPOSS W
Height Average	1.5 IN	4 IN
Pest 4 Code, Type, Scale	ERICA W	ERICA W
Height Average	3 IN	6 IN

Application Equipment

	A	B
Appl. Equipment	BELTSPRAYER	BELTSPRAYER
Equipment Type	SPRBEL	SPRBEL
Operation Pressure	30 PSI	40 PSI
Nozzle Type	FLAFDG	TEEJAI
Nozzle Size	8002	11002
Nozzle Spacing	30 IN	30 IN
Boom ID	6-TIP	6-TIP
Boom Length	10 FT	10 FT
Boom Height	24 IN	24 IN
Ground Speed	4 MPH	4 MPH
Carrier	WATER	WATER
Application Amount	15 GAL/AC	15 GAL/AC
Mix Size	2.5 L	2.5 L
Propellant	COMCO2	COMCO2
Tank Mix (Y/N)	Y yes	Y yes

Context	Date	By	Notes
STATUS	5-21-2019	Sara Carter	Automatically added by ARM: Trial Status updated to 'S' during trial creation.
APPLIC	5-22-2019	SARA	added glyphosate for burndown

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SE Definitions	
	1.
Crop Type, Code	C

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XTEND SOYBEAN SHOOTOUT /SHOWCASE

Trial ID: 19-30 Location: LEXINGTON, KY Trial Year: 2019
 Protocol ID: SYN SOY1 Investigator: Sara Carter
 Project ID: Study Director: SARA CARTER
 Sponsor Contact: SCOTT CULLY

Pest Type		W Weed SETFA Setaria faberi Giant foxtail C -	W Weed AMBTR Ambrosia trifi> Giant ragweed C -	W Weed IPOSS Ipomoea sp. Morning glory C -		W Weed SETFA Setaria faberi Giant foxtail C -		
Pest Code								
Pest Scientific Name								
Pest Name								
Crop Type, Code	C GLXMA				C GLXMA			
BBCH Scale	BSOY				BSOY			
Crop Scientific Name	Glycine max				Glycine max			
Crop Name	Soybean				Soybean			
Rating Date	6-5-2019	6-5-2019	6-5-2019	6-5-2019	6-26-2019	6-26-2019		
Rating Type	PHYGEN	CONRTO	CONTRO	CONTRO	PHYGEN	CONRTO		
Rating Unit	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1		
Days After First/Last Applic.	14 14	14 14	14 14	14 14	35 35	35 35		
Plant-Eval Interval	14 DP-1	14 DP-1	14 DP-1	14 DP-1	35 DP-1	35 DP-1		
Days After Emergence	9 DE-1	9 DE-1	9 DE-1	9 DE-1	30 DE-1	30 DE-1		
ARM Action Codes								
Number of Decimals								
Trt Treatment	Rate	Appl	1	2	3	4	5	6
No. Name	Rate Unit	Code						
1 BOUNDARY	1 qt/a	A	0.0	99.0	99.0	99.0	0.0	75.0
PREFIX	1 qt/a	B						
ROUNDUP POWERMAX	32 fl oz/a	B						
MSO	1 % v/v	B						
AMS	8.5 lb/100 gal	B						
2 BOUNDARY	1 qt/a	A	0.0	99.0	99.0	99.0	0.0	80.0
TAVIUM	56.5 fl oz/a	B						
ROUNDUP POWERMAX	32 fl oz/a	B						
CLASS ACT RIDION	1 % v/v	B						
INTACT	0.5 % v/v	B						
3 BROADAXE XC	25 fl oz/a	A	0.0	99.0	99.0	99.0	0.0	80.0
PREFIX	1 qt/a	B						
ROUNDUP POWERMAX	32 fl oz/a	B						
MSO	1 % v/v	B						
AMS	8.5 lb/100 gal	B						
4 BROADAXE XC	25 fl oz/a	A	0.0	99.0	99.0	99.0	0.0	81.7
TAVIUM	56.5 fl oz/a	B						
ROUNDUP POWERMAX	32 fl oz/a	B						
CLASS ACT RIDION	1 % v/v	B						
INTACT	0.5 % v/v	B						
5 PREFIX	2 pt/a	A	0.0	99.0	99.0	99.0	0.0	83.3
METRIBUZIN	4 oz/a	A						
TAVIUM	56.5 fl oz/a	B						
ROUNDUP POWERMAX	32 fl oz/a	B						
CLASS ACT RIDION	1 % v/v	B						
INTACT	0.5 % v/v	B						
6 BROADAXE XC	25 fl oz/a	A	0.0	99.0	99.0	99.0	0.0	83.3
METRIBUZIN	4 oz/a	A						
TAVIUM	56.5 fl oz/a	B						
ROUNDUP POWERMAX	32 fl oz/a	B						
CLASS ACT RIDION	1 % v/v	B						
INTACT	0.5 % v/v	B						
7 TAVIUM	56.5 fl oz/a	B	0.0	0.0	0.0	0.0	0.0	0.0
ROUNDUP POWERMAX	32 fl oz/a	B						
CLASS ACT RIDION	1 % v/v	B						
INTACT	0.5 % v/v	B						
8 AUTHORITY XL	6.5 oz/a	A	0.0	99.0	99.0	99.0	0.0	83.3
ROUNDUP POWERMAX	32 fl oz/a	B						
XTENDIMAX	22 fl oz/a	B						
CLASS ACT RIDION	1 % v/v	B						
INTACT	0.5 % v/v	B						
LSD P=.05			.	.	.	.	.	6.44
Standard Deviation			0.00	0.00	0.00	0.00	0.00	3.68
CV			0.0	0.0	0.0	0.0	0.0	5.2
Replicate F			0.000	0.000	0.000	0.000	0.000	1.000
Replicate Prob(F)			1.0000	1.0000	1.0000	1.0000	1.0000	0.3927
Treatment F			0.000	0.000	0.000	0.000	0.000	183.209
Treatment Prob(F)			1.0000	1.0000	1.0000	1.0000	1.0000	0.0001

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,9,10,11,12,13,14,15,16 because error mean square = 0.

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Pest Type	W Weed	W Weed		W Weed	W Weed	W Weed		
Pest Code	AMBTR	IPOSS		SETFA	AMBTR	IPOSS		
Pest Scientific Name	Ambrosia trifi>	Ipomoea sp.		Setaria faberi	Ambrosia trifi>	Ipomoea sp.		
Pest Name	Giant ragweed	Morning glory		Giant foxtail	Giant ragweed	Morning glory		
Crop Type, Code	C -	C -	C GLXMA	C -	C -	C -		
BBCH Scale			BSOY					
Crop Scientific Name			Glycine max					
Crop Name			Soybean					
Rating Date	6-26-2019	6-26-2019	7-10-2019	7-10-2019	7-10-2019	7-10-2019		
Rating Type	CONTRO	CONTRO	PHYGEN	CONRTO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1		
Days After First/Last Applic.	35 35	35 35	49 14	49 14	49 14	49 14		
Plant-Eval Interval	35 DP-1	35 DP-1	49 DP-1	49 DP-1	49 DP-1	49 DP-1		
Days After Emergence	30 DE-1	30 DE-1	44 DE-1	44 DE-1	44 DE-1	44 DE-1		
ARM Action Codes								
Number of Decimals								
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	7	8	9	10	11	12
1 BOUNDARY	1 qt/a	A	76.7	68.3	0.0	99.0	99.0	99.0
PREFIX	1 qt/a	B						
ROUNDUP POWERMAX	32 fl oz/a	B						
MSO	1 % v/v	B						
AMS	8.5 lb/100 gal	B						
2 BOUNDARY	1 qt/a	A	78.3	70.0	0.0	99.0	99.0	99.0
TAVIUM	56.5 fl oz/a	B						
ROUNDUP POWERMAX	32 fl oz/a	B						
CLASS ACT RIDION	1 % v/v	B						
INTACT	0.5 % v/v	B						
3 BROADAXE XC	25 fl oz/a	A	75.0	70.0	0.0	99.0	99.0	99.0
PREFIX	1 qt/a	B						
ROUNDUP POWERMAX	32 fl oz/a	B						
MSO	1 % v/v	B						
AMS	8.5 lb/100 gal	B						
4 BROADAXE XC	25 fl oz/a	A	76.7	76.7	0.0	99.0	99.0	99.0
TAVIUM	56.5 fl oz/a	B						
ROUNDUP POWERMAX	32 fl oz/a	B						
CLASS ACT RIDION	1 % v/v	B						
INTACT	0.5 % v/v	B						
5 PREFIX	2 pt/a	A	78.3	73.3	0.0	99.0	99.0	99.0
METRIBUZIN	4 oz/a	A						
TAVIUM	56.5 fl oz/a	B						
ROUNDUP POWERMAX	32 fl oz/a	B						
CLASS ACT RIDION	1 % v/v	B						
INTACT	0.5 % v/v	B						
6 BROADAXE XC	25 fl oz/a	A	78.3	73.3	0.0	99.0	99.0	99.0
METRIBUZIN	4 oz/a	A						
TAVIUM	56.5 fl oz/a	B						
ROUNDUP POWERMAX	32 fl oz/a	B						
CLASS ACT RIDION	1 % v/v	B						
INTACT	0.5 % v/v	B						
7 TAVIUM	56.5 fl oz/a	B	0.0	0.0	0.0	99.0	99.0	99.0
ROUNDUP POWERMAX	32 fl oz/a	B						
CLASS ACT RIDION	1 % v/v	B						
INTACT	0.5 % v/v	B						
8 AUTHORITY XL	6.5 oz/a	A	76.7	71.7	0.0	99.0	99.0	99.0
ROUNDUP POWERMAX	32 fl oz/a	B						
XTENDIMAX	22 fl oz/a	B						
CLASS ACT RIDION	1 % v/v	B						
INTACT	0.5 % v/v	B						
LSD P=.05			9.06	8.68	.	.	.	.
Standard Deviation			5.18	4.96	0.00	0.00	0.00	0.00
CV			7.67	7.88	0.0	0.0	0.0	0.0
Replicate F			1.400	0.806	0.000	0.000	0.000	0.000
Replicate Prob(F)			0.2791	0.4663	1.0000	1.0000	1.0000	1.0000
Treatment F			83.467	79.782	0.000	0.000	0.000	0.000
Treatment Prob(F)			0.0001	0.0001	1.0000	1.0000	1.0000	1.0000

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,9,10,11,12,13,14,15,16 because error mean square = 0.

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Pest Type		W Weed	W Weed	W Weed				
Pest Code		SETFA	AMBTR	IPOSS				
Pest Scientific Name		Setaria faberi	Ambrosia trifi>	Ipomoea sp.				
Pest Name		Giant foxtail	Giant ragweed	Morning glory				
Crop Type, Code	C GLXMA	C -	C -	C -	C GLXMA	C GLXMA		
BBCH Scale	BSOY				BSOY	BSOY		
Crop Scientific Name	Glycine max				Glycine max	Glycine max		
Crop Name	Soybean				Soybean	Soybean		
Rating Date	7-24-2019	7-24-2019	7-24-2019	7-24-2019	10-3-2019	10-3-2019		
Rating Type	PHYGEN	CONRTO	CONTRO	CONTRO	YIELD	MOICON		
Rating Unit	%	%	%	%	lb/plot	%		
Number of Subsamples	1	1	1	1	1	1		
Days After First/Last Applic.	63 28	63 28	63 28	63 28	134 99	134 99		
Plant-Eval Interval	63 DP-1	63 DP-1	63 DP-1	63 DP-1	134 DP-1	134 DP-1		
Days After Emergence	58 DE-1	58 DE-1	58 DE-1	58 DE-1	129 DE-1	129 DE-1		
ARM Action Codes								
Number of Decimals								
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	13	14	15	16	18	19
1 BOUNDARY	1 qt/a	A	0.0	100.0	100.0	100.0	9.690	6.53
PREFIX	1 qt/a	B						
ROUNDUP POWERMAX	32 fl oz/a	B						
MSO	1 % v/v	B						
AMS	8.5 lb/100 gal	B						
2 BOUNDARY	1 qt/a	A	0.0	100.0	100.0	100.0	9.413	6.97
TAVIUM	56.5 fl oz/a	B						
ROUNDUP POWERMAX	32 fl oz/a	B						
CLASS ACT RIDION	1 % v/v	B						
INTACT	0.5 % v/v	B						
3 BROADAXE XC	25 fl oz/a	A	0.0	100.0	100.0	100.0	10.290	7.03
PREFIX	1 qt/a	B						
ROUNDUP POWERMAX	32 fl oz/a	B						
MSO	1 % v/v	B						
AMS	8.5 lb/100 gal	B						
4 BROADAXE XC	25 fl oz/a	A	0.0	100.0	100.0	100.0	11.187	7.87
TAVIUM	56.5 fl oz/a	B						
ROUNDUP POWERMAX	32 fl oz/a	B						
CLASS ACT RIDION	1 % v/v	B						
INTACT	0.5 % v/v	B						
5 PREFIX	2 pt/a	A	0.0	100.0	100.0	100.0	10.673	7.80
METRIBUZIN	4 oz/a	A						
TAVIUM	56.5 fl oz/a	B						
ROUNDUP POWERMAX	32 fl oz/a	B						
CLASS ACT RIDION	1 % v/v	B						
INTACT	0.5 % v/v	B						
6 BROADAXE XC	25 fl oz/a	A	0.0	100.0	100.0	100.0	9.310	6.93
METRIBUZIN	4 oz/a	A						
TAVIUM	56.5 fl oz/a	B						
ROUNDUP POWERMAX	32 fl oz/a	B						
CLASS ACT RIDION	1 % v/v	B						
INTACT	0.5 % v/v	B						
7 TAVIUM	56.5 fl oz/a	B	0.0	100.0	100.0	100.0	10.313	6.90
ROUNDUP POWERMAX	32 fl oz/a	B						
CLASS ACT RIDION	1 % v/v	B						
INTACT	0.5 % v/v	B						
8 AUTHORITY XL	6.5 oz/a	A	0.0	100.0	100.0	100.0	10.407	7.40
ROUNDUP POWERMAX	32 fl oz/a	B						
XTENDIMAX	22 fl oz/a	B						
CLASS ACT RIDION	1 % v/v	B						
INTACT	0.5 % v/v	B						
LSD P=.05			.	.	.	.	3.3372	3.762
Standard Deviation			0.00	0.00	0.00	0.00	1.9057	2.148
CV			0.0	0.0	0.0	0.0	18.76	29.93
Replicate F			0.000	0.000	0.000	0.000	7.426	1.652
Replicate Prob(F)			1.0000	1.0000	1.0000	1.0000	0.0063	0.2269
Treatment F			0.000	0.000	0.000	0.000	0.345	0.142
Treatment Prob(F)			1.0000	1.0000	1.0000	1.0000	0.9194	0.9926

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,9,10,11,12,13,14,15,16 because error mean square = 0.

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Pest Type				
Pest Code				
Pest Scientific Name				
Pest Name				
Crop Type, Code			C	GLXMA
BBCH Scale				BSOY
Crop Scientific Name				Glycine max
Crop Name				Soybean
Rating Date				10-3-2019
Rating Type				YIELD
Rating Unit				BU
Number of Subsamples				1
Days After First/Last Applic.				134 99
Plant-Eval Interval				134 DP-1
Days After Emergence				129 DE-1
ARM Action Codes				TY1
Number of Decimals				1
Trt Treatment	Rate	Appl		
No. Name	Rate Unit	Code		20
1 BOUNDARY	1 qt/a	A		39.4
PREFIX	1 qt/a	B		
ROUNDUP POWERMAX	32 fl oz/a	B		
MSO	1 % v/v	B		
AMS	8.5 lb/100 gal	B		
2 BOUNDARY	1 qt/a	A		38.4
TAVIUM	56.5 fl oz/a	B		
ROUNDUP POWERMAX	32 fl oz/a	B		
CLASS ACT RIDION	1 % v/v	B		
INTACT	0.5 % v/v	B		
3 BROADAXE XC	25 fl oz/a	A		41.9
PREFIX	1 qt/a	B		
ROUNDUP POWERMAX	32 fl oz/a	B		
MSO	1 % v/v	B		
AMS	8.5 lb/100 gal	B		
4 BROADAXE XC	25 fl oz/a	A		45.2
TAVIUM	56.5 fl oz/a	B		
ROUNDUP POWERMAX	32 fl oz/a	B		
CLASS ACT RIDION	1 % v/v	B		
INTACT	0.5 % v/v	B		
5 PREFIX	2 pt/a	A		43.1
METRIBUZIN	4 oz/a	A		
TAVIUM	56.5 fl oz/a	B		
ROUNDUP POWERMAX	32 fl oz/a	B		
CLASS ACT RIDION	1 % v/v	B		
INTACT	0.5 % v/v	B		
6 BROADAXE XC	25 fl oz/a	A		38.0
METRIBUZIN	4 oz/a	A		
TAVIUM	56.5 fl oz/a	B		
ROUNDUP POWERMAX	32 fl oz/a	B		
CLASS ACT RIDION	1 % v/v	B		
INTACT	0.5 % v/v	B		
7 TAVIUM	56.5 fl oz/a	B		42.2
ROUNDUP POWERMAX	32 fl oz/a	B		
CLASS ACT RIDION	1 % v/v	B		
INTACT	0.5 % v/v	B		
8 AUTHORITY XL	6.5 oz/a	A		42.3
ROUNDUP POWERMAX	32 fl oz/a	B		
XTENDIMAX	22 fl oz/a	B		
CLASS ACT RIDION	1 % v/v	B		
INTACT	0.5 % v/v	B		
LSD P=.05				13.10
Standard Deviation				7.48
CV				18.1
Replicate F				7.154
Replicate Prob(F)				0.0072
Treatment F				0.333
Treatment Prob(F)				0.9259

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,9,10,11,12,13,14,15,16 because error mean square = 0.

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XTEND SOYBEAN SHOOTOUT /SHOWCASE

Trial ID: 19-30 Location: LEXINGTON, KY Trial Year: 2019
 Protocol ID: SYN SOY1 Investigator: Sara Carter
 Project ID: Study Director: SARA CARTER
 Sponsor Contact: SCOTT CULLY

Pest Type

W, Weed = Weed or volunteer crop

Pest Code

SETFA, Setaria faberi, Giant foxtail = US
 AMBTR, Ambrosia trifida, Giant ragweed = US
 IPOSS, Ipomoea sp., Morning glory = US

Crop Type, Code

C = EPPO species (Bayer) codes
 GLXMA, BSOY, Glycine max, Soybean = US

Rating Type

PHYGEN = phytotoxicity - general / injury
 CONTRO = control / burndown or knockdown
 YIELD = yield
 MOICON = moisture content

Rating Unit

% = percent
 lb/plot = pounds per plot
 BU = bushel

Plant-Eval Interval

14 DP-1 = 1 GLXMA 5-22-2019
 35 DP-1 = 1 GLXMA 5-22-2019
 49 DP-1 = 1 GLXMA 5-22-2019
 63 DP-1 = 1 GLXMA 5-22-2019
 134 DP-1 = 1 GLXMA 5-22-2019

ARM Action Codes

TY1 = 3.821053*[18]*(100-[19])/87

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COMPARE SYNGENTA 2 PASS PROGRAMS WITH VARIED POST EMERGE MIX OPTIONS IN ENLIST 3 SOYBEAN

Trial ID: 19-31 Location: LEXINGTON, KY Trial Year: 2019
 Protocol ID: SYN E3 SB Investigator: Sara Carter
 Project ID: Study Director: SARA CARTER
 Sponsor Contact: SCOTT CULLY

General Trial Information

Study Director: Sara Carter **Title:** Research Specialist
Investigator: Sara Carter

Discipline: H herbicide
Trial Status: F one-year/final

ARM Trial Created On: 5-14-2019
Initiation Date: 5-14-2019 **Planned Completion Date:** 10-1-2019
Completion Date: 10-3-2019

Trial Location

City: Lexington **Country:** USA United States
State/Prov.: Kentucky
Postal Code: 40511

Conducted Under GLP: No
Conducted Under GEP: No

Contacts

Study Director: Sara Carter **Title:** Research Specialist
Organization: University of Kentucky
Address: 105 Plant Science Building
City+State/Prov: Lexington, KY
Postal Code: 40546-0312 **E-mail:** sara.carter@uky.edu

Investigator: Sara Carter

Crop Description

Crop 1: C GLXMA Glycine max Soybean
Variety: MY419E-DB21
Attributes: Enlist
Planting Date: 5-14-2019 **Planting Rate:** 150000 S/A
Depth: 1.25 IN
Rows per Plot: 6 **Planting Method:** PLANTD planted
Row Spacing: 30 IN **Planting Equipment:** FE field equipment
Seed Bed: MEDIUM medium
Soil Temperature: 59 F **Soil Moisture:** GOOD good
Emergence Date: 5-19-2019
Harvest Date: 10-3-2019 **Harvest Equipment:** Hege
Harvested Width: 5 FT
Harvested Length: 40 FT
% Standard Moisture: 13.0

Pest Description

Pest 1 Type: W **Code:** SETFA *Setaria faberi*
Common Name: Giant foxtail
Crop: 1 GLXMA

Pest 2 Type: W **Code:** AMBTR *Ambrosia trifida*
Common Name: Giant ragweed
Crop: 1 GLXMA

Pest 3 Type: W **Code:** IPOSS *Ipomoea* sp.
Common Name: Morning glory

Site and Design

Treated Plot Width: 10 FT **Site Type:** FIELD field
Treated Plot Length: 44 FT
Treated Plot Area: 440 FT² **Treatments:** 15 **Tillage Type:** NOTILL no-till
Replications: 3 **Study Design:** RACOB� Randomized Complete Block (RCB)

Soil Description

Description Name: MAURY SILT LOAM
% Sand: 6 **% OM:** 2.6 **Texture:** SIL silt loam
% Silt: 32 **pH:** 6.4 **Soil Name:** Maury
% Clay: 62 **CEC:** 18
Analyzed By:

University of Kentucky

Moisture and Weather Conditions
Overall Moisture Conditions: WEWEDR wet-wet-dry
Closest Weather Station: Spindletop **Distance:** 2.25 mi

Application Description

	A	B
Application Date	5-15-2019	6-26-2019
Application Method	SPRAY	SPRAY
Application Timing	PRE	4" WEEDS
Application Placement	BROFOL	BROFOL
Applied By	SARA	SARA
Air Temperature Start, Stop	73 F	90 F
% Relative Humidity Start, Stop	49	60
Wind Velocity+Dir. Start	4 MPH SSE	1 MPH SE
Soil Temperature	59 F	72 F
Soil Moisture	GOOD	GOOD
Soil Surface Condition	MEDIUM	MEDIUM
% Cloud Cover	90	5
Next Moisture Occurred On	5-16-2019	7-3-2019

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale	GLXMA BSOY	GLXMA BSOY
Days after Emergence	-4	38
Height Average		8 IN

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale	SETFA W	SETFA W
Height Average	1 IN	4 IN
Pest 2 Code, Type, Scale	AMBTR W	AMBTR W
Height Average	2 IN	5 IN
Pest 3 Code, Type, Scale	IPOSS W	IPOSS W

Application Equipment

	A	B
Appl. Equipment	BELTSPRAYER	BELTSPRAYER
Equipment Type	SPRBEL	SPRBEL
Operation Pressure	30 PSI	40 PSI
Nozzle Type	FLAFDG	TEEJAI
Nozzle Size	8002	11002
Nozzle Spacing	30 IN	30 IN
Boom ID	6-TIP	6-TIP
Boom Length	10 FT	10 FT
Boom Height	24 IN	24 IN
Ground Speed	4 MPH	4 MPH
Carrier	WATER	WATER
Application Amount	15 GAL/AC	15 GAL/AC
Mix Size	2.5 L	2.5 L
Propellant	COMCO2	COMCO2
Tank Mix (Y/N)	N no	Y yes

Context	Date	By	Notes
STATUS	5-14-2019	Sara Carter	Automatically added by ARM: Trial Status updated to 'S' during trial creation.
APPLIC	10-31-2019	Sara Carter	OVERSPRAYED ENTIRE TRIAL SITE WITH GLUFOSINATE FOR BURNDOWN

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SE Definitions	
	1.
Crop Type, Code	C

University of Kentucky

COMPARE SYNGENTA 2 PASS PROGRAMS WITH VARIED POST EMERGE MIX OPTIONS IN ENLIST 3 SOYBEAN

Trial ID: 19-31 Location: LEXINGTON, KY Trial Year: 2019
 Protocol ID: SYN E3 SB Investigator: Sara Carter
 Project ID: Study Director: SARA CARTER
 Sponsor Contact: SCOTT CULLY

Pest Type		W Weed SETFA Setaria faberi Giant foxtail C -	W Weed AMBTR Ambrosia trifidi> Giant ragweed C -	W Weed IPOSS Ipomoea sp. Morning glory C -		W Weed SETFA Setaria faberi Giant foxtail C -		
Pest Code								
Pest Scientific Name								
Pest Name								
Crop Type, Code	C GLXMA BSOY				C GLXMA BSOY			
BBCH Scale								
Crop Scientific Name	Glycine max				Glycine max			
Crop Name	Soybean				Soybean			
Rating Date	5-29-2019	5-29-2019	5-29-2019	5-29-2019	6-12-2019	6-12-2019		
Rating Type	PHYGEN	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO		
Rating Unit	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1		
Days After First/Last Applic.	14 14	14 14	14 14	14 14	28 28	28 28		
Plant-Eval Interval	15 DP-1	15 DP-1	15 DP-1	15 DP-1	29 DP-1	29 DP-1		
Days After Emergence	10 DE-1	10 DE-1	10 DE-1	10 DE-1	24 DE-1	24 DE-1		
ARM Action Codes								
Number of Decimals								
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	1	2	3	4	5	6
1 UNTREATED CHECK			0.0	0.0	0.0	0.0	0.0	0.0
2 ENLIST ONE	2 pt/a B		0.0	0.0	0.0	0.0	0.0	0.0
ROUNDUP POWERMAX	32 fl oz/a B							
CLASS ACT RIDION	1 % v/v B							
INTACT	0.5 % v/v B							
3 BOUNDARY	2 pt/a A		0.0	96.3	99.0	96.3	0.0	66.0
ENLIST ONE	2 pt/a B							
ROUNDUP POWERMAX	32 fl oz/a B							
CLASS ACT RIDION	1 % v/v B							
INTACT	0.5 % v/v B							
4 BROADAXE XC	2 pt/a A		0.0	97.7	99.0	96.3	0.0	99.0
ENLIST ONE	25 oz/a B							
ROUNDUP POWERMAX	32 fl oz/a B							
CLASS ACT RIDION	1 % v/v B							
INTACT	0.5 % v/v B							
5 BOUNDARY	2 pt/a A		0.0	97.7	99.0	96.3	0.0	99.0
ENLIST ONE	2 pt/a B							
PREFIX	2 pt/a B							
ROUNDUP POWERMAX	32 fl oz/a B							
CLASS ACT RIDION	1 % v/v B							
INTACT	0.5 % v/v B							
6 BOUNDARY	2 pt/a A		0.0	97.7	99.0	97.7	0.0	99.0
PREFIX	2 pt/a B							
ROUNDUP POWERMAX	32 fl oz/a B							
CLASS ACT RIDION	1 % v/v B							
INTACT	0.5 % v/v B							
7 BROADAXE XC	25 oz/a A		0.0	99.0	99.0	96.3	0.0	99.0
ENLIST ONE	2 pt/a B							
PREFIX	2 pt/a B							
ROUNDUP POWERMAX	32 fl oz/a B							
CLASS ACT RIDION	1 % v/v B							
INTACT	0.5 % v/v B							
8 BROADAXE XC	25 oz/a A		0.0	97.7	99.0	96.3	0.0	99.0
PREFIX	2 pt/a B							
ROUNDUP POWERMAX	32 fl oz/a B							
CLASS ACT RIDION	1 % v/v B							
INTACT	0.5 % v/v B							
9 ENLIST ONE	2 pt/a B		0.0	0.0	0.0	0.0	0.0	0.0
LIBERTY 280	32 fl oz/a B							
CLASS ACT RIDION	1 % v/v B							
INTACT	0.5 % v/v B							
10 BOUNDARY	2 pt/a A		0.0	97.7	99.0	96.3	0.0	99.0
ENLIST ONE	2 pt/a B							
LIBERTY 280	32 fl oz/a B							
CLASS ACT RIDION	1 % v/v B							
INTACT	0.5 % v/v B							

Could not calculate LSD (% mean diff) for columns 1,3,5,9,13,14,15,16,17,18 because error mean square = 0.

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Pest Type		W Weed SETFA	W Weed AMBTR	W Weed IPOSS		W Weed SETFA		
Pest Code		Setaria faberi	Ambrosia trifi>	Ipomoea sp.		Setaria faberi		
Pest Scientific Name		Giant foxtail	Giant ragweed	Morning glory		Giant foxtail		
Pest Name		C -	C -	C -		C -		
Crop Type, Code	C GLXMA				C GLXMA			
BBCH Scale	BSOY				BSOY			
Crop Scientific Name	Glycine max				Glycine max			
Crop Name	Soybean				Soybean			
Rating Date	5-29-2019	5-29-2019	5-29-2019	5-29-2019	6-12-2019	6-12-2019		
Rating Type	PHYGEN	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO		
Rating Unit	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1		
Days After First/Last Applic.	14 14	14 14	14 14	14 14	28 28	28 28		
Plant-Eval Interval	15 DP-1	15 DP-1	15 DP-1	15 DP-1	29 DP-1	29 DP-1		
Days After Emergence	10 DE-1	10 DE-1	10 DE-1	10 DE-1	24 DE-1	24 DE-1		
ARM Action Codes								
Number of Decimals								
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	1	2	3	4	5	6
11 BROADAXE XC	2 pt/a	A	0.0	99.0	99.0	95.0	0.0	99.0
ENLIST ONE	25 oz/a	B						
LIBERTY 280	32 fl oz/a	B						
CLASS ACT RIDION	1 % v/v	B						
INTACT	0.5 % v/v	B						
12 BOUNDARY	2 pt/a	A	0.0	97.7	99.0	96.3	0.0	99.0
ENLIST ONE	2 pt/a	B						
PREFIX	2 pt/a	B						
LIBERTY 280	32 fl oz/a	B						
CLASS ACT RIDION	1 % v/v	B						
INTACT	0.5 % v/v	B						
13 BOUNDARY	2 pt/a	A	0.0	97.7	99.0	96.3	0.0	99.0
PREFIX	2 pt/a	B						
LIBERTY 280	32 fl oz/a	B						
CLASS ACT RIDION	1 % v/v	B						
INTACT	0.5 % v/v	B						
14 BROADAXE XC	25 oz/a	A	0.0	97.7	99.0	97.7	0.0	99.0
ENLIST ONE	2 pt/a	B						
PREFIX	2 pt/a	B						
LIBERTY 280	32 fl oz/a	B						
CLASS ACT RIDION	1 % v/v	B						
INTACT	0.5 % v/v	B						
15 BROADAXE XC	25 oz/a	A	0.0	99.0	99.0	99.0	0.0	99.0
PREFIX	2 pt/a	B						
LIBERTY 280	32 fl oz/a	B						
CLASS ACT RIDION	1 % v/v	B						
INTACT	0.5 % v/v	B						
LSD P=.05			0.0	2.72	0.0	3.23	0.0	24.68
Standard Deviation			0.0	1.63	0.0	1.93	0.0	14.76
CV			0.0	2.08	0.0	2.5	0.0	19.17
Replicate F			0.000	4.173	0.000	0.286	0.000	1.000
Replicate Prob(F)			1.0000	0.0259	1.0000	0.7536	1.0000	0.3806
Treatment F			0.000	1866.301	0.000	1287.883	0.000	22.857
Treatment Prob(F)			1.0000	0.0001	1.0000	0.0001	1.0000	0.0001

Could not calculate LSD (% mean diff) for columns 1,3,5,9,13,14,15,16,17,18 because error mean square = 0.

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Pest Type	W Weed	W Weed		W Weed	W Weed	W Weed		
Pest Code	AMBTR	IPOSS		SETFA	AMBTR	IPOSS		
Pest Scientific Name	Ambrosia trifi>	Ipomoea sp.		Setaria faberi	Ambrosia trifi>	Ipomoea sp.		
Pest Name	Giant ragweed	Morning glory		Giant foxtail	Giant ragweed	Morning glory		
Crop Type, Code	C -	C -	C GLXMA	C -	C -	C -		
BBCH Scale			BSOY					
Crop Scientific Name			Glycine max					
Crop Name			Soybean					
Rating Date	6-12-2019	6-12-2019	6-26-2019	6-26-2019	6-26-2019	6-26-2019		
Rating Type	CONTRO	CONTRO	PHYGEN	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1		
Days After First/Last Applic.	28 28	28 28	42 42	42 42	42 42	42 42		
Plant-Eval Interval	29 DP-1	29 DP-1	43 DP-1	43 DP-1	43 DP-1	43 DP-1		
Days After Emergence	24 DE-1	24 DE-1	38 DE-1	38 DE-1	38 DE-1	38 DE-1		
ARM Action Codes								
Number of Decimals								
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	7	8	9	10	11	12
1 UNTREATED CHECK			0.0	0.0	0.0	0.0	0.0	0.0
2 ENLIST ONE	2 pt/a B		0.0	0.0	0.0	0.0	0.0	0.0
ROUNDUP POWERMAX	32 fl oz/a B							
CLASS ACT RIDION	1 % v/v B							
INTACT	0.5 % v/v B							
3 BOUNDARY	2 pt/a A		63.3	60.0	0.0	66.0	63.3	60.0
ENLIST ONE	2 pt/a B							
ROUNDUP POWERMAX	32 fl oz/a B							
CLASS ACT RIDION	1 % v/v B							
INTACT	0.5 % v/v B							
4 BROADAXE XC	2 pt/a A		95.0	94.3	0.0	99.0	95.0	94.3
ENLIST ONE	25 oz/a B							
ROUNDUP POWERMAX	32 fl oz/a B							
CLASS ACT RIDION	1 % v/v B							
INTACT	0.5 % v/v B							
5 BOUNDARY	2 pt/a A		95.0	95.0	0.0	99.0	95.0	95.0
ENLIST ONE	2 pt/a B							
PREFIX	2 pt/a B							
ROUNDUP POWERMAX	32 fl oz/a B							
CLASS ACT RIDION	1 % v/v B							
INTACT	0.5 % v/v B							
6 BOUNDARY	2 pt/a A		95.0	95.0	0.0	99.0	95.0	95.0
PREFIX	2 pt/a B							
ROUNDUP POWERMAX	32 fl oz/a B							
CLASS ACT RIDION	1 % v/v B							
INTACT	0.5 % v/v B							
7 BROADAXE XC	25 oz/a A		95.0	97.3	0.0	99.0	95.0	97.3
ENLIST ONE	2 pt/a B							
PREFIX	2 pt/a B							
ROUNDUP POWERMAX	32 fl oz/a B							
CLASS ACT RIDION	1 % v/v B							
INTACT	0.5 % v/v B							
8 BROADAXE XC	25 oz/a A		95.0	95.0	0.0	99.0	95.0	95.0
PREFIX	2 pt/a B							
ROUNDUP POWERMAX	32 fl oz/a B							
CLASS ACT RIDION	1 % v/v B							
INTACT	0.5 % v/v B							
9 ENLIST ONE	2 pt/a B		0.0	0.0	0.0	0.0	0.0	0.0
LIBERTY 280	32 fl oz/a B							
CLASS ACT RIDION	1 % v/v B							
INTACT	0.5 % v/v B							
10 BOUNDARY	2 pt/a A		95.0	96.0	0.0	99.0	95.0	96.0
ENLIST ONE	2 pt/a B							
LIBERTY 280	32 fl oz/a B							
CLASS ACT RIDION	1 % v/v B							
INTACT	0.5 % v/v B							

Could not calculate LSD (% mean diff) for columns 1,3,5,9,13,14,15,16,17,18 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed		W Weed	W Weed	W Weed		
Pest Code	AMBTR	IPOSS		SETFA	AMBTR	IPOSS		
Pest Scientific Name	Ambrosia trifi>	Ipomoea sp.		Setaria faberi	Ambrosia trifi>	Ipomoea sp.		
Pest Name	Giant ragweed	Morning glory		Giant foxtail	Giant ragweed	Morning glory		
Crop Type, Code	C -	C -	C GLXMA	C -	C -	C -		
BBCH Scale			B SOY					
Crop Scientific Name			Glycine max					
Crop Name			Soybean					
Rating Date	6-12-2019	6-12-2019	6-26-2019	6-26-2019	6-26-2019	6-26-2019		
Rating Type	CONTRO	CONTRO	PHYGEN	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1		
Days After First/Last Applic.	28 28	28 28	42 42	42 42	42 42	42 42		
Plant-Eval Interval	29 DP-1	29 DP-1	43 DP-1	43 DP-1	43 DP-1	43 DP-1		
Days After Emergence	24 DE-1	24 DE-1	38 DE-1	38 DE-1	38 DE-1	38 DE-1		
ARM Action Codes								
Number of Decimals								
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	7	8	9	10	11	12
11 BROADAXE XC	2 pt/a	A	95.0	97.7	0.0	99.0	95.0	97.7
ENLIST ONE	25 oz/a	B						
LIBERTY 280	32 fl oz/a	B						
CLASS ACT RIDION	1 % v/v	B						
INTACT	0.5 % v/v	B						
12 BOUNDARY	2 pt/a	A	95.0	98.3	0.0	99.0	95.0	98.3
ENLIST ONE	2 pt/a	B						
PREFIX	2 pt/a	B						
LIBERTY 280	32 fl oz/a	B						
CLASS ACT RIDION	1 % v/v	B						
INTACT	0.5 % v/v	B						
13 BOUNDARY	2 pt/a	A	95.0	97.7	0.0	99.0	95.0	97.7
PREFIX	2 pt/a	B						
LIBERTY 280	32 fl oz/a	B						
CLASS ACT RIDION	1 % v/v	B						
INTACT	0.5 % v/v	B						
14 BROADAXE XC	25 oz/a	A	95.0	98.7	0.0	99.0	95.0	98.7
ENLIST ONE	2 pt/a	B						
PREFIX	2 pt/a	B						
LIBERTY 280	32 fl oz/a	B						
CLASS ACT RIDION	1 % v/v	B						
INTACT	0.5 % v/v	B						
15 BROADAXE XC	25 oz/a	A	95.0	98.7	0.0	99.0	95.0	98.7
PREFIX	2 pt/a	B						
LIBERTY 280	32 fl oz/a	B						
CLASS ACT RIDION	1 % v/v	B						
INTACT	0.5 % v/v	B						
LSD P=.05			23.69	22.55	.	24.68	23.69	22.55
Standard Deviation			14.16	13.48	0.00	14.76	14.16	13.48
CV			19.17	18.0	0.0	19.17	19.17	18.0
Replicate F			1.000	1.187	0.000	1.000	1.000	1.187
Replicate Prob(F)			0.3806	0.3200	1.0000	0.3806	0.3806	0.3200
Treatment F			22.857	26.298	0.000	22.857	22.857	26.298
Treatment Prob(F)			0.0001	0.0001	1.0000	0.0001	0.0001	0.0001

Could not calculate LSD (% mean diff) for columns 1,3,5,9,13,14,15,16,17,18 because error mean square = 0.

University of Kentucky

Pest Type		W Weed	W Weed	W Weed		W Weed		
Pest Code		SETFA	AMBTR	IPOSS		SETFA		
Pest Scientific Name		Setaria faberi	Ambrosia trifi>	Ipomoea sp.		Setaria faberi		
Pest Name		Giant foxtail	Giant ragweed	Morning glory		Giant foxtail		
Crop Type, Code	C GLXMA	C -	C -	C -	C GLXMA	C -		
BBCH Scale	BSOY				BSOY			
Crop Scientific Name	Glycine max				Glycine max			
Crop Name	Soybean				Soybean			
Rating Date	7-10-2019	7-10-2019	7-10-2019	7-10-2019	7-24-2019	7-24-2019		
Rating Type	PHYGEN	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO		
Rating Unit	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1		
Days After First/Last Applic.	56 14	56 14	56 14	56 14	70 28	70 28		
Plant-Eval Interval	57 DP-1	57 DP-1	57 DP-1	57 DP-1	71 DP-1	71 DP-1		
Days After Emergence	52 DE-1	52 DE-1	52 DE-1	52 DE-1	66 DE-1	66 DE-1		
ARM Action Codes								
Number of Decimals								
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	13	14	15	16	17	18
1 UNTREATED CHECK			0.0	0.0	0.0	0.0	0.0	0.0
2 ENLIST ONE	2 pt/a B		0.0	99.0	99.0	99.0	0.0	99.0
ROUNDUP POWERMAX	32 fl oz/a B							
CLASS ACT RIDION	1 % v/v B							
INTACT	0.5 % v/v B							
3 BOUNDARY	2 pt/a A		0.0	99.0	99.0	99.0	0.0	99.0
ENLIST ONE	2 pt/a B							
ROUNDUP POWERMAX	32 fl oz/a B							
CLASS ACT RIDION	1 % v/v B							
INTACT	0.5 % v/v B							
4 BROADAXE XC	2 pt/a A		0.0	99.0	99.0	99.0	0.0	99.0
ENLIST ONE	25 oz/a B							
ROUNDUP POWERMAX	32 fl oz/a B							
CLASS ACT RIDION	1 % v/v B							
INTACT	0.5 % v/v B							
5 BOUNDARY	2 pt/a A		0.0	99.0	99.0	99.0	0.0	99.0
ENLIST ONE	2 pt/a B							
PREFIX	2 pt/a B							
ROUNDUP POWERMAX	32 fl oz/a B							
CLASS ACT RIDION	1 % v/v B							
INTACT	0.5 % v/v B							
6 BOUNDARY	2 pt/a A		0.0	99.0	99.0	99.0	0.0	99.0
PREFIX	2 pt/a B							
ROUNDUP POWERMAX	32 fl oz/a B							
CLASS ACT RIDION	1 % v/v B							
INTACT	0.5 % v/v B							
7 BROADAXE XC	25 oz/a A		0.0	99.0	99.0	99.0	0.0	99.0
ENLIST ONE	2 pt/a B							
PREFIX	2 pt/a B							
ROUNDUP POWERMAX	32 fl oz/a B							
CLASS ACT RIDION	1 % v/v B							
INTACT	0.5 % v/v B							
8 BROADAXE XC	25 oz/a A		0.0	99.0	99.0	99.0	0.0	99.0
PREFIX	2 pt/a B							
ROUNDUP POWERMAX	32 fl oz/a B							
CLASS ACT RIDION	1 % v/v B							
INTACT	0.5 % v/v B							
9 ENLIST ONE	2 pt/a B		0.0	99.0	99.0	99.0	0.0	99.0
LIBERTY 280	32 fl oz/a B							
CLASS ACT RIDION	1 % v/v B							
INTACT	0.5 % v/v B							
10 BOUNDARY	2 pt/a A		0.0	99.0	99.0	99.0	0.0	99.0
ENLIST ONE	2 pt/a B							
LIBERTY 280	32 fl oz/a B							
CLASS ACT RIDION	1 % v/v B							
INTACT	0.5 % v/v B							

Could not calculate LSD (% mean diff) for columns 1,3,5,9,13,14,15,16,17,18 because error mean square = 0.

University of Kentucky

Pest Type		W Weed SETFA	W Weed AMBTR	W Weed IPOSS		W Weed SETFA		
Pest Code		Setaria faberi	Ambrosia trifida	Ipomoea sp.		Setaria faberi		
Pest Scientific Name		Giant foxtail	Giant ragweed	Morning glory		Giant foxtail		
Pest Name		C -	C -	C -		C -		
Crop Type, Code	C GLXMA				C GLXMA			
BBCH Scale	BSOY				BSOY			
Crop Scientific Name	Glycine max				Glycine max			
Crop Name	Soybean				Soybean			
Rating Date	7-10-2019	7-10-2019	7-10-2019	7-10-2019	7-24-2019	7-24-2019		
Rating Type	PHYGEN	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO		
Rating Unit	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1		
Days After First/Last Applic.	56 14	56 14	56 14	56 14	70 28	70 28		
Plant-Eval Interval	57 DP-1	57 DP-1	57 DP-1	57 DP-1	71 DP-1	71 DP-1		
Days After Emergence	52 DE-1	52 DE-1	52 DE-1	52 DE-1	66 DE-1	66 DE-1		
ARM Action Codes								
Number of Decimals								
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	13	14	15	16	17	18
11 BROADAXE XC	2 pt/a	A	0.0	99.0	99.0	99.0	0.0	99.0
ENLIST ONE	25 oz/a	B						
LIBERTY 280	32 fl oz/a	B						
CLASS ACT RIDION	1 % v/v	B						
INTACT	0.5 % v/v	B						
12 BOUNDARY	2 pt/a	A	0.0	99.0	99.0	99.0	0.0	99.0
ENLIST ONE	2 pt/a	B						
PREFIX	2 pt/a	B						
LIBERTY 280	32 fl oz/a	B						
CLASS ACT RIDION	1 % v/v	B						
INTACT	0.5 % v/v	B						
13 BOUNDARY	2 pt/a	A	0.0	99.0	99.0	99.0	0.0	99.0
PREFIX	2 pt/a	B						
LIBERTY 280	32 fl oz/a	B						
CLASS ACT RIDION	1 % v/v	B						
INTACT	0.5 % v/v	B						
14 BROADAXE XC	25 oz/a	A	0.0	99.0	99.0	99.0	0.0	99.0
ENLIST ONE	2 pt/a	B						
PREFIX	2 pt/a	B						
LIBERTY 280	32 fl oz/a	B						
CLASS ACT RIDION	1 % v/v	B						
INTACT	0.5 % v/v	B						
15 BROADAXE XC	25 oz/a	A	0.0	99.0	99.0	99.0	0.0	99.0
PREFIX	2 pt/a	B						
LIBERTY 280	32 fl oz/a	B						
CLASS ACT RIDION	1 % v/v	B						
INTACT	0.5 % v/v	B						
LSD P=.05			0.0	0.0	0.0	0.0	0.0	0.0
Standard Deviation			0.0	0.0	0.0	0.0	0.0	0.0
CV			0.0	0.0	0.0	0.0	0.0	0.0
Replicate F			0.000	0.000	0.000	0.000	0.000	0.000
Replicate Prob(F)			1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Treatment F			0.000	0.000	0.000	0.000	0.000	0.000
Treatment Prob(F)			1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Could not calculate LSD (% mean diff) for columns 1,3,5,9,13,14,15,16,17,18 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed					
Pest Code	AMBTR	IPOSS					
Pest Scientific Name	Ambrosia trifi>	Ipomoea sp.					
Pest Name	Giant ragweed	Morning glory					
Crop Type, Code	C -	C -	C GLXMA	C GLXMA	C GLXMA		
BBCH Scale			BSOY	BSOY	BSOY		
Crop Scientific Name			Glycine max	Glycine max	Glycine max		
Crop Name			Soybean	Soybean	Soybean		
Rating Date	7-24-2019	7-24-2019	10-3-2019	10-3-2019	10-3-2019		
Rating Type	CONTRO	CONTRO	YIELD	MOICON	YIELD		
Rating Unit	%	%	lb/plot	%	BU		
Number of Subsamples	1	1	1	1	1		
Days After First/Last Applic.	70 28	70 28	141 99	141 99	141 99		
Plant-Eval Interval	71 DP-1	71 DP-1	142 DP-1	142 DP-1	142 DP-1		
Days After Emergence	66 DE-1	66 DE-1	137 DE-1	137 DE-1	137 DE-1		
ARM Action Codes					TY1		
Number of Decimals					1		
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code	19	20	22		
			23	24			
1 UNTREATED CHECK			0.0	0.0	0.503	0.00	2.1
2 ENLIST ONE	2 pt/a B		99.0	99.0	8.940	7.23	34.6
ROUNDUP POWERMAX	32 fl oz/a B						
CLASS ACT RIDION	1 % v/v B						
INTACT	0.5 % v/v B						
3 BOUNDARY	2 pt/a A		99.0	99.0	8.337	6.90	32.4
ENLIST ONE	2 pt/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
CLASS ACT RIDION	1 % v/v B						
INTACT	0.5 % v/v B						
4 BROADAXE XC	2 pt/a A		99.0	99.0	8.030	7.50	31.0
ENLIST ONE	25 oz/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
CLASS ACT RIDION	1 % v/v B						
INTACT	0.5 % v/v B						
5 BOUNDARY	2 pt/a A		99.0	99.0	8.860	7.10	34.3
ENLIST ONE	2 pt/a B						
PREFIX	2 pt/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
CLASS ACT RIDION	1 % v/v B						
INTACT	0.5 % v/v B						
6 BOUNDARY	2 pt/a A		99.0	99.0	7.703	7.07	29.9
PREFIX	2 pt/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
CLASS ACT RIDION	1 % v/v B						
INTACT	0.5 % v/v B						
7 BROADAXE XC	25 oz/a A		99.0	99.0	8.450	7.20	32.7
ENLIST ONE	2 pt/a B						
PREFIX	2 pt/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
CLASS ACT RIDION	1 % v/v B						
INTACT	0.5 % v/v B						
8 BROADAXE XC	25 oz/a A		99.0	99.0	8.153	7.10	31.6
PREFIX	2 pt/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
CLASS ACT RIDION	1 % v/v B						
INTACT	0.5 % v/v B						
9 ENLIST ONE	2 pt/a B		99.0	99.0	9.023	7.53	34.8
LIBERTY 280	32 fl oz/a B						
CLASS ACT RIDION	1 % v/v B						
INTACT	0.5 % v/v B						
10 BOUNDARY	2 pt/a A		99.0	99.0	8.000	7.17	31.0
ENLIST ONE	2 pt/a B						
LIBERTY 280	32 fl oz/a B						
CLASS ACT RIDION	1 % v/v B						
INTACT	0.5 % v/v B						

Could not calculate LSD (% mean diff) for columns 1,3,5,9,13,14,15,16,17,18 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed					
Pest Code	AMBTR	IPOSS					
Pest Scientific Name	Ambrosia trifida	Ipomoea sp.					
Pest Name	Giant ragweed	Morning glory					
Crop Type, Code	C -	C -	C GLXMA	C GLXMA	C GLXMA		
BBCH Scale			BSOY	BSOY	BSOY		
Crop Scientific Name			Glycine max	Glycine max	Glycine max		
Crop Name			Soybean	Soybean	Soybean		
Rating Date	7-24-2019	7-24-2019	10-3-2019	10-3-2019	10-3-2019		
Rating Type	CONTRO	CONTRO	YIELD	MOICON	YIELD		
Rating Unit	%	%	lb/plot	%	BU		
Number of Subsamples	1	1	1	1	1		
Days After First/Last Applic.	70 28	70 28	141 99	141 99	141 99		
Plant-Eval Interval	71 DP-1	71 DP-1	142 DP-1	142 DP-1	142 DP-1		
Days After Emergence	66 DE-1	66 DE-1	137 DE-1	137 DE-1	137 DE-1		
ARM Action Codes					TY1		
Number of Decimals					1		
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code	19	20	22	23	24
11 BROADAXE XC	2 pt/a	A	99.0	99.0	8.310	7.40	32.1
ENLIST ONE	25 oz/a	B					
LIBERTY 280	32 fl oz/a	B					
CLASS ACT RIDION	1 % v/v	B					
INTACT	0.5 % v/v	B					
12 BOUNDARY	2 pt/a	A	99.0	99.0	8.290	7.27	32.1
ENLIST ONE	2 pt/a	B					
PREFIX	2 pt/a	B					
LIBERTY 280	32 fl oz/a	B					
CLASS ACT RIDION	1 % v/v	B					
INTACT	0.5 % v/v	B					
13 BOUNDARY	2 pt/a	A	91.7	93.3	6.867	7.33	26.5
PREFIX	2 pt/a	B					
LIBERTY 280	32 fl oz/a	B					
CLASS ACT RIDION	1 % v/v	B					
INTACT	0.5 % v/v	B					
14 BROADAXE XC	25 oz/a	A	99.0	99.0	8.393	6.97	32.6
ENLIST ONE	2 pt/a	B					
PREFIX	2 pt/a	B					
LIBERTY 280	32 fl oz/a	B					
CLASS ACT RIDION	1 % v/v	B					
INTACT	0.5 % v/v	B					
15 BROADAXE XC	25 oz/a	A	99.0	99.0	7.230	7.40	27.9
PREFIX	2 pt/a	B					
LIBERTY 280	32 fl oz/a	B					
CLASS ACT RIDION	1 % v/v	B					
INTACT	0.5 % v/v	B					
LSD P=.05			1.25	1.25	1.4372	0.554	5.54
Standard Deviation			0.75	0.75	0.8593	0.331	3.31
CV			0.81	0.81	11.2	4.92	11.15
Replicate F			1.000	1.000	5.447	0.317	5.632
Replicate Prob(F)			0.3806	0.3806	0.0100	0.7306	0.0088
Treatment F			3510.383	3511.069	17.385	95.970	17.377
Treatment Prob(F)			0.0001	0.0001	0.0001	0.0001	0.0001

Could not calculate LSD (% mean diff) for columns 1,3,5,9,13,14,15,16,17,18 because error mean square = 0.

University of Kentucky

COMPARE SYNGENTA 2 PASS PROGRAMS WITH VARIED POST EMERGE MIX OPTIONS IN ENLIST 3 SOYBEAN

Trial ID: 19-31 Location: LEXINGTON, KY Trial Year: 2019
 Protocol ID: SYN E3 SB Investigator: Sara Carter
 Project ID: Study Director: SARA CARTER
 Sponsor Contact: SCOTT CULLY

Pest Type

W, Weed = Weed or volunteer crop

Pest Code

SETFA, Setaria faberi, Giant foxtail = US
 AMBTR, Ambrosia trifida, Giant ragweed = US
 IPOSS, Ipomoea sp., Morning glory = US

Crop Type, Code

C = EPPO species (Bayer) codes
 GLXMA, BSOY, Glycine max, Soybean = US

Rating Type

PHYGEN = phytotoxicity - general / injury
 CONTRO = control / burndown or knockdown
 YIELD = yield
 MOICON = moisture content

Rating Unit

% = percent
 lb/plot = pounds per plot
 BU = bushel

Plant-Eval Interval

15 DP-1 = 1 GLXMA 5-14-2019
 29 DP-1 = 1 GLXMA 5-14-2019
 43 DP-1 = 1 GLXMA 5-14-2019
 57 DP-1 = 1 GLXMA 5-14-2019
 71 DP-1 = 1 GLXMA 5-14-2019
 142 DP-1 = 1 GLXMA 5-14-2019

ARM Action Codes

TY1 = 3.63*[22]*(100-[23])/87

University of Kentucky

CORN HERBICIDE SHOOTOUT

Trial ID: 19-32 Location: LEXINGTON, KY Trial Year: 2019
 Protocol ID: SYN CORN1 Investigator: Sara Carter
 Project ID: Study Director: SARA CARTER
 Sponsor Contact: SCOTT CULLY

General Trial Information

Study Director: Sara Carter **Title:** Research Specialist
Investigator: Sara Carter

Discipline: H herbicide
Trial Status: F one-year/final

ARM Trial Created On: 5-1-2019
Initiation Date: 5-1-2019 **Planned Completion Date:** 10-1-2019
Completion Date: 9-30-2019

Trial Location

City: Lexington **Country:** USA United States
State/Prov.: Kentucky
Postal Code: 40511

Conducted Under GLP: No
Conducted Under GEP: No

Contacts

Study Director: Sara Carter **Title:** Research Specialist
Organization: University of Kentucky
Address: 105 Plant Science Building
City+State/Prov: Lexington, KY
Postal Code: 40546-0312 **E-mail:** sara.carter@uky.edu

Investigator: Sara Carter

Crop Description

Crop 1: C ZEAMX Zea mays Corn
Variety: DKC 63-55
Planting Date: 5-1-2019 **Planting Rate:** 32000 S/A
Depth: 1.5 IN
Rows per Plot: 6 **Planting Method:** PLANTD planted
Row Spacing: 30 IN **Planting Equipment:** FE field equipment
Seed Bed: SMOOTH smooth
Soil Temperature: 61 F **Soil Moisture:** GOOD good
Emergence Date: 5-8-2019
Harvest Date: 9-30-2019 **Harvest Equipment:** KINCAID
Harvested Width: 5 FT
% Standard Moisture: 15.5 **Harvested Length:** 38 FT

Pest Description

Pest 1 Type: W **Code:** SETFA Setaria faberi
Common Name: Giant foxtail
Crop: 1 ZEAMX

Pest 2 Type: W **Code:** AMBTR Ambrosia trifida
Common Name: Giant ragweed
Crop: 1 ZEAMX

Pest 3 Type: W **Code:** IPOSS Ipomoea sp.
Common Name: Morning glory
Crop: 1 ZEAMX

Site and Design

Treated Plot Width: 10 FT **Site Type:** FIELD field
Treated Plot Length: 44 FT
Treated Plot Area: 440 FT² **Treatments:** 6 **Tillage Type:** CONTIL conventional-till
Replications: 3 **Study Design:** RACOB Randomized Complete Block (RCB)

Soil Description

Description Name: MAURY SILT LOAM
% Sand: 6 **% OM:** 2.6 **Texture:** SIL silt loam
% Silt: 32 **pH:** 6.4 **Soil Name:** Maury
% Clay: 62 **CEC:** 18

Moisture and Weather Conditions

Overall Moisture Conditions: WEWEDR wet-wet-dry
Closest Weather Station: SPINDLETOP **Distance:** 1.5 MI

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Application Description		
	A	B
Application Date	5-1-2019	5-23-2019
Appl. Start Time	6:50 PM	3:00 PM
Application Method	SPRAY	SPRAY
Application Timing	PRE	2-4"W
Application Placement	BROSOI	BROFOL
Applied By	SARA	SARA
Air Temperature Start, Stop	80 F	88 F
% Relative Humidity Start, Stop	60	65
Wind Velocity+Dir. Start	5 MPH WNW	4 MPH W
Soil Temperature	61 F	68 F
Soil Moisture	GOOD	GOOD
Soil Surface Condition	SMOOTH	SMOOTH
% Cloud Cover	60	90
Next Moisture Occurred On	5-1-2019	5-26-2019

Crop Stage At Each Application		
	A	B
Crop 1 Code, BBCH Scale	ZEAMX BCOR	ZEAMX BCOR
Days after Emergence	-7	15
Height Average		4 IN

Pest Stage At Each Application		
	A	B
Pest 1 Code, Type, Scale	SETFA W	SETFA W
Height Average		2 IN
Pest 2 Code, Type, Scale	AMBTR W	AMBTR W
Height Average		4 IN
Pest 3 Code, Type, Scale	IPOSS W	IPOSS W
Height Average		1.5 IN

Application Equipment		
	A	B
Appl. Equipment	BELTSPRAYER	BELTSPRAYER
Equipment Type	SPRBEL	SPRBEL
Operation Pressure	30 PSI	30 PSI
Nozzle Type	FLAFDG	FLAFDG
Nozzle Size	8002	8002
Nozzle Spacing	30 IN	30 IN
Boom ID	6-TIP	6-TIP
Boom Length	10 FT	10 FT
Boom Height	24 IN	24 IN
Ground Speed	4 MPH	4 MPH
Carrier	WATER	WATER
Application Amount	15 GAL/AC	15 GAL/AC
Mix Size	2.5 L	2.5 L
Propellant	COMCO2	COMCO2
Tank Mix (Y/N)	N no	N no

Context	Date	By	Notes
STATUS	5-1-2019	Sara Carter	Automatically added by ARM: Trial Status updated to 'S' during trial creation.

SE Definitions	
	1.
Crop Type, Code	C

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CORN HERBICIDE SHOOTOUT

Trial ID: 19-32	Location: LEXINGTON, KY	Trial Year: 2019
Protocol ID: SYN CORN1	Investigator: Sara Carter	
Project ID:	Study Director: SARA CARTER	
	Sponsor Contact: SCOTT CULLY	

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed			
Pest Code	SETFA	AMBTR	IPOSS		SETFA			
Pest Scientific Name	Setaria faberi	Ambrosia trifid	Ipomoea sp.		Setaria faberi			
Pest Name	Giant foxtail	Giant ragweed	Morning glory		Giant foxtail			
Crop Type, Code	C ZEAMX	C -	C -	C ZEAMX	C -			
BBCH Scale	BCOR			BCOR				
Crop Scientific Name	Zea mays			Zea mays				
Crop Name	Corn			Corn				
Rating Date	5-15-2019	5-15-2019	5-15-2019	5-15-2019	5-30-2019			
Rating Type	PHYGEN	CONTRO	CONTRO	CONTRO	PHYGEN			
Rating Unit	%	%	%	%	%			
Number of Subsamples	1	1	1	1	1			
Days After First/Last Applic.	14 14	14 14	14 14	14 14	29 7			
Plant-Eval Interval	14 DP-1	14 DP-1	14 DP-1	14 DP-1	29 DP-1			
Days After Emergence	7 DE-1	7 DE-1	7 DE-1	7 DE-1	22 DE-1			
ARM Action Codes								
Number of Decimals								
Trt Treatment	Rate	Appl	1	2	3	4	5	6
No. Name	Rate Unit	Code						
1 ACURON	3 qt/a	A	0.0	99.0	99.0	99.0	0.0	99.0
AATREX	1 pt/a	A						
2 ACURON	1.5 qt/a	A	0.0	99.0	99.0	99.0	0.0	99.0
AATREX	1 pt/a	A						
ACURON	1.5 qt/a	B						
AATREX	1 pt/a	B						
ROUNDUP POWERMAX	24 fl oz/a	B						
AMS	8.5 lb/100 gal	B						
3 ACURON	1.5 qt/a	A	0.0	99.0	99.0	99.0	0.0	99.0
HALEX GT	3.6 pt/a	B						
AATREX	1 pt/a	B						
NIS	0.25 % v/v	B						
AMS	8.5 lb/100 gal	B						
4 BICEP II MAGNUM	1.6 qt/a	A	0.0	99.0	99.0	99.0	0.0	99.0
HALEX GT	3.6 pt/a	B						
AATREX	1 pt/a	B						
NIS	0.25 % v/v	B						
AMS	8.5 lb/100 gal	B						
5 ACURON	3 qt/a	B	0.0	0.0	0.0	0.0	0.0	91.7
ROUNDUP POWERMAX	24 fl oz/a	B						
AMS	8.5 lb/100 gal	B						
6 UNTREATED			0.0	0.0	0.0	0.0	0.0	0.0
LSD P=.05			.	.	.	.	.	2.14
Standard Deviation			0.00	0.00	0.00	0.00	0.00	1.18
CV			0.0	0.0	0.0	0.0	0.0	1.45
Replicate F			0.000	0.000	0.000	0.000	0.000	1.000
Replicate Prob(F)			1.0000	1.0000	1.0000	1.0000	1.0000	0.4019
Treatment F			0.000	0.000	0.000	0.000	0.000	3443.176
Treatment Prob(F)			1.0000	1.0000	1.0000	1.0000	1.0000	0.0001

Missing data estimates are included in columns: Yates=1
 Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,7,8,9,10,11,12,13,17,18,19,21,22,23 because error mean square = 0.

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Pest Type	W Weed	W Weed		W Weed	W Weed	W Weed		
Pest Code	AMBTR	IPOSS		SETFA	AMBTR	IPOSS		
Pest Scientific Name	Ambrosia trifid	Ipomoea sp.		Setaria faberi	Ambrosia trifid	Ipomoea sp.		
Pest Name	Giant ragweed	Morning glory		Giant foxtail	Giant ragweed	Morning glory		
Crop Type, Code	C -	C -	C ZEAMX	C -	C -	C -		
BBCH Scale			BCOR					
Crop Scientific Name			Zea mays					
Crop Name			Corn					
Rating Date	5-30-2019	5-30-2019	6-6-2019	6-6-2019	6-6-2019	6-6-2019		
Rating Type	CONTRO	CONTRO	PHYGEN	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1		
Days After First/Last Applic.	29 7	29 7	36 14	36 14	36 14	36 14		
Plant-Eval Interval	29 DP-1	29 DP-1	36 DP-1	36 DP-1	36 DP-1	36 DP-1		
Days After Emergence	22 DE-1	22 DE-1	29 DE-1	29 DE-1	29 DE-1	29 DE-1		
ARM Action Codes								
Number of Decimals								
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	7	8	9	10	11	12
1 ACURON	3 qt/a	A	99.0	99.0	0.0	95.0	90.0	90.0
AATREX	1 pt/a	A						
2 ACURON	1.5 qt/a	A	99.0	99.0	0.0	99.0	99.0	99.0
AATREX	1 pt/a	A						
ACURON	1.5 qt/a	B						
AATREX	1 pt/a	B						
ROUNDUP POWERMAX	24 fl oz/a	B						
AMS	8.5 lb/100 gal	B						
3 ACURON	1.5 qt/a	A	99.0	99.0	0.0	99.0	99.0	99.0
HALEX GT	3.6 pt/a	B						
AATREX	1 pt/a	B						
NIS	0.25 % v/v	B						
AMS	8.5 lb/100 gal	B						
4 BICEP II MAGNUM	1.6 qt/a	A	99.0	99.0	0.0	99.0	99.0	99.0
HALEX GT	3.6 pt/a	B						
AATREX	1 pt/a	B						
NIS	0.25 % v/v	B						
AMS	8.5 lb/100 gal	B						
5 ACURON	3 qt/a	B	90.0	90.0	0.0	99.0	99.0	99.0
ROUNDUP POWERMAX	24 fl oz/a	B						
AMS	8.5 lb/100 gal	B						
6 UNTREATED			0.0	0.0	0.0	0.0	0.0	0.0
LSD P=.05			.	.	.	.	.	.
Standard Deviation			0.00	0.00	0.00	0.00	0.00	0.00
CV			0.0	0.0	0.0	0.0	0.0	0.0
Replicate F			0.000	0.000	0.000	0.000	0.000	0.000
Replicate Prob(F)			1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Treatment F			0.000	0.000	0.000	0.000	0.000	0.000
Treatment Prob(F)			1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Missing data estimates are included in columns:Yates=1

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,7,8,9,10,11,12,13,17,18,19,21,22,23 because error mean square = 0.

University of Kentucky

Pest Type		W Weed	W Weed	W Weed		W Weed		
Pest Code		SETFA	AMBTR	IPOSS		SETFA		
Pest Scientific Name		Setaria faberi	Ambrosia trifid	Ipomoea sp.		Setaria faberi		
Pest Name		Giant foxtail	Giant ragweed	Morning glory		Giant foxtail		
Crop Type, Code	C ZEAMX	C -	C -	C -	C ZEAMX	C -		
BBCH Scale	BCOR				BCOR			
Crop Scientific Name	Zea mays				Zea mays			
Crop Name	Corn				Corn			
Rating Date	6-20-2019	6-20-2019	6-20-2019	6-20-2019	7-3-2019	7-3-2019		
Rating Type	PHYGEN	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO		
Rating Unit	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1		
Days After First/Last Applic.	50 28	50 28	50 28	50 28	63 41	63 41		
Plant-Eval Interval	50 DP-1	50 DP-1	50 DP-1	50 DP-1	63 DP-1	63 DP-1		
Days After Emergence	43 DE-1	43 DE-1	43 DE-1	43 DE-1	56 DE-1	56 DE-1		
ARM Action Codes								
Number of Decimals								
Trt Treatment	Rate	Appl	13	14	15	16	17	18
No. Name	Rate Unit	Code						
1 ACURON	3 qt/a	A	0.0	81.7	83.3	87.0	0.0	80.0
AATREX	1 pt/a	A						
2 ACURON	1.5 qt/a	A	0.0	99.0	99.0	99.0	0.0	95.0
AATREX	1 pt/a	A						
ACURON	1.5 qt/a	B						
AATREX	1 pt/a	B						
ROUNDUP POWERMAX	24 fl oz/a	B						
AMS	8.5 lb/100 gal	B						
3 ACURON	1.5 qt/a	A	0.0	99.0	99.0	99.0	0.0	95.0
HALEX GT	3.6 pt/a	B						
AATREX	1 pt/a	B						
NIS	0.25 % v/v	B						
AMS	8.5 lb/100 gal	B						
4 BICEP II MAGNUM	1.6 qt/a	A	0.0	99.0	99.0	99.0	0.0	95.0
HALEX GT	3.6 pt/a	B						
AATREX	1 pt/a	B						
NIS	0.25 % v/v	B						
AMS	8.5 lb/100 gal	B						
5 ACURON	3 qt/a	B	0.0	99.0	99.0	99.0	0.0	95.0
ROUNDUP POWERMAX	24 fl oz/a	B						
AMS	8.5 lb/100 gal	B						
6 UNTREATED			0.0	0.0	0.0	0.0	0.0	0.0
LSD P=.05			.	2.14	2.14	1.29	.	.
Standard Deviation			0.00	1.18	1.18	0.71	0.00	0.00
CV			0.0	1.48	1.48	0.88	0.0	0.0
Replicate F			0.000	1.000	1.000	1.000	0.000	0.000
Replicate Prob(F)			1.0000	0.4019	0.4019	0.4019	1.0000	1.0000
Treatment F			0.000	3389.416	3393.376	9469.801	0.000	0.000
Treatment Prob(F)			1.0000	0.0001	0.0001	0.0001	1.0000	1.0000

Missing data estimates are included in columns: Yates=1
 Could not calculate LSD (% mean diff) for columns: 1,2,3,4,5,7,8,9,10,11,12,13,17,18,19,21,22,23 because error mean square = 0.

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Pest Type	W Weed	W Weed		W Weed	W Weed	W Weed		
Pest Code	AMBTR	IPOSS		SETFA	AMBTR	IPOSS		
Pest Scientific Name	Ambrosia trifid	Ipomoea sp.		Setaria faberi	Ambrosia trifid	Ipomoea sp.		
Pest Name	Giant ragweed	Morning glory		Giant foxtail	Giant ragweed	Morning glory		
Crop Type, Code	C -	C -	C ZEAMX	C -	C -	C -		
BBCH Scale			BCOR					
Crop Scientific Name			Zea mays					
Crop Name			Corn					
Rating Date	7-3-2019	7-3-2019	7-17-2019	7-17-2019	7-17-2019	7-17-2019		
Rating Type	CONTRO	CONTRO	PHYGEN	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1		
Days After First/Last Applic.	63 41	63 41	77 55	77 55	77 55	77 55		
Plant-Eval Interval	63 DP-1	63 DP-1	77 DP-1	77 DP-1	77 DP-1	77 DP-1		
Days After Emergence	56 DE-1	56 DE-1	70 DE-1	70 DE-1	70 DE-1	70 DE-1		
ARM Action Codes								
Number of Decimals								
Trt Treatment	Rate	Appl	19	20	21	22	23	24
No. Name	Rate Unit	Code						
1 ACURON	3 qt/a	A	80.0	83.3	0.0	75.0	70.0	75.0
AATREX	1 pt/a	A						
2 ACURON	1.5 qt/a	A	95.0	95.0	0.0	85.0	85.0	81.7
AATREX	1 pt/a	A						
ACURON	1.5 qt/a	B						
AATREX	1 pt/a	B						
ROUNDUP POWERMAX	24 fl oz/a	B						
AMS	8.5 lb/100 gal	B						
3 ACURON	1.5 qt/a	A	95.0	95.0	0.0	85.0	85.0	85.0
HALEX GT	3.6 pt/a	B						
AATREX	1 pt/a	B						
NIS	0.25 % v/v	B						
AMS	8.5 lb/100 gal	B						
4 BICEP II MAGNUM	1.6 qt/a	A	95.0	95.0	0.0	85.0	85.0	81.7
HALEX GT	3.6 pt/a	B						
AATREX	1 pt/a	B						
NIS	0.25 % v/v	B						
AMS	8.5 lb/100 gal	B						
5 ACURON	3 qt/a	B	95.0	95.0	0.0	85.0	85.0	81.7
ROUNDUP POWERMAX	24 fl oz/a	B						
AMS	8.5 lb/100 gal	B						
6 UNTREATED			0.0	0.0	0.0	0.0	0.0	0.0
LSD P=.05			.	2.14	.	.	.	2.88
Standard Deviation			0.00	1.18	0.00	0.00	0.00	1.58
CV			0.0	1.53	0.0	0.0	0.0	2.34
Replicate F			0.000	1.000	0.000	0.000	0.000	5.000
Replicate Prob(F)			1.0000	0.4019	1.0000	1.0000	1.0000	0.0313
Treatment F			0.000	3138.400	0.000	0.000	0.000	1325.000
Treatment Prob(F)			1.0000	0.0001	1.0000	1.0000	1.0000	0.0001

Missing data estimates are included in columns:Yates=1
 Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,7,8,9,10,11,12,13,17,18,19,21,22,23 because error mean square = 0.

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Pest Type					
Pest Code					
Pest Scientific Name					
Pest Name					
Crop Type, Code	C ZEAMX	C ZEAMX	C ZEAMX		
BBCH Scale	BCOR	BCOR	BCOR		
Crop Scientific Name	Zea mays	Zea mays	Zea mays		
Crop Name	Corn	Corn	Corn		
Rating Date	9-30-2019	9-30-2019	9-30-2019		
Rating Type	YIELD	MOICON	YIELD		
Rating Unit	lb/plot	%	BU		
Number of Subsamples	1	1	1		
Days After First/Last Applic.	152 130	152 130	152 130		
Plant-Eval Interval	152 DP-1	152 DP-1	152 DP-1		
Days After Emergence	145 DE-1	145 DE-1	145 DE-1		
ARM Action Codes			TY1		
Number of Decimals			1		
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	26	27	28
1 ACURON	3 qt/a	A	45.880	12.500	194.5
AATREX	1 pt/a	A			
2 ACURON	1.5 qt/a	A	44.350	12.533	187.9
AATREX	1 pt/a	A			
ACURON	1.5 qt/a	B			
AATREX	1 pt/a	B			
ROUNDUP POWERMAX	24 fl oz/a	B			
AMS	8.5 lb/100 gal	B			
3 ACURON	1.5 qt/a	A	43.420	12.767	183.5
HALEX GT	3.6 pt/a	B			
AATREX	1 pt/a	B			
NIS	0.25 % v/v	B			
AMS	8.5 lb/100 gal	B			
4 BICEP II MAGNUM	1.6 qt/a	A	43.880	12.300	186.5
HALEX GT	3.6 pt/a	B			
AATREX	1 pt/a	B			
NIS	0.25 % v/v	B			
AMS	8.5 lb/100 gal	B			
5 ACURON	3 qt/a	B	42.243	12.133	179.7
ROUNDUP POWERMAX	24 fl oz/a	B			
AMS	8.5 lb/100 gal	B			
6 UNTREATED			9.067	6.663	39.4
LSD P=.05			7.7248	3.9644	32.04
Standard Deviation			4.2461	2.1791	17.61
CV			11.13	18.98	10.88
Replicate F			2.325	0.931	2.444
Replicate Prob(F)			0.1481	0.4257	0.1368
Treatment F			33.991	3.551	35.101
Treatment Prob(F)			0.0001	0.0418	0.0001

Missing data estimates are included in columns: Yates=1

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,7,8,9,10,11,12,13,17,18,19,21,22,23 because error mean square = 0.

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CORN HERBICIDE SHOOTOUT

Trial ID: 19-32 Location: LEXINGTON, KY Trial Year: 2019
 Protocol ID: SYN CORN1 Investigator: Sara Carter
 Project ID: Study Director: SARA CARTER
 Sponsor Contact: SCOTT CULLY

Pest Type

W, Weed = Weed or volunteer crop

Pest Code

SETFA, Setaria faberi, Giant foxtail = US
 AMBTR, Ambrosia trifida, Giant ragweed = US
 IPOSS, Ipomoea sp., Morning glory = US

Crop Type, Code

C = EPPO species (Bayer) codes
 ZEAMX, BCOR, Zea mays, Corn = US

Rating Type

PHYGEN = phytotoxicity - general / injury
 CONTRO = control / burndown or knockdown
 YIELD = yield
 MOICON = moisture content

Rating Unit

% = percent
 lb/plot = pounds per plot
 BU = bushel

Plant-Eval Interval

14 DP-1 = 1 ZEAMX 5-1-2019
 29 DP-1 = 1 ZEAMX 5-1-2019
 36 DP-1 = 1 ZEAMX 5-1-2019
 50 DP-1 = 1 ZEAMX 5-1-2019
 63 DP-1 = 1 ZEAMX 5-1-2019
 77 DP-1 = 1 ZEAMX 5-1-2019
 152 DP-1 = 1 ZEAMX 5-1-2019

ARM Action Codes

TY1 = 4.093985*[26]*(100-[27])/84.5

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UPL PRE/POT PROGRAMS FOR ENLIST SOYBEAN

Trial ID: 19-33 Location: LEXINGTON, KY Trial Year: 2019
 Protocol ID: UPI-ENLIST SOY Investigator: Sara Carter
 Project ID: Study Director: SARA CARTER
 Sponsor Contact: TONY ESTES

General Trial Information

Study Director: Sara Carter **Title:** Research Specialist
Investigator: Sara Carter

Discipline: H herbicide
Trial Status: F one-year/final
ARM Trial Created On: 5-14-2019
Initiation Date: 5-14-2019 **Planned Completion Date:** 10-1-2019
Completion Date: 10-3-2019

Trial Location

City: Lexington **Country:** USA United States
State/Prov.: Kentucky
Postal Code: 40511

Conducted Under GLP: No
Conducted Under GEP: No

Contacts

Study Director: Sara Carter **Title:** Research Specialist
Organization: University of Kentucky
Address: 105 Plant Science Building
City+State/Prov: Lexington, KY
Postal Code: 40546-0312 **E-mail:** sara.carter@uky.edu

Investigator: Sara Carter

Crop Description

Crop 1: C GLXMA Glycine max Soybean
Variety: MY419E-DB21
Attributes: Enlist
Planting Date: 5-14-2019 **Planting Rate:** 150000 S/A
Depth: 1.25 IN
Rows per Plot: 6 **Planting Method:** PLANTD planted
Row Spacing: 30 IN **Planting Equipment:** FE field equipment
Seed Bed: MEDIUM medium
Soil Temperature: 59 F **Soil Moisture:** GOOD good
Emergence Date: 5-19-2019 **Harvest Equipment:** Hege
Harvest Date: 10-3-2019 **Harvested Width:** 5 FT
% Standard Moisture: 13.0 **Harvested Length:** 40 FT

Pest Description

Pest 1 Type: W **Code:** SETFA *Setaria faberi*
Common Name: Giant foxtail
Crop: 1 GLXMA
Pest 2 Type: W **Code:** AMBTR *Ambrosia trifida*
Common Name: Giant ragweed
Pest 3 Type: W **Code:** IPOSS *Ipomoea* sp.
Common Name: Morning glory

Site and Design

Treated Plot Width: 10 FT **Site Type:** FIELD field
Treated Plot Length: 44 FT
Treated Plot Area: 440 FT² **Treatments:** 5 **Tillage Type:** NOTILL no-till
Replications: 3 **Study Design:** RACOB Randomized Complete Block (RCB)

Soil Description

Description Name: MAURY SILT LOAM
% Sand: 6 **% OM:** 2.6 **Texture:** SIL silt loam
% Silt: 32 **pH:** 6.4 **Soil Name:** Maury
% Clay: 62 **CEC:** 18

Moisture and Weather Conditions

Overall Moisture Conditions: WEWEDR wet-wet-dry
Closest Weather Station: SPINDLETOP **Distance:** 2.25 MI

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Application Description			
	A	B	C
Application Date	5-15-2019	6-26-2019	
Application Method	SPRAY	SPRAY	
Application Timing	PRE	<4" WEEDS	
Application Placement	BROFOL	BROFOL	
Applied By	SARA	SARA	
Air Temperature Start, Stop	73 F	93 F	
% Relative Humidity Start, Stop	49	57	
Wind Velocity+Dir. Start	4 MPH SSE	1 MPH SE	
Soil Temperature	59 F	72 F	
Soil Moisture	GOOD	WET	
Soil Surface Condition	MEDIUM	MEDIUM	
% Cloud Cover	90	5	
Next Moisture Occurred On	5-16-2019	7-3-2019	

Crop Stage At Each Application			
	A	B	C
Crop 1 Code, BBCH Scale	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Days after Emergence	-4	38	
Height Average		8 IN	

Pest Stage At Each Application			
	A	B	C
Pest 1 Code, Type, Scale	SETFA W	SETFA W	SETFA W
Height Average	1 IN	3 IN	
Pest 2 Code, Type, Scale	AMBTR W	AMBTR W	AMBTR W
Height Average	2 IN	5 IN	
Pest 3 Code, Type, Scale	IPOSS W	IPOSS W	IPOSS W
Height Average	1 IN	2.5 IN	

Application Equipment			
	A	B	C
Appl. Equipment	BELTSPRAYER	BELTSPRAYER	
Equipment Type	SPRBEL	SPRBEL	
Operation Pressure	30 PSI	40 PSI	
Nozzle Type	FLAFDG	TEEJAI	
Nozzle Size	8002	11002	
Nozzle Spacing	30 IN	30 IN	
Boom ID	6-TIP	6-TIP	
Boom Length	10 FT	10 FT	
Boom Height	24 IN	24 IN	
Ground Speed	4 MPH	4 MPH	
Carrier	WATER	WATER	
Application Amount	15 GAL/AC	15 GAL/AC	
Mix Size	2.5 L	2.5 L	
Propellant	COMCO2	COMCO2	
Tank Mix (Y/N)	N no	N no	

Context	Date	By	Notes
STATUS	5-14-2019	Sara Carter	Automatically added by ARM: Trial Status updated to 'S' during trial creation.
APPLIC	11-1-2019	Sara Carter	+4"WEED APPLICATION WAS NOT NEEDED

SE Definitions	
	1.
Crop Type, Code	C

University of Kentucky

UPL PRE/POT PROGRAMS FOR ENLIST SOYBEAN

Trial ID: 19-33	Location: LEXINGTON, KY	Trial Year: 2019
Protocol ID: UPI-ENLIST SOY	Investigator: Sara Carter	
Project ID:	Study Director: SARA CARTER	
	Sponsor Contact: TONY ESTES	

		W Weed SETFA Setaria faberi Giant foxtail C -	W Weed AMBTR Ambrosia trifi> Giant ragweed C -	W Weed IPOSS Ipomoea sp. Morning glory C -		W Weed SETFA Setaria faberi Giant foxtail C -
Pest Type						
Pest Code						
Pest Scientific Name						
Pest Name						
Crop Type, Code	C GLXMA BSOY				C GLXMA BSOY	
BBCH Scale						
Crop Scientific Name	Glycine max				Glycine max	
Crop Name	Soybean				Soybean	
Rating Date	5-22-2019	5-22-2019	5-22-2019	5-22-2019	5-29-2019	5-29-2019
Rating Type	PHYGEN	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO
Rating Unit	%	%	%	%	%	%
Number of Subsamples	1	1	1	1	1	1
Days After First/Last Applic.	7 7	7 7	7 7	7 7	14 14	14 14
Plant-Eval Interval	8 DP-1	8 DP-1	8 DP-1	8 DP-1	15 DP-1	15 DP-1
Days After Emergence	3 DE-1	3 DE-1	3 DE-1	3 DE-1	10 DE-1	10 DE-1
ARM Action Codes						
Number of Decimals						
Trt Treatment	Rate Appl					
No. Name	Rate Unit Code	1	2	3	4	5
1 UNTREATED CHECK		0.0	0.0	0.0	0.0	0.0
2 MOCCASIN MTZ	42 fl oz/a A	0.0	99.0	99.0	99.0	0.0
INTERLINE	32 fl oz/a B					99.0
MOCCASIN II PLUS	16 fl oz/a B					
ENLIST ONE	32 fl oz/a B					
NIS	0.25 % v/v B					
INTERLINE	29 fl oz/a C					
NIS	0.25 % v/v C					
3 TRIPZIN ZC	44 fl oz/a A	0.0	99.0	99.0	99.0	0.0
INTERLINE	32 fl oz/a B					99.0
MOCCASIN II PLUS	16 fl oz/a B					
ENLIST ONE	32 fl oz/a B					
NIS	0.25 % v/v B					
INTERLINE	29 fl oz/a C					
NIS	0.25 % v/v C					
4 MOCCASIN MTZ	52 fl oz/a A	0.0	99.0	99.0	99.0	0.0
INTERLINE	32 fl oz/a B					99.0
MOCCASIN II PLUS	16 fl oz/a B					
ENLIST ONE	32 fl oz/a B					
COC	1 % v/v B					
INTERLINE	29 fl oz/a C					
COC	1 % v/v C					
5 TRIPZIN ZC	44 fl oz/a A	0.0	99.0	99.0	99.0	0.0
INTERLINE	32 fl oz/a B					99.0
MOCCASIN II PLUS	16 fl oz/a B					
ENLIST ONE	32 fl oz/a B					
COC	1 % v/v B					
INTERLINE	29 fl oz/a C					
COC	1 % v/v C					
LSD P=.05		.	.	.	.	.
Standard Deviation		0.00	0.00	0.00	0.00	0.00
CV		0.0	0.0	0.0	0.0	0.0
Replicate F		0.000	0.000	0.000	0.000	0.000
Replicate Prob(F)		1.0000	1.0000	1.0000	1.0000	1.0000
Treatment F		0.000	0.000	0.000	0.000	0.000
Treatment Prob(F)		1.0000	1.0000	1.0000	1.0000	1.0000

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,8,9,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed		W Weed	W Weed	W Weed		
Pest Code	AMBTR	IPOSS		SETFA	AMBTR	IPOSS		
Pest Scientific Name	Ambrosia trifi>	Ipomoea sp.		Setaria faberi	Ambrosia trifi>	Ipomoea sp.		
Pest Name	Giant ragweed	Morning glory		Giant foxtail	Giant ragweed	Morning glory		
Crop Type, Code	C -	C -	C GLXMA	C -	C -	C -		
BBCH Scale			B SOY					
Crop Scientific Name			Glycine max					
Crop Name			Soybean					
Rating Date	5-29-2019	5-29-2019	6-5-2019	6-5-2019	6-5-2019	6-5-2019		
Rating Type	CONTRO	CONTRO	PHYGEN	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1		
Days After First/Last Applic.	14 14	14 14	21 21	21 21	21 21	21 21		
Plant-Eval Interval	15 DP-1	15 DP-1	22 DP-1	22 DP-1	22 DP-1	22 DP-1		
Days After Emergence	10 DE-1	10 DE-1	17 DE-1	17 DE-1	17 DE-1	17 DE-1		
ARM Action Codes								
Number of Decimals								
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	7	8	9	10	11	12
1 UNTREATED CHECK			0.0	0.0	0.0	0.0	0.0	0.0
2 MOCCASIN MTZ	42 fl oz/a A		99.0	99.0	0.0	93.0	92.3	89.3
INTERLINE	32 fl oz/a B							
MOCCASIN II PLUS	16 fl oz/a B							
ENLIST ONE	32 fl oz/a B							
NIS	0.25 % v/v B							
INTERLINE	29 fl oz/a C							
NIS	0.25 % v/v C							
3 TRIPZIN ZC	44 fl oz/a A		99.0	99.0	0.0	94.0	93.3	88.3
INTERLINE	32 fl oz/a B							
MOCCASIN II PLUS	16 fl oz/a B							
ENLIST ONE	32 fl oz/a B							
NIS	0.25 % v/v B							
INTERLINE	29 fl oz/a C							
NIS	0.25 % v/v C							
4 MOCCASIN MTZ	52 fl oz/a A		99.0	99.0	0.0	92.3	92.3	91.7
INTERLINE	32 fl oz/a B							
MOCCASIN II PLUS	16 fl oz/a B							
ENLIST ONE	32 fl oz/a B							
COC	1 % v/v B							
INTERLINE	29 fl oz/a C							
COC	1 % v/v C							
5 TRIPZIN ZC	44 fl oz/a A		99.0	99.0	0.0	92.3	91.7	90.0
INTERLINE	32 fl oz/a B							
MOCCASIN II PLUS	16 fl oz/a B							
ENLIST ONE	32 fl oz/a B							
COC	1 % v/v B							
INTERLINE	29 fl oz/a C							
COC	1 % v/v C							
LSD P=.05			.	.	.	3.34	5.09	4.53
Standard Deviation			0.00	0.00	0.00	1.77	2.70	2.40
CV			0.0	0.0	0.0	2.39	3.66	3.35
Replicate F			0.000	0.000	0.000	1.926	0.009	0.496
Replicate Prob(F)			1.0000	1.0000	1.0000	0.2076	0.9909	0.6267
Treatment F			0.000	0.000	0.000	1644.921	700.533	838.000
Treatment Prob(F)			1.0000	1.0000	1.0000	0.0001	0.0001	0.0001

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,8,9,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32 because error mean square = 0.

University of Kentucky

Pest Type		W Weed	W Weed	W Weed		W Weed
Pest Code		SETFA	AMBTR	IPOSS		SETFA
Pest Scientific Name		Setaria faberi	Ambrosia trifi>	Ipomoea sp.		Setaria faberi
Pest Name		Giant foxtail	Giant ragweed	Morning glory		Giant foxtail
Crop Type, Code	C GLXMA				C GLXMA	
BBCH Scale	BSOY				BSOY	
Crop Scientific Name	Glycine max				Glycine max	
Crop Name	Soybean				Soybean	
Rating Date	7-3-2019	7-3-2019	7-3-2019	7-3-2019	7-10-2019	7-10-2019
Rating Type	PHYGEN	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO
Rating Unit	%	%	%	%	%	%
Number of Subsamples	1	1	1	1	1	1
Days After First/Last Applic.	49 7	49 7	49 7	49 7	56 14	56 14
Plant-Eval Interval	50 DP-1	50 DP-1	50 DP-1	50 DP-1	57 DP-1	57 DP-1
Days After Emergence	45 DE-1	45 DE-1	45 DE-1	45 DE-1	52 DE-1	52 DE-1
ARM Action Codes						
Number of Decimals						
Trt Treatment	Rate Appl					
No. Name	Rate Unit Code	13	14	15	16	17
1 UNTREATED CHECK		0.0	0.0	0.0	0.0	0.0
2 MOCCASIN MTZ	42 fl oz/a A	0.0	99.0	99.0	99.0	0.0
INTERLINE	32 fl oz/a B					99.0
MOCCASIN II PLUS	16 fl oz/a B					
ENLIST ONE	32 fl oz/a B					
NIS	0.25 % v/v B					
INTERLINE	29 fl oz/a C					
NIS	0.25 % v/v C					
3 TRIPZIN ZC	44 fl oz/a A	0.0	99.0	99.0	99.0	0.0
INTERLINE	32 fl oz/a B					99.0
MOCCASIN II PLUS	16 fl oz/a B					
ENLIST ONE	32 fl oz/a B					
NIS	0.25 % v/v B					
INTERLINE	29 fl oz/a C					
NIS	0.25 % v/v C					
4 MOCCASIN MTZ	52 fl oz/a A	0.0	99.0	99.0	99.0	0.0
INTERLINE	32 fl oz/a B					99.0
MOCCASIN II PLUS	16 fl oz/a B					
ENLIST ONE	32 fl oz/a B					
COC	1 % v/v B					
INTERLINE	29 fl oz/a C					
COC	1 % v/v C					
5 TRIPZIN ZC	44 fl oz/a A	0.0	99.0	99.0	99.0	0.0
INTERLINE	32 fl oz/a B					99.0
MOCCASIN II PLUS	16 fl oz/a B					
ENLIST ONE	32 fl oz/a B					
COC	1 % v/v B					
INTERLINE	29 fl oz/a C					
COC	1 % v/v C					
LSD P=.05		.	.	.	.	.
Standard Deviation		0.00	0.00	0.00	0.00	0.00
CV		0.0	0.0	0.0	0.0	0.0
Replicate F		0.000	0.000	0.000	0.000	0.000
Replicate Prob(F)		1.0000	1.0000	1.0000	1.0000	1.0000
Treatment F		0.000	0.000	0.000	0.000	0.000
Treatment Prob(F)		1.0000	1.0000	1.0000	1.0000	1.0000

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,8,9,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32 because error mean square = 0.

University of Kentucky

Pest Type		W Weed	W Weed		W Weed	W Weed	W Weed
Pest Code		AMBTR	IPOSS		SETFA	AMBTR	IPOSS
Pest Scientific Name		Ambrosia trifi>	Ipomoea sp.		Setaria faberi	Ambrosia trifi>	Ipomoea sp.
Pest Name		Giant ragweed	Morning glory		Giant foxtail	Giant ragweed	Morning glory
Crop Type, Code		C -	C -	C GLXMA	C -	C -	C -
BBCH Scale				B SOY			
Crop Scientific Name				Glycine max			
Crop Name				Soybean			
Rating Date		7-10-2019	7-10-2019	7-17-2019	7-17-2019	7-17-2019	7-17-2019
Rating Type		CONTRO	CONTRO	PHYGEN	CONTRO	CONTRO	CONTRO
Rating Unit		%	%	%	%	%	%
Number of Subsamples		1	1	1	1	1	1
Days After First/Last Applic.		56 14	56 14	63 21	63 21	63 21	63 21
Plant-Eval Interval		57 DP-1	57 DP-1	64 DP-1	64 DP-1	64 DP-1	64 DP-1
Days After Emergence		52 DE-1	52 DE-1	59 DE-1	59 DE-1	59 DE-1	59 DE-1
ARM Action Codes							
Number of Decimals							
Trt Treatment	Rate Appl						
No. Name	Rate Unit Code	19	20	21	22	23	24
1 UNTREATED CHECK		0.0	0.0	0.0	0.0	0.0	0.0
2 MOCCASIN MTZ	42 fl oz/a A	99.0	99.0	0.0	99.0	99.0	99.0
INTERLINE	32 fl oz/a B						
MOCCASIN II PLUS	16 fl oz/a B						
ENLIST ONE	32 fl oz/a B						
NIS	0.25 % v/v B						
INTERLINE	29 fl oz/a C						
NIS	0.25 % v/v C						
3 TRIPZIN ZC	44 fl oz/a A	99.0	99.0	0.0	99.0	99.0	99.0
INTERLINE	32 fl oz/a B						
MOCCASIN II PLUS	16 fl oz/a B						
ENLIST ONE	32 fl oz/a B						
NIS	0.25 % v/v B						
INTERLINE	29 fl oz/a C						
NIS	0.25 % v/v C						
4 MOCCASIN MTZ	52 fl oz/a A	99.0	99.0	0.0	99.0	99.0	99.0
INTERLINE	32 fl oz/a B						
MOCCASIN II PLUS	16 fl oz/a B						
ENLIST ONE	32 fl oz/a B						
COC	1 % v/v B						
INTERLINE	29 fl oz/a C						
COC	1 % v/v C						
5 TRIPZIN ZC	44 fl oz/a A	99.0	99.0	0.0	99.0	99.0	99.0
INTERLINE	32 fl oz/a B						
MOCCASIN II PLUS	16 fl oz/a B						
ENLIST ONE	32 fl oz/a B						
COC	1 % v/v B						
INTERLINE	29 fl oz/a C						
COC	1 % v/v C						
LSD P=.05		.	.	.	.	.	.
Standard Deviation		0.00	0.00	0.00	0.00	0.00	0.00
CV		0.0	0.0	0.0	0.0	0.0	0.0
Replicate F		0.000	0.000	0.000	0.000	0.000	0.000
Replicate Prob(F)		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Treatment F		0.000	0.000	0.000	0.000	0.000	0.000
Treatment Prob(F)		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,8,9,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32 because error mean square = 0.

University of Kentucky

Pest Type		W Weed	W Weed	W Weed		W Weed		
Pest Code		SETFA	AMBTR	IPOSS		SETFA		
Pest Scientific Name		Setaria faberi	Ambrosia trifi>	Ipomoea sp.		Setaria faberi		
Pest Name		Giant foxtail	Giant ragweed	Morning glory		Giant foxtail		
Crop Type, Code	C GLXMA				C GLXMA			
BBCH Scale	BSOY				BSOY			
Crop Scientific Name	Glycine max				Glycine max			
Crop Name	Soybean				Soybean			
Rating Date	7-24-2019	7-24-2019	7-24-2019	7-24-2019	7-31-2019	7-31-2019		
Rating Type	PHYGEN	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO		
Rating Unit	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1		
Days After First/Last Applic.	70 28	70 28	70 28	70 28	77 35	77 35		
Plant-Eval Interval	71 DP-1	71 DP-1	71 DP-1	71 DP-1	78 DP-1	78 DP-1		
Days After Emergence	66 DE-1	66 DE-1	66 DE-1	66 DE-1	73 DE-1	73 DE-1		
ARM Action Codes								
Number of Decimals								
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	25	26	27	28	29	30
1 UNTREATED CHECK			0.0	0.0	0.0	0.0	0.0	0.0
2 MOCCASIN MTZ	42 fl oz/a A		0.0	99.0	99.0	99.0	0.0	99.0
INTERLINE	32 fl oz/a B							
MOCCASIN II PLUS	16 fl oz/a B							
ENLIST ONE	32 fl oz/a B							
NIS	0.25 % v/v B							
INTERLINE	29 fl oz/a C							
NIS	0.25 % v/v C							
3 TRIPZIN ZC	44 fl oz/a A		0.0	99.0	99.0	99.0	0.0	99.0
INTERLINE	32 fl oz/a B							
MOCCASIN II PLUS	16 fl oz/a B							
ENLIST ONE	32 fl oz/a B							
NIS	0.25 % v/v B							
INTERLINE	29 fl oz/a C							
NIS	0.25 % v/v C							
4 MOCCASIN MTZ	52 fl oz/a A		0.0	99.0	99.0	99.0	0.0	99.0
INTERLINE	32 fl oz/a B							
MOCCASIN II PLUS	16 fl oz/a B							
ENLIST ONE	32 fl oz/a B							
COC	1 % v/v B							
INTERLINE	29 fl oz/a C							
COC	1 % v/v C							
5 TRIPZIN ZC	44 fl oz/a A		0.0	99.0	99.0	99.0	0.0	99.0
INTERLINE	32 fl oz/a B							
MOCCASIN II PLUS	16 fl oz/a B							
ENLIST ONE	32 fl oz/a B							
COC	1 % v/v B							
INTERLINE	29 fl oz/a C							
COC	1 % v/v C							
LSD P=.05			.	.	.	.	.	.
Standard Deviation			0.00	0.00	0.00	0.00	0.00	0.00
CV			0.0	0.0	0.0	0.0	0.0	0.0
Replicate F			0.000	0.000	0.000	0.000	0.000	0.000
Replicate Prob(F)			1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Treatment F			0.000	0.000	0.000	0.000	0.000	0.000
Treatment Prob(F)			1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,8,9,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32 because error mean square = 0.

University of Kentucky

Pest Type		W Weed	W Weed			
Pest Code		AMBTR	IPOSS			
Pest Scientific Name		Ambrosia trifi>	Ipomoea sp.			
Pest Name		Giant ragweed	Morning glory			
Crop Type, Code		C -	C -	C GLXMA	C GLXMA	C GLXMA
BBCH Scale				BSOY	BSOY	BSOY
Crop Scientific Name				Glycine max	Glycine max	Glycine max
Crop Name				Soybean	Soybean	Soybean
Rating Date		7-31-2019	7-31-2019	10-3-2019	10-3-2019	10-3-2019
Rating Type		CONTRO	CONTRO	YIELD	MOICON	YIELD
Rating Unit		%	%	lb/plot	%	BU
Number of Subsamples		1	1	1	1	1
Days After First/Last Applic.		77 35	77 35	141 99	141 99	141 99
Plant-Eval Interval		78 DP-1	78 DP-1	142 DP-1	142 DP-1	142 DP-1
Days After Emergence		73 DE-1	73 DE-1	137 DE-1	137 DE-1	137 DE-1
ARM Action Codes						TY1
Number of Decimals						1
Trt Treatment	Rate Appl					
No. Name	Rate Unit Code	31	32	34	35	36
1 UNTREATED CHECK		0.0	0.0	0.197	0.00	0.8
2 MOCCASIN MTZ	42 fl oz/a A	99.0	99.0	9.060	7.37	35.0
INTERLINE	32 fl oz/a B					
MOCCASIN II PLUS	16 fl oz/a B					
ENLIST ONE	32 fl oz/a B					
NIS	0.25 % v/v B					
INTERLINE	29 fl oz/a C					
NIS	0.25 % v/v C					
3 TRIPZIN ZC	44 fl oz/a A	99.0	99.0	9.753	7.77	37.4
INTERLINE	32 fl oz/a B					
MOCCASIN II PLUS	16 fl oz/a B					
ENLIST ONE	32 fl oz/a B					
NIS	0.25 % v/v B					
INTERLINE	29 fl oz/a C					
NIS	0.25 % v/v C					
4 MOCCASIN MTZ	52 fl oz/a A	99.0	99.0	7.747	7.97	29.7
INTERLINE	32 fl oz/a B					
MOCCASIN II PLUS	16 fl oz/a B					
ENLIST ONE	32 fl oz/a B					
COC	1 % v/v B					
INTERLINE	29 fl oz/a C					
COC	1 % v/v C					
5 TRIPZIN ZC	44 fl oz/a A	99.0	99.0	8.240	8.17	31.4
INTERLINE	32 fl oz/a B					
MOCCASIN II PLUS	16 fl oz/a B					
ENLIST ONE	32 fl oz/a B					
COC	1 % v/v B					
INTERLINE	29 fl oz/a C					
COC	1 % v/v C					
LSD P=.05		.	.	2.6580	1.280	9.83
Standard Deviation		0.00	0.00	1.4117	0.680	5.22
CV		0.0	0.0	20.17	10.87	19.43
Replicate F		0.000	0.000	5.803	11.132	5.395
Replicate Prob(F)		1.0000	1.0000	0.0277	0.0049	0.0329
Treatment F		0.000	0.000	22.658	79.890	24.347
Treatment Prob(F)		1.0000	1.0000	0.0002	0.0001	0.0002

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,8,9,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32 because error mean square = 0.

University of Kentucky

UPL PRE/POT PROGRAMS FOR ENLIST SOYBEAN

Trial ID: 19-33 Location: LEXINGTON, KY Trial Year: 2019
 Protocol ID: UPI-ENLIST SOY Investigator: Sara Carter
 Project ID: Study Director: SARA CARTER
 Sponsor Contact: TONY ESTES

Pest Type

W, Weed = Weed or volunteer crop

Pest Code

SETFA, Setaria faberi, Giant foxtail = US
 AMBTR, Ambrosia trifida, Giant ragweed = US
 IPOSS, Ipomoea sp., Morning glory = US

Crop Type, Code

C = EPPO species (Bayer) codes
 GLXMA, BSOY, Glycine max, Soybean = US

Rating Type

PHYGEN = phytotoxicity - general / injury
 CONTRO = control / burndown or knockdown
 YIELD = yield
 MOICON = moisture content

Rating Unit

% = percent
 lb/plot = pounds per plot
 BU = bushel

Plant-Eval Interval

8 DP-1 = 1 GLXMA 5-14-2019
 15 DP-1 = 1 GLXMA 5-14-2019
 22 DP-1 = 1 GLXMA 5-14-2019
 50 DP-1 = 1 GLXMA 5-14-2019
 57 DP-1 = 1 GLXMA 5-14-2019
 64 DP-1 = 1 GLXMA 5-14-2019
 71 DP-1 = 1 GLXMA 5-14-2019
 78 DP-1 = 1 GLXMA 5-14-2019
 142 DP-1 = 1 GLXMA 5-14-2019

ARM Action Codes

TY1 = 3.63*[34]*(100-[35])/87

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EVALUATING EARLY PRE PLANT HERBICIDE PROGRAMS IN DICAMBA-TOLERANT SOYBEAN

Trial ID: 19-34 SOY-REC Location: UKREC - K200A Trial Year: 2019
 Protocol ID: USA-19-773 Investigator: Travis Legleiter
 Project ID: Study Director:
 Sponsor Contact: Matthew Wiggins

General Trial Information

Investigator: Travis Legleiter **Title:** Assistant Extension Professor

Trial Status: E established

ARM Trial Created On: 4-5-2019

Trial Location

City: Princeton

State/Prov.: Kentucky

Postal Code: 42445

Conducted Under GLP: No

Conducted Under GEP: No

Investigator: Travis Legleiter **Title:** Assistant Extension Professor

Organization: University of Kentucky

Address: 1205 Hopkinsville Street **Phone No.:** 859-562-1323

City+State/Prov: Princeton, KY

Postal Code: 42445

E-mail: Travis.Legleiter@uky.edu

Crop Description

Crop 1: C	GLXMA Glycine max	Soybean	BBCH Scale: BSOY
	Variety: AG39X7		
	Attributes: RR2XTEND, STS SOYBEAN		
	Planting Date: 5-14-2019	Planting Rate: 140000	S/A
	Depth: 1 IN		
	Rows per Plot: 7	Planting Method: PLANTD	planted
	Row Spacing: 15 IN	Planting Equipment: VP	vacuum planter
		Soil Moisture: DRY	dry
		Harvested Width: 5	FT
% Standard Moisture: 13.5			

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Pest Description

- Pest 1 Type:** W **Code:** LAMPU *Lamium purpureum*
Common Name: Purple deadnettle
- Pest 2 Type:** W **Code:** LAMAM *Lamium amplexicaule*
Common Name: Henbit
- Pest 3 Type:** W **Code:** GERCA *Geranium carolinianum*
Common Name: Carolina geranium
- Pest 4 Type:** W **Code:** THLAR *Thlaspi arvense*
Common Name: Fanweed
- Pest 5 Type:** W **Code:** ERICA *Erigeron canadensis*
Common Name: Canada horseweed
- Pest 6 Type:** W **Code:** CERVU *Cerastium fontanum vulgare*
Common Name: Mouse-ear chickweed
- Pest 7 Type:** W **Code:** LOLMG *Lolium multiflorum gaudini*
Common Name: Annual ryegrass
- Pest 8 Type:** W **Code:** VIOAR *Viola arvensis*
Common Name: Field violet
- Pest 9 Type:** W **Code:** VERAR *Veronica arvensis*
Common Name: Corn speedwell
- Pest10 Type:** W **Code:** RANAR *Ranunculus arvensis*
Common Name: Corn buttercup
- Pest11 Type:** W **Code:** AMARE *Amaranthus retroflexus*
Common Name: Redroot pigweed
- Pest12 Type:** W **Code:** SIDSP *Sida spinosa*
Common Name: Prickly sida
- Pest13 Type:** W **Code:** CYPES *Cyperus esculentus*
Common Name: Yellow nutsedge
- Pest14 Type:** W **Code:** ELEIN *Eleusine indica*
Common Name: Goosegrass
- Pest15 Type:** W **Code:** SORHA *Sorghum halepense*
Common Name: Johnson grass
- Pest16 Type:** W **Code:** SETFA *Setaria faberi*
Common Name: Giant foxtail
- Pest17 Type:** W **Code:** MOLVE *Mollugo verticillata*
Common Name: Carpetweed

Site and Design

Treated Plot Width: 10 FT **Site Type:** FIELD field
Treated Plot Length: 30 FT
Treated Plot Area: 300 FT² **Treatments:** 8 **Tillage Type:** NOTILL no-till
Replications: 4 **Study Design:** RACOB� Randomized Complete Block (RCB)

Field Prep./Maintenance:**Soil Description**

% Sand: 4 **% OM:** 3 **Texture:** SIL silt loam
% Silt: 77 **Soil Name:** Crider Silt Loam
% Clay: 19

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR above normal
Closest Weather Station: Princeton Mesonet **Distance:** 0.25 mi

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Application Description			
	A	B	C
Application Date	4-15-2019	4-30-2019	5-31-2019
Appl. Start Time	2:00 PM	8:10 AM	8:10 AM
Appl. Stop Time	2:04 PM	8:30 AM	8:30 AM
Application Method	SPRAY	SPRAY	SPRAY
Application Timing	EARPRE	PREPRE	POSPOS
Application Placement	BROSOI	BROSOI	BROFOL
Air Temperature Start, Stop	70 F	68 F	76 F
% Relative Humidity Start, Stop	44	71	69
Wind Velocity+Dir. Start	2 MPH SW	1 MPH S	1.4 MPH SW
Wind Velocity+Dir. Max	3.7 MPH SW	2.2 MPH S	2.6 MPH SW
Wet Leaves (Y/N)	N no	Y yes	Y yes
Soil Temperature	70 F	58 F	63 F
Soil Moisture	SLIWET	sliwet	wet
% Cloud Cover	0	95	25

Crop Stage At Each Application			
	A	B	C
Crop 1 Code, BBCH Scale	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Stage Scale Used	DESC	DESC	VR
Stage Majority, Percent	00	00	V1
Height Average			5 in
Height Minimum, Maximum			4.5 6

Pest Stage At Each Application			
	A	B	C
Pest 1 Code, Type, Scale	LAMPU W	LAMPU W	LAMPU W
Height Average	7 in	6 in	
Height Minimum, Maximum	6 8	5.25 6.5	
Density Average	5 ft ²	1 ft ²	
Density Min, Max	4 6	0 2	
Pest 2 Code, Type, Scale	LAMAM W	LAMAM W	LAMAM W
Height Average	6 in	7 in	
Height Minimum, Maximum	5 7		
Density Average	3.5 ft ²	0.5 ft ²	
Density Min, Max	3 4	0 1	
Pest 3 Code, Type, Scale	GERCA W	GERCA W	GERCA W
Height Average	7 in	6 in	
Height Minimum, Maximum	6 8	3 7.5	
Density Average	1.5 ft ²	0.5 ft ²	
Density Min, Max	1 2	0 1	
Pest 4 Code, Type, Scale	THLAR W	THLAR W	THLAR W
Height Average	24 in		
Height Minimum, Maximum	12 36		
Density Average	0.5 ft ²		
Density Min, Max	0 1		
Pest 5 Code, Type, Scale	ERICA W	ERICA W	ERICA W
Height Average	3 in	4 in	6 in
Height Minimum, Maximum	2 4	3 4.25	0.5 9
Density Average	2 ft ²	2 ft ²	
Density Min, Max	1 4	0 4	
Pest 6 Code, Type, Scale	CERVU W	CERVU W	CERVU W
Height Average	2 in	4 in	
Height Minimum, Maximum	1 3	3.25 4.5	
Density Average	1 ft ²	1 ft ²	
Density Min, Max	0 1	1 2	

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Pest 7 Code, Type, Scale	LOLMG W	LOLMG W	LOLMG W
Height Average	9 in	14 in	30 in
Height Minimum, Maximum	8 10	13 16.25	16 40
Density Average	1 ft ²	1 ft ²	
Density Min, Max	1 2	0 2	
Pest 8 Code, Type, Scale	VIOAR W	VIOAR W	VIOAR W
Height Average		4.5 in	4 in
Height Minimum, Maximum			1.5 5.5
Density Average		0.25 ft ²	
Density Min, Max		0 1	
Pest 9 Code, Type, Scale	VERAR W	VERAR W	VERAR W
Height Average		6.5 in	
Density Average		0.25 ft ²	
Density Min, Max		0 1	
Pest10 Code, Type, Scale	RANAR W	RANAR W	RANAR W
Height Average		1.5 in	
Height Minimum, Maximum		1.25 2	
Density Average		1 ft ²	
Density Min, Max		0 2	
Pest11 Code, Type, Scale	AMARE W	AMARE W	AMARE W
Height Average			3 in
Height Minimum, Maximum			0.75 5
Pest12 Code, Type, Scale	SIDSP W	SIDSP W	SIDSP W
Height Average			2 in
Height Minimum, Maximum			0.75 1.75
Pest13 Code, Type, Scale	CYPES W	CYPES W	CYPES W
Height Average			4 in
Height Minimum, Maximum			3 7
Pest14 Code, Type, Scale	ELEIN W	ELEIN W	ELEIN W
Height Average			3 in
Height Minimum, Maximum			2.25 3.5
Pest15 Code, Type, Scale	SORHA W	SORHA W	SORHA W
Height Average			12 in
Height Minimum, Maximum			6 35
Pest16 Code, Type, Scale	SETFA W	SETFA W	SETFA W
Height Average			6 in
Height Minimum, Maximum			5.5 8
Pest17 Code, Type, Scale	MOLVE W	MOLVE W	MOLVE W
Height Average			0.5 in
Height Minimum, Maximum			0.25 1

Application Equipment

	A	B	C
Appl. Equipment	CO2 BACKPACK	CO2 BACKPACK	CO2 BACKPACK
Equipment Type	BACCAI	BACCAI	BACCAI
Operation Pressure	32 PSI		49 PSI
Nozzle Type	FLAFXR	XR & TT1	TT1110015
Nozzle Size	02	02 & 015	015
Nozzle Spacing	20 IN	20 IN	20 IN
Boom Length	10 FT	10 FT	6.7 FT
Boom Height	18 IN	18 IN	18 IN
Ground Speed	3 MPH	3 MPH	3 MPH
Carrier	H2O	H2O	H2O
Application Amount	15 GAL/AC	15 GAL/AC	15 GAL/AC
Mix Overage	436 mL	436 mL	436 mL
Mix Size	2 L	2 L	2 L
Propellant	COMCO2	COMCO2	COMCO2

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Equipment Comment:Application B Nozzles and Pressures: XR11002 - 32 PSI; TTI110015 - 48 PSI

Context	Date	By	Notes
STATUS	4-5-2019	Travis Legleiter	Automatically added by ARM: Trial Status updated to 'S' during trial creation.
STATUS	8-27-2019	Travis Legleiter	Automatically added by ARM: Trial Status updated to 'E' when Planting Date entered.

SE Definitions

	1.
Crop Type, Code	C

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	W Weed ERICA Erigeron canad> Canada horsewe> C -	W Weed LAMPU Lamium purpure> Purple deadnet> C -	W Weed GERCA Geranium carol> Carolina geran> C -	W Weed LOLMG Lolium multifi> Annual ryegrass C -	W Weed ERICA Erigeron canad> Canada horsewe> C -
Pest Type					
Pest Code					
Pest Scientific Name					
Pest Name					
Crop Type, Code					
BBCH Scale					
Crop Scientific Name					
Crop Name					
Rating Date	4-22-2019	4-22-2019	4-22-2019	4-22-2019	5-1-2019
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Days After First/Last Applic.	7 7	7 7	7 7	7 7	16 1
Plant-Eval Interval	-22 DP-1	-22 DP-1	-22 DP-1	-22 DP-1	-13 DP-1
ARM Action Codes	ET2	ET2	ET2	ET2	ET2
Number of Decimals					
Trt Treatment	1	2	3	4	5
No. Name					
Rate					
Rate Unit					
Appl Code					
1 UNTREATED CHECK	0.0	0.0	0.0	0.0	0.0
2 Crusher - 1 oz/A	47.5	50.0	70.0	22.5	96.3
SOLIDA	1 oz/a A				
HARMONY SG	0.5 oz/a A				
METRIBUZIN	5 oz/a A				
ROUNDUP POWERMAX	32 fl oz/a A				
2,4-D	16 fl oz/a A				
MSO	1 % v/v A				
ANTHEM MAXX	3.25 fl oz/a C				
XTENDIMAX	22 fl oz/a C				
ROUNDUP POWERMAX	32 fl oz/a C				
INTACT	0.5 % v/v C				
3 Firstshot - 0.5 oz/A	0.0	0.0	0.0	0.0	0.0
HARMONY SG	0.25 oz/a B				
EXPRESS SG	0.25 oz/a B				
METRIBUZIN	5 oz/a B				
ROUNDUP POWERMAX	32 fl oz/a B				
2,4-D	16 fl oz/a B				
MSO	1 % v/v B				
ANTHEM MAXX	3.25 fl oz/a C				
XTENDIMAX	22 fl oz/a C				
ROUNDUP POWERMAX	32 fl oz/a C				
INTACT	0.5 % v/v C				
4 AUTHORITY FIRST	0.0	0.0	0.0	0.0	0.0
METRIBUZIN	5 oz/a B				
ROUNDUP POWERMAX	32 fl oz/a B				
2,4-D	16 fl oz/a B				
MSO	1 % v/v B				
ANTHEM MAXX	3.25 fl oz/a C				
XTENDIMAX	22 fl oz/a C				
ROUNDUP POWERMAX	32 fl oz/a C				
INTACT	0.5 % v/v C				
5 GRAMOXONE SL 2.0	0.0	0.0	0.0	0.0	0.0
METRIBUZIN	5 oz/a B				
NIS	0.5 % v/v B				
ANTHEM MAXX	3.25 fl oz/a C				
XTENDIMAX	22 fl oz/a C				
ROUNDUP POWERMAX	32 fl oz/a C				
INTACT	0.5 % v/v C				

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Missing data estimates are included in columns: Yates=31,71

Excluded replicate 1 in column 13; 1 in 61; 3 in 73; 3 in 77; 3 in 81

Could not calculate LSD (% mean diff) for columns

1,2,3,4,5,6,7,8,16,17,18,19,20,21,22,23,24,25,31,44,45,46,52,53,54,55,56,57,59,61,64,66,70,73,74,75,76,77,78,79 because error mean square = 0.

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Pest Type					
Pest Code					
Pest Scientific Name					
Pest Name					
Crop Type, Code					
BBCH Scale					
Crop Scientific Name					
Crop Name					
Rating Date	4-22-2019	4-22-2019	4-22-2019	4-22-2019	5-1-2019
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Days After First/Last Applic.	7 7	7 7	7 7	7 7	16 1
Plant-Eval Interval	-22 DP-1	-22 DP-1	-22 DP-1	-22 DP-1	-13 DP-1
ARM Action Codes	ET2			ET2	ET2
Number of Decimals					
Trt Treatment					
No. Name	1	2	3	4	5
Rate					
Appl					
Code					
6 VALOR SX	0.0	0.0	0.0	0.0	0.0
XTENDIMAX					
ROUNDUP POWERMAX					
INTACT					
MSO					
WARRANT					
XTENDIMAX					
ROUNDUP POWERMAX					
INTACT					
7 SHARPEN	0.0	0.0	0.0	0.0	0.0
LIBERTY 280 SL					
MSO					
ZIDUA					
ENGENIA					
ROUNDUP POWERMAX					
INTACT					
8 ELEVORE	0.0	0.0	0.0	0.0	0.0
ROUNDUP POWERMAX					
MSO					
DUAL II MAGNUM					
XTENDIMAX					
ROUNDUP POWERMAX					
INTACT					
LSD P=.05					
Standard Deviation	0.00	0.00	0.00	0.00	0.00
CV	0.0	0.0	0.0	0.0	0.0
Replicate F	0.000	0.000	0.000	0.000	0.000
Replicate Prob(F)	1.0000	1.0000	1.0000	1.0000	1.0000
Treatment F	0.000	0.000	0.000	0.000	0.000
Treatment Prob(F)	1.0000	1.0000	1.0000	1.0000	1.0000

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	LAMPU	GERCA	LOLMG	ERICA	LAMPU		
Pest Scientific Name	Lamium purpure>	Geranium carol>	Lolium multifi>	Erigeron canad>	Lamium purpure>		
Pest Name	Purple deadnet>	Carolina geran>	Annual ryegrass	Canada horsewe>	Purple deadnet>		
Crop Type, Code	C -	C -	C -	C -	C -		
BBCH Scale							
Crop Scientific Name							
Crop Name							
Rating Date	5-1-2019	5-1-2019	5-1-2019	5-10-2019	5-10-2019		
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1		
Days After First/Last Applic.	16 1	16 1	16 1	25 10	25 10		
Plant-Eval Interval	-13 DP-1	-13 DP-1	-13 DP-1	-4 DP-1	-4 DP-1		
ARM Action Codes	ET2	ET2	ET2				
Number of Decimals							
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code	6	7	8	9	10
1 UNTREATED CHECK			0.0	0.0	0.0	0.0	0.0
2 Crusher - 1 oz/A			99.0	65.0	71.3	73.8	100.0
SOLIDA	1 oz/a A						
HARMONY SG	0.5 oz/a A						
METRIBUZIN	5 oz/a A						
ROUNDUP POWERMAX	32 fl oz/a A						
2,4-D	16 fl oz/a A						
MSO	1 % v/v A						
ANTHEM MAXX	3.25 fl oz/a C						
XTENDIMAX	22 fl oz/a C						
ROUNDUP POWERMAX	32 fl oz/a C						
INTACT	0.5 % v/v C						
3 Firstshot - 0.5 oz/A			0.0	0.0	0.0	42.5	93.8
HARMONY SG	0.25 oz/a B						
EXPRESS SG	0.25 oz/a B						
METRIBUZIN	5 oz/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
2,4-D	16 fl oz/a B						
MSO	1 % v/v B						
ANTHEM MAXX	3.25 fl oz/a C						
XTENDIMAX	22 fl oz/a C						
ROUNDUP POWERMAX	32 fl oz/a C						
INTACT	0.5 % v/v C						
4 AUTHORITY FIRST	6 oz/a B		0.0	0.0	0.0	83.8	98.8
METRIBUZIN	5 oz/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
2,4-D	16 fl oz/a B						
MSO	1 % v/v B						
ANTHEM MAXX	3.25 fl oz/a C						
XTENDIMAX	22 fl oz/a C						
ROUNDUP POWERMAX	32 fl oz/a C						
INTACT	0.5 % v/v C						
5 GRAMOXONE SL 2.0	48 fl oz/a B		0.0	0.0	0.0	72.5	100.0
METRIBUZIN	5 oz/a B						
NIS	0.5 % v/v B						
ANTHEM MAXX	3.25 fl oz/a C						
XTENDIMAX	22 fl oz/a C						
ROUNDUP POWERMAX	32 fl oz/a C						
INTACT	0.5 % v/v C						

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Pest Code	LAMPU	GERCA	LOLMG	ERICA	LAMPU		
Pest Scientific Name	Lamium purpure>	Geranium carol>	Lolium multifi>	Erigeron canad>	Lamium purpure>		
Pest Name	Purple deadnet>	Carolina geran>	Annual ryegrass	Canada horsewe>	Purple deadnet>		
Crop Type, Code	C -	C -	C -	C -	C -		
BBCH Scale							
Crop Scientific Name							
Crop Name							
Rating Date	5-1-2019	5-1-2019	5-1-2019	5-10-2019	5-10-2019		
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1		
Days After First/Last Applic.	16 1	16 1	16 1	25 10	25 10		
Plant-Eval Interval	-13 DP-1	-13 DP-1	-13 DP-1	-4 DP-1	-4 DP-1		
ARM Action Codes	ET2	ET2	ET2				
Number of Decimals							
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code	6	7	8	9	10
6 VALOR SX	2 oz/a	B	0.0	0.0	0.0	67.5	97.5
XTENDIMAX	22 fl oz/a	B					
ROUNDUP POWERMAX	32 fl oz/a	B					
INTACT	0.5 % v/v	B					
MSO	1 % v/v	B					
WARRANT	48 fl oz/a	C					
XTENDIMAX	22 fl oz/a	C					
ROUNDUP POWERMAX	32 fl oz/a	C					
INTACT	0.5 % v/v	C					
7 SHARPEN	1 fl oz/a	B	0.0	0.0	0.0	91.3	96.3
LIBERTY 280 SL	29 fl oz/a	B					
MSO	1 % v/v	B					
ZIDUA	2 oz/a	C					
ENGENIA	12.8 fl oz/a	C					
ROUNDUP POWERMAX	32 fl oz/a	C					
INTACT	0.5 % v/v	C					
8 ELEVORE	1 fl oz/a	B	0.0	0.0	0.0	50.0	96.3
ROUNDUP POWERMAX	32 fl oz/a	B					
MSO	1 % v/v	B					
DUAL II MAGNUM	16 fl oz/a	C					
XTENDIMAX	22 fl oz/a	C					
ROUNDUP POWERMAX	32 fl oz/a	C					
INTACT	0.5 % v/v	C					
LSD P=.05						35.63	2.95
Standard Deviation			0.00	0.00	0.00	24.23	2.00
CV			0.0	0.0	0.0	40.28	2.35
Replicate F			0.000	0.000	0.000	6.360	1.296
Replicate Prob(F)			1.0000	1.0000	1.0000	0.0031	0.3018
Treatment F			0.000	0.000	0.000	5.790	1187.445
Treatment Prob(F)			1.0000	1.0000	1.0000	0.0008	0.0001

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	GERCA	LOLMG	ERICA	GERCA	LOLMG
Pest Scientific Name	Geranium carol>	Lolium multifi>	Erigeron canad>	Geranium carol>	Lolium multifi>
Pest Name	Carolina geran>	Annual ryegrass	Canada horsewe>	Carolina geran>	Annual ryegrass
Crop Type, Code	C -	C -	C -	C -	C -
BBCH Scale					
Crop Scientific Name					
Crop Name					
Rating Date	5-10-2019	5-10-2019	5-17-2019	5-17-2019	5-17-2019
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Days After First/Last Applic.	25 10	25 10	32 17	32 17	32 17
Plant-Eval Interval	-4 DP-1	-4 DP-1	3 DP-1	3 DP-1	3 DP-1
ARM Action Codes	EC		ER1		
Number of Decimals					
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	11	12	13
1 UNTREATED CHECK			0.0	0.0	0.0
2 Crusher - 1 oz/A			81.3	96.0	100.0
SOLIDA	1 oz/a A				
HARMONY SG	0.5 oz/a A				
METRIBUZIN	5 oz/a A				
ROUNDUP POWERMAX	32 fl oz/a A				
2,4-D	16 fl oz/a A				
MSO	1 % v/v A				
ANTHEM MAXX	3.25 fl oz/a C				
XTENDIMAX	22 fl oz/a C				
ROUNDUP POWERMAX	32 fl oz/a C				
INTACT	0.5 % v/v C				
3 Firstshot - 0.5 oz/A			55.0	22.5	100.0
HARMONY SG	0.25 oz/a B				
EXPRESS SG	0.25 oz/a B				
METRIBUZIN	5 oz/a B				
ROUNDUP POWERMAX	32 fl oz/a B				
2,4-D	16 fl oz/a B				
MSO	1 % v/v B				
ANTHEM MAXX	3.25 fl oz/a C				
XTENDIMAX	22 fl oz/a C				
ROUNDUP POWERMAX	32 fl oz/a C				
INTACT	0.5 % v/v C				
4 AUTHORITY FIRST	6 oz/a B		72.5	27.5	98.3
METRIBUZIN	5 oz/a B				
ROUNDUP POWERMAX	32 fl oz/a B				
2,4-D	16 fl oz/a B				
MSO	1 % v/v B				
ANTHEM MAXX	3.25 fl oz/a C				
XTENDIMAX	22 fl oz/a C				
ROUNDUP POWERMAX	32 fl oz/a C				
INTACT	0.5 % v/v C				
5 GRAMOXONE SL 2.0	48 fl oz/a B		96.3	93.8	100.0
METRIBUZIN	5 oz/a B				
NIS	0.5 % v/v B				
ANTHEM MAXX	3.25 fl oz/a C				
XTENDIMAX	22 fl oz/a C				
ROUNDUP POWERMAX	32 fl oz/a C				
INTACT	0.5 % v/v C				

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Missing data estimates are included in columns:Yates=31,71

Excluded replicate 1 in column 13; 1 in 61; 3 in 73; 3 in 77; 3 in 81

Could not calculate LSD (% mean diff) for columns

1,2,3,4,5,6,7,8,16,17,18,19,20,21,22,23,24,25,31,44,45,46,52,53,54,55,56,57,59,61,64,66,70,73,74,75,76,77,78,79 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	GERCA	LOLMG	ERICA	GERCA	LOLMG
Pest Scientific Name	Geranium carol>	Lolium multifi>	Erigeron canad>	Geranium carol>	Lolium multifi>
Pest Name	Carolina geran>	Annual ryegrass	Canada horsewe>	Carolina geran>	Annual ryegrass
Crop Type, Code	C -	C -	C -	C -	C -
BBCH Scale					
Crop Scientific Name					
Crop Name					
Rating Date	5-10-2019	5-10-2019	5-17-2019	5-17-2019	5-17-2019
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Days After First/Last Applic.	25 10	25 10	32 17	32 17	32 17
Plant-Eval Interval	-4 DP-1	-4 DP-1	3 DP-1	3 DP-1	3 DP-1
ARM Action Codes	EC		ER1		
Number of Decimals					
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	11	12	13
6 VALOR SX	2 oz/a	B	92.5	75.0	100.0
XTENDIMAX	22 fl oz/a	B			
ROUNDUP POWERMAX	32 fl oz/a	B			
INTACT	0.5 % v/v	B			
MSO	1 % v/v	B			
WARRANT	48 fl oz/a	C			
XTENDIMAX	22 fl oz/a	C			
ROUNDUP POWERMAX	32 fl oz/a	C			
INTACT	0.5 % v/v	C			
7 SHARPEN	1 fl oz/a	B	96.3	20.0	98.3
LIBERTY 280 SL	29 fl oz/a	B			
MSO	1 % v/v	B			
ZIDUA	2 oz/a	C			
ENGENIA	12.8 fl oz/a	C			
ROUNDUP POWERMAX	32 fl oz/a	C			
INTACT	0.5 % v/v	C			
8 ELEVORE	1 fl oz/a	B	52.5	55.0	95.0
ROUNDUP POWERMAX	32 fl oz/a	B			
MSO	1 % v/v	B			
DUAL II MAGNUM	16 fl oz/a	C			
XTENDIMAX	22 fl oz/a	C			
ROUNDUP POWERMAX	32 fl oz/a	C			
INTACT	0.5 % v/v	C			
LSD P=.05			13.91	8.80	3.51
Standard Deviation			9.36	5.99	2.00
CV			12.0	12.29	2.32
Replicate F			3.621	0.654	3.370
Replicate Prob(F)			0.0332	0.5891	0.0638
Treatment F			15.937	148.794	913.445
Treatment Prob(F)			0.0001	0.0001	0.0001

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Could not calculate LSD (% mean diff) for columns

1,2,3,4,5,6,7,8,16,17,18,19,20,21,22,23,24,25,31,44,45,46,52,53,54,55,56,57,59,61,64,66,70,73,74,75,76,77,78,79 because error mean square = 0.

University of Kentucky

Pest Type										
Pest Code										
Pest Scientific Name										
Pest Name										
Crop Type, Code			C GLXMA	C GLXMA	C GLXMA	C GLXMA	C GLXMA	C GLXMA	C GLXMA	
BBCH Scale			BSOY	BSOY	BSOY	BSOY	BSOY	BSOY	BSOY	
Crop Scientific Name			Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	
Crop Name			Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	
Rating Date			5-23-2019	5-23-2019	5-23-2019	5-23-2019	5-30-2019	5-30-2019	5-30-2019	
Part Rated			PLANT C	PLANT C	PLANT C	PLANT C	PLANT C	PLANT C	PLANT C	
Rating Type			PHYGEN	PHYCHL	PHYNEC	PHYSTU	PHYGEN	PHYCHL	PHYNEC	
Rating Unit			%	%	%	%	%	%	%	
Number of Subsamples			1	1	1	1	1	1	1	
Days After First/Last Applic.			38 23	38 23	38 23	38 23	45 30	45 30	45 30	
Plant-Eval Interval			9 DP-1	9 DP-1	9 DP-1	9 DP-1	16 DP-1	16 DP-1	16 DP-1	
ARM Action Codes										
Number of Decimals										
Trt No.	Treatment Name	Rate	Appl Code	16	17	18	19	20	21	22
1	UNTREATED CHECK			0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	Crusher - 1 oz/A			0.0	0.0	0.0	0.0	0.0	0.0	0.0
	SOLIDA	1 oz/a	A							
	HARMONY SG	0.5 oz/a	A							
	METRIBUZIN	5 oz/a	A							
	ROUNDUP POWERMAX	32 fl oz/a	A							
	2,4-D	16 fl oz/a	A							
	MSO	1 % v/v	A							
	ANTHEM MAXX	3.25 fl oz/a	C							
	XTENDIMAX	22 fl oz/a	C							
	ROUNDUP POWERMAX	32 fl oz/a	C							
	INTACT	0.5 % v/v	C							
3	Firstshot - 0.5 oz/A			0.0	0.0	0.0	0.0	0.0	0.0	0.0
	HARMONY SG	0.25 oz/a	B							
	EXPRESS SG	0.25 oz/a	B							
	METRIBUZIN	5 oz/a	B							
	ROUNDUP POWERMAX	32 fl oz/a	B							
	2,4-D	16 fl oz/a	B							
	MSO	1 % v/v	B							
	ANTHEM MAXX	3.25 fl oz/a	C							
	XTENDIMAX	22 fl oz/a	C							
	ROUNDUP POWERMAX	32 fl oz/a	C							
	INTACT	0.5 % v/v	C							
4	AUTHORITY FIRST	6 oz/a	B	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	METRIBUZIN	5 oz/a	B							
	ROUNDUP POWERMAX	32 fl oz/a	B							
	2,4-D	16 fl oz/a	B							
	MSO	1 % v/v	B							
	ANTHEM MAXX	3.25 fl oz/a	C							
	XTENDIMAX	22 fl oz/a	C							
	ROUNDUP POWERMAX	32 fl oz/a	C							
	INTACT	0.5 % v/v	C							
5	GRAMOXONE SL 2.0	48 fl oz/a	B	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	METRIBUZIN	5 oz/a	B							
	NIS	0.5 % v/v	B							
	ANTHEM MAXX	3.25 fl oz/a	C							
	XTENDIMAX	22 fl oz/a	C							
	ROUNDUP POWERMAX	32 fl oz/a	C							
	INTACT	0.5 % v/v	C							

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Could not calculate LSD (% mean diff) for columns

1,2,3,4,5,6,7,8,16,17,18,19,20,21,22,23,24,25,31,44,45,46,52,53,54,55,56,57,59,61,64,66,70,73,74,75,76,77,78,79 because error mean square = 0.

University of Kentucky

Pest Type							
Pest Code							
Pest Scientific Name							
Pest Name							
Crop Type, Code	C GLXMA BSOY	C GLXMA BSOY	C GLXMA BSOY	C GLXMA BSOY	C GLXMA BSOY	C GLXMA BSOY	C GLXMA BSOY
BBCH Scale							
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean	Soybean
Rating Date	5-23-2019	5-23-2019	5-23-2019	5-23-2019	5-30-2019	5-30-2019	5-30-2019
Part Rated	PLANT C	PLANT C	PLANT C	PLANT C	PLANT C	PLANT C	PLANT C
Rating Type	PHYGEN	PHYCHL	PHYNEC	PHYSTU	PHYGEN	PHYCHL	PHYNEC
Rating Unit	%	%	%	%	%	%	%
Number of Subsamples	1	1	1	1	1	1	1
Days After First/Last Applic.	38 23	38 23	38 23	38 23	45 30	45 30	45 30
Plant-Eval Interval	9 DP-1	9 DP-1	9 DP-1	9 DP-1	16 DP-1	16 DP-1	16 DP-1
ARM Action Codes							
Number of Decimals							
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code	16	17	18	19	20
6 VALOR SX	2 oz/a	B	0.0	0.0	0.0	0.0	0.0
XTENDIMAX	22 fl oz/a	B					
ROUNDUP POWERMAX	32 fl oz/a	B					
INTACT	0.5 % v/v	B					
MSO	1 % v/v	B					
WARRANT	48 fl oz/a	C					
XTENDIMAX	22 fl oz/a	C					
ROUNDUP POWERMAX	32 fl oz/a	C					
INTACT	0.5 % v/v	C					
7 SHARPEN	1 fl oz/a	B	0.0	0.0	0.0	0.0	0.0
LIBERTY 280 SL	29 fl oz/a	B					
MSO	1 % v/v	B					
ZIDUA	2 oz/a	C					
ENGENIA	12.8 fl oz/a	C					
ROUNDUP POWERMAX	32 fl oz/a	C					
INTACT	0.5 % v/v	C					
8 ELEVORE	1 fl oz/a	B	0.0	0.0	0.0	0.0	0.0
ROUNDUP POWERMAX	32 fl oz/a	B					
MSO	1 % v/v	B					
DUAL II MAGNUM	16 fl oz/a	C					
XTENDIMAX	22 fl oz/a	C					
ROUNDUP POWERMAX	32 fl oz/a	C					
INTACT	0.5 % v/v	C					
LSD P=.05			0.00	0.00	0.00	0.00	0.00
Standard Deviation			0.0	0.0	0.0	0.0	0.0
CV							
Replicate F			0.000	0.000	0.000	0.000	0.000
Replicate Prob(F)			1.0000	1.0000	1.0000	1.0000	1.0000
Treatment F			0.000	0.000	0.000	0.000	0.000
Treatment Prob(F)			1.0000	1.0000	1.0000	1.0000	1.0000

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Excluded replicate 1 in column 13; 1 in 61; 3 in 73; 3 in 77; 3 in 81

Could not calculate LSD (% mean diff) for columns

1,2,3,4,5,6,7,8,16,17,18,19,20,21,22,23,24,25,31,44,45,46,52,53,54,55,56,57,59,61,64,66,70,73,74,75,76,77,78,79 because error mean square = 0.

University of Kentucky

Pest Type		W Weed	W Weed	W Weed	W Weed
Pest Code		ERICA	GERCA	LOLMG	ELEIN
Pest Scientific Name		Erigeron canad>	Geranium carol>	Lolium multifi>	Eleusine indica
Pest Name		Canada horsewe>	Carolina geran>	Annual ryegrass	Goosegrass
Crop Type, Code	C GLXMA	C -	C -	C -	C -
BBCH Scale	BSOY				
Crop Scientific Name	Glycine max				
Crop Name	Soybean				
Rating Date	5-30-2019	5-30-2019	5-30-2019	5-30-2019	5-30-2019
Part Rated	PLANT C	PLANT P	PLANT P	PLANT P	PLANT P
Rating Type	PHYSTU	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Days After First/Last Applic.	45 30	45 30	45 30	45 30	45 30
Plant-Eval Interval	16 DP-1	16 DP-1	16 DP-1	16 DP-1	16 DP-1
ARM Action Codes					
Number of Decimals					
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	23	24	25
1 UNTREATED CHECK			0.0	0.0	0.0
2 Crusher - 1 oz/A			0.0	100.0	100.0
SOLIDA	1 oz/a A				67.5
HARMONY SG	0.5 oz/a A				
METRIBUZIN	5 oz/a A				
ROUNDUP POWERMAX	32 fl oz/a A				
2,4-D	16 fl oz/a A				
MSO	1 % v/v A				
ANTHEM MAXX	3.25 fl oz/a C				
XTENDIMAX	22 fl oz/a C				
ROUNDUP POWERMAX	32 fl oz/a C				
INTACT	0.5 % v/v C				
3 Firstshot - 0.5 oz/A			0.0	100.0	100.0
HARMONY SG	0.25 oz/a B				30.0
EXPRESS SG	0.25 oz/a B				
METRIBUZIN	5 oz/a B				
ROUNDUP POWERMAX	32 fl oz/a B				
2,4-D	16 fl oz/a B				
MSO	1 % v/v B				
ANTHEM MAXX	3.25 fl oz/a C				
XTENDIMAX	22 fl oz/a C				
ROUNDUP POWERMAX	32 fl oz/a C				
INTACT	0.5 % v/v C				
4 AUTHORITY FIRST	6 oz/a B		0.0	100.0	100.0
METRIBUZIN	5 oz/a B				91.3
ROUNDUP POWERMAX	32 fl oz/a B				
2,4-D	16 fl oz/a B				
MSO	1 % v/v B				
ANTHEM MAXX	3.25 fl oz/a C				
XTENDIMAX	22 fl oz/a C				
ROUNDUP POWERMAX	32 fl oz/a C				
INTACT	0.5 % v/v C				
5 GRAMOXONE SL 2.0	48 fl oz/a B		0.0	100.0	100.0
METRIBUZIN	5 oz/a B				98.8
NIS	0.5 % v/v B				25.0
ANTHEM MAXX	3.25 fl oz/a C				
XTENDIMAX	22 fl oz/a C				
ROUNDUP POWERMAX	32 fl oz/a C				
INTACT	0.5 % v/v C				

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Excluded replicate 1 in column 13; 1 in 61; 3 in 73; 3 in 77; 3 in 81

Could not calculate LSD (% mean diff) for columns

1,2,3,4,5,6,7,8,16,17,18,19,20,21,22,23,24,25,31,44,45,46,52,53,54,55,56,57,59,61,64,66,70,73,74,75,76,77,78,79 because error mean square = 0.

University of Kentucky

Pest Type		W Weed	W Weed	W Weed	W Weed
Pest Code		ERICA	GERCA	LOLMG	ELEIN
Pest Scientific Name		Erigeron canad>	Geranium carol>	Lolium multifi>	Eleusine indica
Pest Name		Canada horsewe>	Carolina geran>	Annual ryegrass	Goosegrass
Crop Type, Code	C GLXMA	C -	C -	C -	C -
BBCH Scale	BSOY				
Crop Scientific Name	Glycine max				
Crop Name	Soybean				
Rating Date	5-30-2019	5-30-2019	5-30-2019	5-30-2019	5-30-2019
Part Rated	PLANT C	PLANT P	PLANT P	PLANT P	PLANT P
Rating Type	PHYSTU	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Days After First/Last Applic.	45 30	45 30	45 30	45 30	45 30
Plant-Eval Interval	16 DP-1	16 DP-1	16 DP-1	16 DP-1	16 DP-1
ARM Action Codes					
Number of Decimals					
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	23	24	25
6 VALOR SX	2 oz/a B		0.0	100.0	100.0
XTENDIMAX	22 fl oz/a B				100.0
ROUNDUP POWERMAX	32 fl oz/a B				100.0
INTACT	0.5 % v/v B				100.0
MSO	1 % v/v B				100.0
WARRANT	48 fl oz/a C				100.0
XTENDIMAX	22 fl oz/a C				100.0
ROUNDUP POWERMAX	32 fl oz/a C				100.0
INTACT	0.5 % v/v C				100.0
7 SHARPEN	1 fl oz/a B		0.0	100.0	100.0
LIBERTY 280 SL	29 fl oz/a B				0.0
MSO	1 % v/v B				0.0
ZIDUA	2 oz/a C				0.0
ENGENIA	12.8 fl oz/a C				0.0
ROUNDUP POWERMAX	32 fl oz/a C				0.0
INTACT	0.5 % v/v C				0.0
8 ELEVORE	1 fl oz/a B		0.0	100.0	100.0
ROUNDUP POWERMAX	32 fl oz/a B				100.0
MSO	1 % v/v B				100.0
DUAL II MAGNUM	16 fl oz/a C				100.0
XTENDIMAX	22 fl oz/a C				100.0
ROUNDUP POWERMAX	32 fl oz/a C				100.0
INTACT	0.5 % v/v C				100.0
LSD P=.05					1.30
Standard Deviation			0.00	0.00	0.00
CV			0.0	0.0	0.0
Replicate F			0.000	0.000	0.000
Replicate Prob(F)			1.0000	1.0000	1.0000
Treatment F			0.000	0.000	0.000
Treatment Prob(F)			1.0000	1.0000	1.0000
					10926.715
					0.0001
					5.196
					0.0077
					10.609
					0.0001

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1,2,3,4,5,6,7,8,16,17,18,19,20,21,22,23,24,25,31,44,45,46,52,53,54,55,56,57,59,61,64,66,70,73,74,75,76,77,78,79 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	AMARE	AMARE	MOLVE	GERCA	ELEIN		
Pest Scientific Name	Amaranthus ret>	Amaranthus ret>	Mollugo vertic>	Geranium carol>	Eleusine indica		
Pest Name	Redroot pigweed	Redroot pigweed	Carpetweed	Carolina geran>	Goosegrass		
Crop Type, Code	C -	C -	C -	C -	C -		
BBCH Scale							
Crop Scientific Name							
Crop Name							
Rating Date	5-30-2019	5-31-2019	5-31-2019	5-31-2019	5-31-2019		
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P		
Rating Type	CONTRO	COUNT	COUNT	COUNT	COUNT		
Rating Unit	%	FT2	FT2	FT2	FT2		
Number of Subsamples	1	1	1	1	1		
Days After First/Last Applic.	45 30	46 31	46 31	46 31	46 31		
Plant-Eval Interval	16 DP-1	17 DP-1	17 DP-1	17 DP-1	17 DP-1		
ARM Action Codes	AS	AS	AA	EC	AL		
Number of Decimals							
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code	28	29	30	31	32
1 UNTREATED CHECK			0.0	8.3	2.0	0.8	2.1
2 Crusher - 1 oz/A			78.7	7.2	2.5	0.0	1.9
SOLIDA	1 oz/a	A					
HARMONY SG	0.5 oz/a	A					
METRIBUZIN	5 oz/a	A					
ROUNDUP POWERMAX	32 fl oz/a	A					
2,4-D	16 fl oz/a	A					
MSO	1 % v/v	A					
ANTHEM MAXX	3.25 fl oz/a	C					
XTENDIMAX	22 fl oz/a	C					
ROUNDUP POWERMAX	32 fl oz/a	C					
INTACT	0.5 % v/v	C					
3 Firstshot - 0.5 oz/A			30.8	7.1	5.6	0.0	1.4
HARMONY SG	0.25 oz/a	B					
EXPRESS SG	0.25 oz/a	B					
METRIBUZIN	5 oz/a	B					
ROUNDUP POWERMAX	32 fl oz/a	B					
2,4-D	16 fl oz/a	B					
MSO	1 % v/v	B					
ANTHEM MAXX	3.25 fl oz/a	C					
XTENDIMAX	22 fl oz/a	C					
ROUNDUP POWERMAX	32 fl oz/a	C					
INTACT	0.5 % v/v	C					
4 AUTHORITY FIRST	6 oz/a	B	89.9	0.0	0.1	0.0	1.2
METRIBUZIN	5 oz/a	B					
ROUNDUP POWERMAX	32 fl oz/a	B					
2,4-D	16 fl oz/a	B					
MSO	1 % v/v	B					
ANTHEM MAXX	3.25 fl oz/a	C					
XTENDIMAX	22 fl oz/a	C					
ROUNDUP POWERMAX	32 fl oz/a	C					
INTACT	0.5 % v/v	C					
5 GRAMOXONE SL 2.0	48 fl oz/a	B	0.0	21.3	2.3	0.0	1.3
METRIBUZIN	5 oz/a	B					
NIS	0.5 % v/v	B					
ANTHEM MAXX	3.25 fl oz/a	C					
XTENDIMAX	22 fl oz/a	C					
ROUNDUP POWERMAX	32 fl oz/a	C					
INTACT	0.5 % v/v	C					

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Could not calculate LSD (% mean diff) for columns

1,2,3,4,5,6,7,8,16,17,18,19,20,21,22,23,24,25,31,44,45,46,52,53,54,55,56,57,59,61,64,66,70,73,74,75,76,77,78,79 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	AMARE	AMARE	MOLVE	GERCA	ELEIN		
Pest Scientific Name	Amaranthus ret>	Amaranthus ret>	Mollugo vertic>	Geranium carol>	Eleusine indica		
Pest Name	Redroot pigweed	Redroot pigweed	Carpetweed	Carolina geran>	Goosegrass		
Crop Type, Code	C -	C -	C -	C -	C -		
BBCH Scale							
Crop Scientific Name							
Crop Name							
Rating Date	5-30-2019	5-31-2019	5-31-2019	5-31-2019	5-31-2019		
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P		
Rating Type	CONTRO	COUNT	COUNT	COUNT	COUNT		
Rating Unit	%	FT2	FT2	FT2	FT2		
Number of Subsamples	1	1	1	1	1		
Days After First/Last Applic.	45 30	46 31	46 31	46 31	46 31		
Plant-Eval Interval	16 DP-1	17 DP-1	17 DP-1	17 DP-1	17 DP-1		
ARM Action Codes	AS	AS	AA	EC	AL		
Number of Decimals							
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code	28	29	30	31	32
6 VALOR SX	2 oz/a	B	66.9	7.8	3.2	0.0	2.7
XTENDIMAX	22 fl oz/a	B					
ROUNDUP POWERMAX	32 fl oz/a	B					
INTACT	0.5 % v/v	B					
MSO	1 % v/v	B					
WARRANT	48 fl oz/a	C					
XTENDIMAX	22 fl oz/a	C					
ROUNDUP POWERMAX	32 fl oz/a	C					
INTACT	0.5 % v/v	C					
7 SHARPEN	1 fl oz/a	B	27.9	8.4	0.5	0.0	3.2
LIBERTY 280 SL	29 fl oz/a	B					
MSO	1 % v/v	B					
ZIDUA	2 oz/a	C					
ENGENIA	12.8 fl oz/a	C					
ROUNDUP POWERMAX	32 fl oz/a	C					
INTACT	0.5 % v/v	C					
8 ELEVORE	1 fl oz/a	B	4.8	13.2	3.1	0.0	3.3
ROUNDUP POWERMAX	32 fl oz/a	B					
MSO	1 % v/v	B					
DUAL II MAGNUM	16 fl oz/a	C					
XTENDIMAX	22 fl oz/a	C					
ROUNDUP POWERMAX	32 fl oz/a	C					
INTACT	0.5 % v/v	C					
LSD P=.05			24.79 - 50.36	17.71 - 21.67	5.54 - 5.70	.	3.08 - 5.57
Standard Deviation			2.16t	1.80t	8.12t	0.00	0.38t
CV			41.94t	61.5t	97.99t	0.0	77.78t
Replicate F			1.147	8.963	6.394	0.000	19.170
Replicate Prob(F)			0.3532	0.0005	0.0030	1.0000	0.0001
Treatment F			11.013	1.516	0.821	0.000	0.372
Treatment Prob(F)			0.0001	0.2160	0.5807	1.0000	0.9084

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Missing data estimates are included in columns:Yates=31,71

Excluded replicate 1 in column 13; 1 in 61; 3 in 73; 3 in 77; 3 in 81

Could not calculate LSD (% mean diff) for columns

1,2,3,4,5,6,7,8,16,17,18,19,20,21,22,23,24,25,31,44,45,46,52,53,54,55,56,57,59,61,64,66,70,73,74,75,76,77,78,79 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	TRFRE	ERICA	VIOAR	CYPES	OXAST		
Pest Scientific Name	Trifolium repe>	Erigeron canad>	Viola arvensis	Cyperus escul>	Oxalis stricta		
Pest Name	White clover	Canada horsewe>	Field violet	Yellow nutsedge	European wood >		
Crop Type, Code	C -	C -	C -	C -	C -		
BBCH Scale							
Crop Scientific Name							
Crop Name							
Rating Date	5-31-2019	5-31-2019	5-31-2019	5-31-2019	5-31-2019		
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P		
Rating Type	COUNT	COUNT	COUNT	COUNT	COUNT		
Rating Unit	FT2	FT2	FT2	FT2	FT2		
Number of Subsamples	1	1	1	1	1		
Days After First/Last Applic.	46 31	46 31	46 31	46 31	46 31		
Plant-Eval Interval	17 DP-1	17 DP-1	17 DP-1	17 DP-1	17 DP-1		
ARM Action Codes	AA				AS		
Number of Decimals							
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code	33	34	35	36	37
1 UNTREATED CHECK			0.4	5.3	0.5	0.0	2.3
2 Crusher - 1 oz/A			0.0	1.3	2.0	1.0	4.9
SOLIDA	1 oz/a	A					
HARMONY SG	0.5 oz/a	A					
METRIBUZIN	5 oz/a	A					
ROUNDUP POWERMAX	32 fl oz/a	A					
2,4-D	16 fl oz/a	A					
MSO	1 % v/v	A					
ANTHEM MAXX	3.25 fl oz/a	C					
XTENDIMAX	22 fl oz/a	C					
ROUNDUP POWERMAX	32 fl oz/a	C					
INTACT	0.5 % v/v	C					
3 Firstshot - 0.5 oz/A			0.2	0.3	0.0	0.5	7.5
HARMONY SG	0.25 oz/a	B					
EXPRESS SG	0.25 oz/a	B					
METRIBUZIN	5 oz/a	B					
ROUNDUP POWERMAX	32 fl oz/a	B					
2,4-D	16 fl oz/a	B					
MSO	1 % v/v	B					
ANTHEM MAXX	3.25 fl oz/a	C					
XTENDIMAX	22 fl oz/a	C					
ROUNDUP POWERMAX	32 fl oz/a	C					
INTACT	0.5 % v/v	C					
4 AUTHORITY FIRST	6 oz/a	B	0.1	0.0	0.0	7.0	0.4
METRIBUZIN	5 oz/a	B					
ROUNDUP POWERMAX	32 fl oz/a	B					
2,4-D	16 fl oz/a	B					
MSO	1 % v/v	B					
ANTHEM MAXX	3.25 fl oz/a	C					
XTENDIMAX	22 fl oz/a	C					
ROUNDUP POWERMAX	32 fl oz/a	C					
INTACT	0.5 % v/v	C					
5 GRAMOXONE SL 2.0	48 fl oz/a	B	0.1	0.5	0.0	3.5	20.6
METRIBUZIN	5 oz/a	B					
NIS	0.5 % v/v	B					
ANTHEM MAXX	3.25 fl oz/a	C					
XTENDIMAX	22 fl oz/a	C					
ROUNDUP POWERMAX	32 fl oz/a	C					
INTACT	0.5 % v/v	C					

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Missing data estimates are included in columns:Yates=31,71

Excluded replicate 1 in column 13; 1 in 61; 3 in 73; 3 in 77; 3 in 81

Could not calculate LSD (% mean diff) for columns

1,2,3,4,5,6,7,8,16,17,18,19,20,21,22,23,24,25,31,44,45,46,52,53,54,55,56,57,59,61,64,66,70,73,74,75,76,77,78,79 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	TRFRE	ERICA	VIOAR	CYPES	OXAST
Pest Scientific Name	Trifolium repe>	Erigeron canad>	Viola arvensis	Cyperus escul>	Oxalis stricta
Pest Name	White clover	Canada horsewe>	Field violet	Yellow nutsedge	European wood >
Crop Type, Code	C -	C -	C -	C -	C -
BBCH Scale					
Crop Scientific Name					
Crop Name					
Rating Date	5-31-2019	5-31-2019	5-31-2019	5-31-2019	5-31-2019
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P
Rating Type	COUNT	COUNT	COUNT	COUNT	COUNT
Rating Unit	FT2	FT2	FT2	FT2	FT2
Number of Subsamples	1	1	1	1	1
Days After First/Last Applic.	46 31	46 31	46 31	46 31	46 31
Plant-Eval Interval	17 DP-1	17 DP-1	17 DP-1	17 DP-1	17 DP-1
ARM Action Codes	AA				AS
Number of Decimals					
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	33	34	35
6 VALOR SX	2 oz/a B		0.0	4.0	0.0
XTENDIMAX	22 fl oz/a B				4.0
ROUNDUP POWERMAX	32 fl oz/a B				
INTACT	0.5 % v/v B				
MSO	1 % v/v B				
WARRANT	48 fl oz/a C				
XTENDIMAX	22 fl oz/a C				
ROUNDUP POWERMAX	32 fl oz/a C				
INTACT	0.5 % v/v C				8.7
7 SHARPEN	1 fl oz/a B		0.1	0.3	1.3
LIBERTY 280 SL	29 fl oz/a B				3.0
MSO	1 % v/v B				
ZIDUA	2 oz/a C				
ENGENIA	12.8 fl oz/a C				
ROUNDUP POWERMAX	32 fl oz/a C				
INTACT	0.5 % v/v C				4.4
8 ELEVORE	1 fl oz/a B		0.1	0.8	0.0
ROUNDUP POWERMAX	32 fl oz/a B				0.0
MSO	1 % v/v B				
DUAL II MAGNUM	16 fl oz/a C				
XTENDIMAX	22 fl oz/a C				
ROUNDUP POWERMAX	32 fl oz/a C				
INTACT	0.5 % v/v C				5.9
LSD P=.05			1.10 - 99999.38	4.64	2.59
Standard Deviation			3.23t	3.16	1.76
CV			210.43t	206.22	375.77
Replicate F			0.940	0.914	0.494
Replicate Prob(F)			0.4390	0.4511	0.6906
Treatment F			0.527	1.565	0.747
Treatment Prob(F)			0.8045	0.2006	0.6361
					7.20
					4.90
					206.17
					8.16 - 14.76
					1.41t
					56.13t
					2.743
					0.0688
					2.302
					0.0658

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Missing data estimates are included in columns:Yates=31,71

Excluded replicate 1 in column 13; 1 in 61; 3 in 73; 3 in 77; 3 in 81

Could not calculate LSD (% mean diff) for columns

1,2,3,4,5,6,7,8,16,17,18,19,20,21,22,23,24,25,31,44,45,46,52,53,54,55,56,57,59,61,64,66,70,73,74,75,76,77,78,79 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	DIGSA	SORHA	SIDSP	LOLMG	TAROF
Pest Scientific Name	Digitaria sang>	Sorghum halepe>	Sida spinosa	Lolium multifi>	Taraxacum offi>
Pest Name	large crabgrass	Johnson grass	Prickly sida	Annual ryegrass	Blowball
Crop Type, Code	C -	C -	C -	C -	C -
BBCH Scale					
Crop Scientific Name					
Crop Name					
Rating Date	5-31-2019	5-31-2019	5-31-2019	5-31-2019	5-31-2019
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P
Rating Type	COUNT	COUNT	COUNT	COUNT	COUNT
Rating Unit	FT2	FT2	FT2	FT2	FT2
Number of Subsamples	1	1	1	1	1
Days After First/Last Applic.	46 31	46 31	46 31	46 31	46 31
Plant-Eval Interval	17 DP-1	17 DP-1	17 DP-1	17 DP-1	17 DP-1
ARM Action Codes	AA				
Number of Decimals					
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	38	39	40
1 UNTREATED CHECK			0.6	0.0	0.3
2 Crusher - 1 oz/A			1.1	0.3	2.0
SOLIDA	1 oz/a A				
HARMONY SG	0.5 oz/a A				
METRIBUZIN	5 oz/a A				
ROUNDUP POWERMAX	32 fl oz/a A				
2,4-D	16 fl oz/a A				
MSO	1 % v/v A				
ANTHEM MAXX	3.25 fl oz/a C				
XTENDIMAX	22 fl oz/a C				
ROUNDUP POWERMAX	32 fl oz/a C				
INTACT	0.5 % v/v C				
3 Firstshot - 0.5 oz/A			2.7	0.0	0.0
HARMONY SG	0.25 oz/a B				
EXPRESS SG	0.25 oz/a B				
METRIBUZIN	5 oz/a B				
ROUNDUP POWERMAX	32 fl oz/a B				
2,4-D	16 fl oz/a B				
MSO	1 % v/v B				
ANTHEM MAXX	3.25 fl oz/a C				
XTENDIMAX	22 fl oz/a C				
ROUNDUP POWERMAX	32 fl oz/a C				
INTACT	0.5 % v/v C				
4 AUTHORITY FIRST	6 oz/a B		1.3	0.0	0.0
METRIBUZIN	5 oz/a B				
ROUNDUP POWERMAX	32 fl oz/a B				
2,4-D	16 fl oz/a B				
MSO	1 % v/v B				
ANTHEM MAXX	3.25 fl oz/a C				
XTENDIMAX	22 fl oz/a C				
ROUNDUP POWERMAX	32 fl oz/a C				
INTACT	0.5 % v/v C				
5 GRAMOXONE SL 2.0	48 fl oz/a B		2.9	0.0	0.5
METRIBUZIN	5 oz/a B				
NIS	0.5 % v/v B				
ANTHEM MAXX	3.25 fl oz/a C				
XTENDIMAX	22 fl oz/a C				
ROUNDUP POWERMAX	32 fl oz/a C				
INTACT	0.5 % v/v C				

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Missing data estimates are included in columns:Yates=31,71

Excluded replicate 1 in column 13; 1 in 61; 3 in 73; 3 in 77; 3 in 81

Could not calculate LSD (% mean diff) for columns

1,2,3,4,5,6,7,8,16,17,18,19,20,21,22,23,24,25,31,44,45,46,52,53,54,55,56,57,59,61,64,66,70,73,74,75,76,77,78,79 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	DIGSA	SORHA	SIDSP	LOLMG	TAROF
Pest Scientific Name	Digitaria sang>	Sorghum halepe>	Sida spinosa	Lolium multifi>	Taraxacum offi>
Pest Name	large crabgrass	Johnson grass	Prickly sida	Annual ryegrass	Blowball
Crop Type, Code	C -	C -	C -	C -	C -
BBCH Scale					
Crop Scientific Name					
Crop Name					
Rating Date	5-31-2019	5-31-2019	5-31-2019	5-31-2019	5-31-2019
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P
Rating Type	COUNT	COUNT	COUNT	COUNT	COUNT
Rating Unit	FT2	FT2	FT2	FT2	FT2
Number of Subsamples	1	1	1	1	1
Days After First/Last Applic.	46 31	46 31	46 31	46 31	46 31
Plant-Eval Interval	17 DP-1	17 DP-1	17 DP-1	17 DP-1	17 DP-1
ARM Action Codes	AA				
Number of Decimals					
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	38	39	40
6 VALOR SX	2 oz/a B		2.9	1.0	0.8
XTENDIMAX	22 fl oz/a B				
ROUNDUP POWERMAX	32 fl oz/a B				
INTACT	0.5 % v/v B				
MSO	1 % v/v B				
WARRANT	48 fl oz/a C				
XTENDIMAX	22 fl oz/a C				
ROUNDUP POWERMAX	32 fl oz/a C				
INTACT	0.5 % v/v C				
7 SHARPEN	1 fl oz/a B		0.6	0.0	1.3
LIBERTY 280 SL	29 fl oz/a B				
MSO	1 % v/v B				
ZIDUA	2 oz/a C				
ENGENIA	12.8 fl oz/a C				
ROUNDUP POWERMAX	32 fl oz/a C				
INTACT	0.5 % v/v C				
8 ELEVORE	1 fl oz/a B		0.9	0.0	1.3
ROUNDUP POWERMAX	32 fl oz/a B				
MSO	1 % v/v B				
DUAL II MAGNUM	16 fl oz/a C				
XTENDIMAX	22 fl oz/a C				
ROUNDUP POWERMAX	32 fl oz/a C				
INTACT	0.5 % v/v C				
LSD P=.05			10.15 - 100001.95	0.80	2.16
Standard Deviation			10.03t	0.54	1.47
CV			143.05t	346.52	195.72
Replicate F			1.354	0.675	0.735
Replicate Prob(F)			0.2840	0.5769	0.5429
Treatment F			0.218	1.690	0.928
Treatment Prob(F)			0.9770	0.1658	0.5054
					0.0037
					0.0954

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Missing data estimates are included in columns:Yates=31,71

Excluded replicate 1 in column 13; 1 in 61; 3 in 73; 3 in 77; 3 in 81

Could not calculate LSD (% mean diff) for columns

1,2,3,4,5,6,7,8,16,17,18,19,20,21,22,23,24,25,31,44,45,46,52,53,54,55,56,57,59,61,64,66,70,73,74,75,76,77,78,79 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	SETPU	SOLNI	SETVI	PHBPU	ERICA		
Pest Scientific Name	Setaria helvola	Solanum nigrum	Setaria viridis	Ipomoea purpur>	Erigeron canad>		
Pest Name	yellow foxtail	Black nightsha>	Green foxtail	Tall morning g>	Canada horsewe>		
Crop Type, Code	C -	C -	C -	C -	C -		
BBCH Scale							
Crop Scientific Name							
Crop Name							
Rating Date	5-31-2019	5-31-2019	5-31-2019	5-31-2019	6-5-2019		
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P		
Rating Type	COUNT	COUNT	COUNT	COUNT	CONTRO		
Rating Unit	FT2	FT2	FT2	FT2	%		
Number of Subsamples	1	1	1	1	1		
Days After First/Last Applic.	46 31	46 31	46 31	46 31	51 5		
Plant-Eval Interval	17 DP-1	17 DP-1	17 DP-1	17 DP-1	22 DP-1		
ARM Action Codes		ET2	ET8	ET7			
Number of Decimals							
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code	43	44	45	46	47
1 UNTREATED CHECK			0.0	0.0	0.0	0.0	0.0
2 Crusher - 1 oz/A			0.0	0.3	0.0	0.0	98.0
SOLIDA	1 oz/a A						
HARMONY SG	0.5 oz/a A						
METRIBUZIN	5 oz/a A						
ROUNDUP POWERMAX	32 fl oz/a A						
2,4-D	16 fl oz/a A						
MSO	1 % v/v A						
ANTHEM MAXX	3.25 fl oz/a C						
XTENDIMAX	22 fl oz/a C						
ROUNDUP POWERMAX	32 fl oz/a C						
INTACT	0.5 % v/v C						
3 Firstshot - 0.5 oz/A			0.8	0.0	0.0	0.0	100.0
HARMONY SG	0.25 oz/a B						
EXPRESS SG	0.25 oz/a B						
METRIBUZIN	5 oz/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
2,4-D	16 fl oz/a B						
MSO	1 % v/v B						
ANTHEM MAXX	3.25 fl oz/a C						
XTENDIMAX	22 fl oz/a C						
ROUNDUP POWERMAX	32 fl oz/a C						
INTACT	0.5 % v/v C						
4 AUTHORITY FIRST	6 oz/a B		0.0	0.0	0.0	0.0	100.0
METRIBUZIN	5 oz/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
2,4-D	16 fl oz/a B						
MSO	1 % v/v B						
ANTHEM MAXX	3.25 fl oz/a C						
XTENDIMAX	22 fl oz/a C						
ROUNDUP POWERMAX	32 fl oz/a C						
INTACT	0.5 % v/v C						
5 GRAMOXONE SL 2.0	48 fl oz/a B		1.3	0.0	0.0	0.0	100.0
METRIBUZIN	5 oz/a B						
NIS	0.5 % v/v B						
ANTHEM MAXX	3.25 fl oz/a C						
XTENDIMAX	22 fl oz/a C						
ROUNDUP POWERMAX	32 fl oz/a C						
INTACT	0.5 % v/v C						

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Missing data estimates are included in columns:Yates=31,71

Excluded replicate 1 in column 13; 1 in 61; 3 in 73; 3 in 77; 3 in 81

Could not calculate LSD (% mean diff) for columns

1,2,3,4,5,6,7,8,16,17,18,19,20,21,22,23,24,25,31,44,45,46,52,53,54,55,56,57,59,61,64,66,70,73,74,75,76,77,78,79 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	SETPU	SOLNI	SETVI	PHBPU	ERICA		
Pest Scientific Name	Setaria helvola	Solanum nigrum	Setaria viridis	Ipomoea purpur>	Erigeron canad>		
Pest Name	yellow foxtail	Black nightsha>	Green foxtail	Tall morning g>	Canada horsewe>		
Crop Type, Code	C -	C -	C -	C -	C -		
BBCH Scale							
Crop Scientific Name							
Crop Name							
Rating Date	5-31-2019	5-31-2019	5-31-2019	5-31-2019	6-5-2019		
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P		
Rating Type	COUNT	COUNT	COUNT	COUNT	CONTRO		
Rating Unit	FT2	FT2	FT2	FT2	%		
Number of Subsamples	1	1	1	1	1		
Days After First/Last Applic.	46 31	46 31	46 31	46 31	51 5		
Plant-Eval Interval	17 DP-1	17 DP-1	17 DP-1	17 DP-1	22 DP-1		
ARM Action Codes		ET2	ET8	ET7			
Number of Decimals							
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code	43	44	45	46	47
6 VALOR SX	2 oz/a B		0.0	0.0	0.0	0.0	100.0
XTENDIMAX	22 fl oz/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
INTACT	0.5 % v/v B						
MSO	1 % v/v B						
WARRANT	48 fl oz/a C						
XTENDIMAX	22 fl oz/a C						
ROUNDUP POWERMAX	32 fl oz/a C						
INTACT	0.5 % v/v C						
7 SHARPEN	1 fl oz/a B		0.3	0.0	0.0	0.3	100.0
LIBERTY 280 SL	29 fl oz/a B						
MSO	1 % v/v B						
ZIDUA	2 oz/a C						
ENGENIA	12.8 fl oz/a C						
ROUNDUP POWERMAX	32 fl oz/a C						
INTACT	0.5 % v/v C						
8 ELEVORE	1 fl oz/a B		0.0	0.0	2.8	0.0	100.0
ROUNDUP POWERMAX	32 fl oz/a B						
MSO	1 % v/v B						
DUAL II MAGNUM	16 fl oz/a C						
XTENDIMAX	22 fl oz/a C						
ROUNDUP POWERMAX	32 fl oz/a C						
INTACT	0.5 % v/v C						
LSD P=.05			1.56	.	.	.	1.27
Standard Deviation			1.06	0.00	0.00	0.00	0.87
CV			377.37	0.0	0.0	0.0	0.99
Replicate F			0.768	0.000	0.000	0.000	1.000
Replicate Prob(F)			0.5250	1.0000	1.0000	1.0000	0.4123
Treatment F			0.789	0.000	0.000	0.000	6631.239
Treatment Prob(F)			0.6046	1.0000	1.0000	1.0000	0.0001

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Missing data estimates are included in columns:Yates=31,71

Excluded replicate 1 in column 13; 1 in 61; 3 in 73; 3 in 77; 3 in 81

Could not calculate LSD (% mean diff) for columns

1,2,3,4,5,6,7,8,16,17,18,19,20,21,22,23,24,25,31,44,45,46,52,53,54,55,56,57,59,61,64,66,70,73,74,75,76,77,78,79 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	GERCA	LOLMG	ELEIN	AMARE	ERICA		
Pest Scientific Name	Geranium carol>	Lolium multifi>	Eleusine indica	Amaranthus ret>	Erigeron canad>		
Pest Name	Carolina geran>	Annual ryegrass	Goosegrass	Redroot pigweed	Canada horsewe>		
Crop Type, Code	C -	C -	C -	C -	C -		
BBCH Scale							
Crop Scientific Name							
Crop Name							
Rating Date	6-5-2019	6-5-2019	6-5-2019	6-5-2019	6-14-2019		
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	COTNRO		
Rating Unit	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1		
Days After First/Last Applic.	51 5	51 5	51 5	51 5	60 14		
Plant-Eval Interval	22 DP-1	22 DP-1	22 DP-1	22 DP-1	31 DP-1		
ARM Action Codes							
Number of Decimals							
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code	48	49	50	51	52
1 UNTREATED CHECK			0.0	0.0	0.0	0.0	0.0
2 Crusher - 1 oz/A			100.0	100.0	88.5	98.8	100.0
SOLIDA	1 oz/a	A					
HARMONY SG	0.5 oz/a	A					
METRIBUZIN	5 oz/a	A					
ROUNDUP POWERMAX	32 fl oz/a	A					
2,4-D	16 fl oz/a	A					
MSO	1 % v/v	A					
ANTHEM MAXX	3.25 fl oz/a	C					
XTENDIMAX	22 fl oz/a	C					
ROUNDUP POWERMAX	32 fl oz/a	C					
INTACT	0.5 % v/v	C					
3 Firstshot - 0.5 oz/A			100.0	100.0	89.0	98.8	100.0
HARMONY SG	0.25 oz/a	B					
EXPRESS SG	0.25 oz/a	B					
METRIBUZIN	5 oz/a	B					
ROUNDUP POWERMAX	32 fl oz/a	B					
2,4-D	16 fl oz/a	B					
MSO	1 % v/v	B					
ANTHEM MAXX	3.25 fl oz/a	C					
XTENDIMAX	22 fl oz/a	C					
ROUNDUP POWERMAX	32 fl oz/a	C					
INTACT	0.5 % v/v	C					
4 AUTHORITY FIRST	6 oz/a	B	100.0	98.0	98.0	100.0	100.0
METRIBUZIN	5 oz/a	B					
ROUNDUP POWERMAX	32 fl oz/a	B					
2,4-D	16 fl oz/a	B					
MSO	1 % v/v	B					
ANTHEM MAXX	3.25 fl oz/a	C					
XTENDIMAX	22 fl oz/a	C					
ROUNDUP POWERMAX	32 fl oz/a	C					
INTACT	0.5 % v/v	C					
5 GRAMOXONE SL 2.0	48 fl oz/a	B	100.0	99.3	86.8	100.0	100.0
METRIBUZIN	5 oz/a	B					
NIS	0.5 % v/v	B					
ANTHEM MAXX	3.25 fl oz/a	C					
XTENDIMAX	22 fl oz/a	C					
ROUNDUP POWERMAX	32 fl oz/a	C					
INTACT	0.5 % v/v	C					

t=Mean descriptions are reported in transformed data units, and are not de-transformed.

Missing data estimates are included in columns:Yates=31,71

Excluded replicate 1 in column 13; 1 in 61; 3 in 73; 3 in 77; 3 in 81

Could not calculate LSD (% mean diff) for columns

1,2,3,4,5,6,7,8,16,17,18,19,20,21,22,23,24,25,31,44,45,46,52,53,54,55,56,57,59,61,64,66,70,73,74,75,76,77,78,79 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	GERCA	LOLMG	ELEIN	AMARE	ERICA
Pest Scientific Name	Geranium carol>	Lolium multifi>	Eleusine indica	Amaranthus ret>	Erigeron canad>
Pest Name	Carolina geran>	Annual ryegrass	Goosegrass	Redroot pigweed	Canada horsewe>
Crop Type, Code	C -	C -	C -	C -	C -
BBCH Scale					
Crop Scientific Name					
Crop Name					
Rating Date	6-5-2019	6-5-2019	6-5-2019	6-5-2019	6-14-2019
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	COTNRO
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Days After First/Last Applic.	51 5	51 5	51 5	51 5	60 14
Plant-Eval Interval	22 DP-1	22 DP-1	22 DP-1	22 DP-1	31 DP-1
ARM Action Codes					
Number of Decimals					
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	48	49	50
6 VALOR SX	2 oz/a B		100.0	99.3	86.8
XTENDIMAX	22 fl oz/a B				
ROUNDUP POWERMAX	32 fl oz/a B				
INTACT	0.5 % v/v B				
MSO	1 % v/v B				
WARRANT	48 fl oz/a C				
XTENDIMAX	22 fl oz/a C				
ROUNDUP POWERMAX	32 fl oz/a C				
INTACT	0.5 % v/v C				
7 SHARPEN	1 fl oz/a B		100.0	87.5	77.5
LIBERTY 280 SL	29 fl oz/a B				
MSO	1 % v/v B				
ZIDUA	2 oz/a C				
ENGENIA	12.8 fl oz/a C				
ROUNDUP POWERMAX	32 fl oz/a C				
INTACT	0.5 % v/v C				
8 ELEVORE	1 fl oz/a B		97.5	99.3	89.3
ROUNDUP POWERMAX	32 fl oz/a B				
MSO	1 % v/v B				
DUAL II MAGNUM	16 fl oz/a C				
XTENDIMAX	22 fl oz/a C				
ROUNDUP POWERMAX	32 fl oz/a C				
INTACT	0.5 % v/v C				
LSD P=.05			2.60	3.15	12.30
Standard Deviation			1.77	2.14	8.37
CV			2.03	2.51	10.87
Replicate F			1.000	1.223	5.499
Replicate Prob(F)			0.4123	0.3261	0.0060
Treatment F			1589.572	1052.810	57.047
Treatment Prob(F)			0.0001	0.0001	0.0001
					1.90
					1.29
					1.49
					4.200
					0.0178
					2955.667
					0.0001
					0.000
					1.0000
					0.000
					1.0000

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Missing data estimates are included in columns:Yates=31,71

Excluded replicate 1 in column 13; 1 in 61; 3 in 73; 3 in 77; 3 in 81

Could not calculate LSD (% mean diff) for columns

1,2,3,4,5,6,7,8,16,17,18,19,20,21,22,23,24,25,31,44,45,46,52,53,54,55,56,57,59,61,64,66,70,73,74,75,76,77,78,79 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	LOLMG	ELEIN	AMARE	ERICA	LOLMG
Pest Scientific Name	Lolium multifl>	Eleusine indica	Amaranthus ret>	Erigeron canad>	Lolium multifl>
Pest Name	Annual ryegrass	Goosegrass	Redroot pigweed	Canada horsewe>	Annual ryegrass
Crop Type, Code	C -	C -	C -	C -	C -
BBCH Scale					
Crop Scientific Name					
Crop Name					
Rating Date	6-14-2019	6-14-2019	6-14-2019	6-26-2019	6-26-2019
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Days After First/Last Applic.	60 14	60 14	60 14	72 26	72 26
Plant-Eval Interval	31 DP-1	31 DP-1	31 DP-1	43 DP-1	43 DP-1
ARM Action Codes					
Number of Decimals					
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	53	54	55
1 UNTREATED CHECK			0.0	0.0	0.0
2 Crusher - 1 oz/A			100.0	100.0	100.0
SOLIDA	1 oz/a A				
HARMONY SG	0.5 oz/a A				
METRIBUZIN	5 oz/a A				
ROUNDUP POWERMAX	32 fl oz/a A				
2,4-D	16 fl oz/a A				
MSO	1 % v/v A				
ANTHEM MAXX	3.25 fl oz/a C				
XTENDIMAX	22 fl oz/a C				
ROUNDUP POWERMAX	32 fl oz/a C				
INTACT	0.5 % v/v C				
3 Firstshot - 0.5 oz/A			100.0	100.0	100.0
HARMONY SG	0.25 oz/a B				
EXPRESS SG	0.25 oz/a B				
METRIBUZIN	5 oz/a B				
ROUNDUP POWERMAX	32 fl oz/a B				
2,4-D	16 fl oz/a B				
MSO	1 % v/v B				
ANTHEM MAXX	3.25 fl oz/a C				
XTENDIMAX	22 fl oz/a C				
ROUNDUP POWERMAX	32 fl oz/a C				
INTACT	0.5 % v/v C				
4 AUTHORITY FIRST	6 oz/a B		100.0	100.0	100.0
METRIBUZIN	5 oz/a B				
ROUNDUP POWERMAX	32 fl oz/a B				
2,4-D	16 fl oz/a B				
MSO	1 % v/v B				
ANTHEM MAXX	3.25 fl oz/a C				
XTENDIMAX	22 fl oz/a C				
ROUNDUP POWERMAX	32 fl oz/a C				
INTACT	0.5 % v/v C				
5 GRAMOXONE SL 2.0	48 fl oz/a B		100.0	100.0	100.0
METRIBUZIN	5 oz/a B				
NIS	0.5 % v/v B				
ANTHEM MAXX	3.25 fl oz/a C				
XTENDIMAX	22 fl oz/a C				
ROUNDUP POWERMAX	32 fl oz/a C				
INTACT	0.5 % v/v C				

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Missing data estimates are included in columns:Yates=31,71

Excluded replicate 1 in column 13; 1 in 61; 3 in 73; 3 in 77; 3 in 81

Could not calculate LSD (% mean diff) for columns

1,2,3,4,5,6,7,8,16,17,18,19,20,21,22,23,24,25,31,44,45,46,52,53,54,55,56,57,59,61,64,66,70,73,74,75,76,77,78,79 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	LOLMG	ELEIN	AMARE	ERICA	LOLMG
Pest Scientific Name	Lolium multifi>	Eleusine indica	Amaranthus ret>	Erigeron canad>	Lolium multifi>
Pest Name	Annual ryegrass	Goosegrass	Redroot pigweed	Canada horsewe>	Annual ryegrass
Crop Type, Code	C -	C -	C -	C -	C -
BBCH Scale					
Crop Scientific Name					
Crop Name					
Rating Date	6-14-2019	6-14-2019	6-14-2019	6-26-2019	6-26-2019
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Days After First/Last Applic.	60 14	60 14	60 14	72 26	72 26
Plant-Eval Interval	31 DP-1	31 DP-1	31 DP-1	43 DP-1	43 DP-1
ARM Action Codes					
Number of Decimals					
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	53	54	55
6 VALOR SX	2 oz/a B		100.0	100.0	100.0
XTENDIMAX	22 fl oz/a B				
ROUNDUP POWERMAX	32 fl oz/a B				
INTACT	0.5 % v/v B				
MSO	1 % v/v B				
WARRANT	48 fl oz/a C				
XTENDIMAX	22 fl oz/a C				
ROUNDUP POWERMAX	32 fl oz/a C				
INTACT	0.5 % v/v C				
7 SHARPEN	1 fl oz/a B		100.0	100.0	100.0
LIBERTY 280 SL	29 fl oz/a B				
MSO	1 % v/v B				
ZIDUA	2 oz/a C				
ENGENIA	12.8 fl oz/a C				
ROUNDUP POWERMAX	32 fl oz/a C				
INTACT	0.5 % v/v C				
8 ELEVORE	1 fl oz/a B		100.0	100.0	100.0
ROUNDUP POWERMAX	32 fl oz/a B				
MSO	1 % v/v B				
DUAL II MAGNUM	16 fl oz/a C				
XTENDIMAX	22 fl oz/a C				
ROUNDUP POWERMAX	32 fl oz/a C				
INTACT	0.5 % v/v C				
LSD P=.05			.	.	.
Standard Deviation			0.00	0.00	0.00
CV			0.0	0.0	0.0
Replicate F			0.000	0.000	0.000
Replicate Prob(F)			1.0000	1.0000	1.0000
Treatment F			0.000	0.000	0.000
Treatment Prob(F)			1.0000	1.0000	1.0000

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Missing data estimates are included in columns:Yates=31,71

Excluded replicate 1 in column 13; 1 in 61; 3 in 73; 3 in 77; 3 in 81

Could not calculate LSD (% mean diff) for columns

1,2,3,4,5,6,7,8,16,17,18,19,20,21,22,23,24,25,31,44,45,46,52,53,54,55,56,57,59,61,64,66,70,73,74,75,76,77,78,79 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	ELEIN	AMARE	AMARE	MOLVE	GERCA		
Pest Scientific Name	Eleusine indica	Amaranthus ret>	Amaranthus ret>	Mollugo vertic>	Geranium carol>		
Pest Name	Goosegrass	Redroot pigweed	Redroot pigweed	Carpetweed	Carolina geran>		
Crop Type, Code	C -	C -	C -	C -	C -		
BBCH Scale							
Crop Scientific Name							
Crop Name							
Rating Date	6-26-2019	6-26-2019	6-24-2019	6-24-2019	6-24-2019		
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P		
Rating Type	CONTRO	CONTROL	COUNT	COUNT	COUNT		
Rating Unit	%	%	FT2	FT2	FT2		
Number of Subsamples	1	1	1	1	1		
Days After First/Last Applic.	72 26	72 26	70 24	70 24	70 24		
Plant-Eval Interval	43 DP-1	43 DP-1	41 DP-1	41 DP-1	41 DP-1		
ARM Action Codes				ER1			
Number of Decimals							
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code	58	59	60	61	62
1 UNTREATED CHECK			0.0	0.0	8.5	0.0	0.3
2 Crusher - 1 oz/A			98.8	100.0	0.0	0.0	0.3
SOLIDA	1 oz/a A						
HARMONY SG	0.5 oz/a A						
METRIBUZIN	5 oz/a A						
ROUNDUP POWERMAX	32 fl oz/a A						
2,4-D	16 fl oz/a A						
MSO	1 % v/v A						
ANTHEM MAXX	3.25 fl oz/a C						
XTENDIMAX	22 fl oz/a C						
ROUNDUP POWERMAX	32 fl oz/a C						
INTACT	0.5 % v/v C						
3 Firstshot - 0.5 oz/A			99.0	100.0	0.0	0.0	0.0
HARMONY SG	0.25 oz/a B						
EXPRESS SG	0.25 oz/a B						
METRIBUZIN	5 oz/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
2,4-D	16 fl oz/a B						
MSO	1 % v/v B						
ANTHEM MAXX	3.25 fl oz/a C						
XTENDIMAX	22 fl oz/a C						
ROUNDUP POWERMAX	32 fl oz/a C						
INTACT	0.5 % v/v C						
4 AUTHORITY FIRST	6 oz/a B		99.0	100.0	0.0	0.0	0.0
METRIBUZIN	5 oz/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
2,4-D	16 fl oz/a B						
MSO	1 % v/v B						
ANTHEM MAXX	3.25 fl oz/a C						
XTENDIMAX	22 fl oz/a C						
ROUNDUP POWERMAX	32 fl oz/a C						
INTACT	0.5 % v/v C						
5 GRAMOXONE SL 2.0	48 fl oz/a B		96.3	100.0	0.0	0.0	0.3
METRIBUZIN	5 oz/a B						
NIS	0.5 % v/v B						
ANTHEM MAXX	3.25 fl oz/a C						
XTENDIMAX	22 fl oz/a C						
ROUNDUP POWERMAX	32 fl oz/a C						
INTACT	0.5 % v/v C						

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Missing data estimates are included in columns:Yates=31,71

Excluded replicate 1 in column 13; 1 in 61; 3 in 73; 3 in 77; 3 in 81

Could not calculate LSD (% mean diff) for columns

1,2,3,4,5,6,7,8,16,17,18,19,20,21,22,23,24,25,31,44,45,46,52,53,54,55,56,57,59,61,64,66,70,73,74,75,76,77,78,79 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	ELEIN	AMARE	AMARE	MOLVE	GERCA
Pest Scientific Name	Eleusine indica	Amaranthus ret>	Amaranthus ret>	Mollugo vertic>	Geranium carol>
Pest Name	Goosegrass	Redroot pigweed	Redroot pigweed	Carpetweed	Carolina geran>
Crop Type, Code	C -	C -	C -	C -	C -
BBCH Scale					
Crop Scientific Name					
Crop Name					
Rating Date	6-26-2019	6-26-2019	6-24-2019	6-24-2019	6-24-2019
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P
Rating Type	CONTRO	CONTROL	COUNT	COUNT	COUNT
Rating Unit	%	%	FT2	FT2	FT2
Number of Subsamples	1	1	1	1	1
Days After First/Last Applic.	72 26	72 26	70 24	70 24	70 24
Plant-Eval Interval	43 DP-1	43 DP-1	41 DP-1	41 DP-1	41 DP-1
ARM Action Codes				ER1	
Number of Decimals					
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	58	59	60
6 VALOR SX	2 oz/a B		94.3	100.0	0.0
XTENDIMAX	22 fl oz/a B				0.0
ROUNDUP POWERMAX	32 fl oz/a B				0.0
INTACT	0.5 % v/v B				0.0
MSO	1 % v/v B				0.0
WARRANT	48 fl oz/a C				0.0
XTENDIMAX	22 fl oz/a C				0.0
ROUNDUP POWERMAX	32 fl oz/a C				0.0
INTACT	0.5 % v/v C				0.0
7 SHARPEN	1 fl oz/a B		98.3	100.0	0.0
LIBERTY 280 SL	29 fl oz/a B				0.0
MSO	1 % v/v B				0.0
ZIDUA	2 oz/a C				0.0
ENGENIA	12.8 fl oz/a C				0.0
ROUNDUP POWERMAX	32 fl oz/a C				0.0
INTACT	0.5 % v/v C				0.0
8 ELEVORE	1 fl oz/a B		97.3	100.0	1.0
ROUNDUP POWERMAX	32 fl oz/a B				0.0
MSO	1 % v/v B				0.0
DUAL II MAGNUM	16 fl oz/a C				0.0
XTENDIMAX	22 fl oz/a C				0.0
ROUNDUP POWERMAX	32 fl oz/a C				0.0
INTACT	0.5 % v/v C				0.0
LSD P=.05	3.51	.	8.08	.	0.69
Standard Deviation	2.39	0.00	5.49	0.00	0.47
CV	2.8	0.0	462.57	0.0	301.36
Replicate F	1.158	0.000	1.297	0.000	0.893
Replicate Prob(F)	0.3490	1.0000	0.3017	1.0000	0.4613
Treatment F	834.939	0.000	1.174	0.000	0.624
Treatment Prob(F)	0.0001	1.0000	0.3589	1.0000	0.7304

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Missing data estimates are included in columns:Yates=31,71

Excluded replicate 1 in column 13; 1 in 61; 3 in 73; 3 in 77; 3 in 81

Could not calculate LSD (% mean diff) for columns

1,2,3,4,5,6,7,8,16,17,18,19,20,21,22,23,24,25,31,44,45,46,52,53,54,55,56,57,59,61,64,66,70,73,74,75,76,77,78,79 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	ELEIN	TRFRE	ERICA	VIOAR	CYPES		
Pest Scientific Name	Eleusine indica	Trifolium repe>	Erigeron canad>	Viola arvensis	Cyperus escul>		
Pest Name	Goosegrass	White clover	Canada horsewe>	Field violet	Yellow nutsedge		
Crop Type, Code	C -	C -	C -	C -	C -		
BBCH Scale							
Crop Scientific Name							
Crop Name							
Rating Date	6-24-2019	6-24-2019	6-24-2019	6-24-2019	6-24-2019		
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P		
Rating Type	COUNT	COUNT	COUNT	COUNT	COUNT		
Rating Unit	FT2	FT2	FT2	FT2	FT2		
Number of Subsamples	1	1	1	1	1		
Days After First/Last Applic.	70 24	70 24	70 24	70 24	70 24		
Plant-Eval Interval	41 DP-1	41 DP-1	41 DP-1	41 DP-1	41 DP-1		
ARM Action Codes							
Number of Decimals							
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code	63	64	65	66	67
1 UNTREATED CHECK			1.5	0.0	7.8	0.0	5.0
2 Crusher - 1 oz/A			0.0	0.0	0.0	0.0	5.0
SOLIDA	1 oz/a A						
HARMONY SG	0.5 oz/a A						
METRIBUZIN	5 oz/a A						
ROUNDUP POWERMAX	32 fl oz/a A						
2,4-D	16 fl oz/a A						
MSO	1 % v/v A						
ANTHEM MAXX	3.25 fl oz/a C						
XTENDIMAX	22 fl oz/a C						
ROUNDUP POWERMAX	32 fl oz/a C						
INTACT	0.5 % v/v C						
3 Firstshot - 0.5 oz/A			0.0	0.0	0.5	0.0	0.0
HARMONY SG	0.25 oz/a B						
EXPRESS SG	0.25 oz/a B						
METRIBUZIN	5 oz/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
2,4-D	16 fl oz/a B						
MSO	1 % v/v B						
ANTHEM MAXX	3.25 fl oz/a C						
XTENDIMAX	22 fl oz/a C						
ROUNDUP POWERMAX	32 fl oz/a C						
INTACT	0.5 % v/v C						
4 AUTHORITY FIRST	6 oz/a B		0.0	0.0	0.0	0.0	7.0
METRIBUZIN	5 oz/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
2,4-D	16 fl oz/a B						
MSO	1 % v/v B						
ANTHEM MAXX	3.25 fl oz/a C						
XTENDIMAX	22 fl oz/a C						
ROUNDUP POWERMAX	32 fl oz/a C						
INTACT	0.5 % v/v C						
5 GRAMOXONE SL 2.0	48 fl oz/a B		0.3	0.0	3.3	0.0	1.5
METRIBUZIN	5 oz/a B						
NIS	0.5 % v/v B						
ANTHEM MAXX	3.25 fl oz/a C						
XTENDIMAX	22 fl oz/a C						
ROUNDUP POWERMAX	32 fl oz/a C						
INTACT	0.5 % v/v C						

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Missing data estimates are included in columns:Yates=31,71

Excluded replicate 1 in column 13; 1 in 61; 3 in 73; 3 in 77; 3 in 81

Could not calculate LSD (% mean diff) for columns

1,2,3,4,5,6,7,8,16,17,18,19,20,21,22,23,24,25,31,44,45,46,52,53,54,55,56,57,59,61,64,66,70,73,74,75,76,77,78,79 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	ELEIN	TRFRE	ERICA	VIOAR	CYPES
Pest Scientific Name	Eleusine indica	Trifolium repe>	Erigeron canad>	Viola arvensis	Cyperus escul>
Pest Name	Goosegrass	White clover	Canada horsewe>	Field violet	Yellow nutsedge
Crop Type, Code	C -	C -	C -	C -	C -
BBCH Scale					
Crop Scientific Name					
Crop Name					
Rating Date	6-24-2019	6-24-2019	6-24-2019	6-24-2019	6-24-2019
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P
Rating Type	COUNT	COUNT	COUNT	COUNT	COUNT
Rating Unit	FT2	FT2	FT2	FT2	FT2
Number of Subsamples	1	1	1	1	1
Days After First/Last Applic.	70 24	70 24	70 24	70 24	70 24
Plant-Eval Interval	41 DP-1	41 DP-1	41 DP-1	41 DP-1	41 DP-1
ARM Action Codes					
Number of Decimals					
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	63	64	65
6 VALOR SX	2 oz/a B		1.0	0.0	0.0
XTENDIMAX	22 fl oz/a B				
ROUNDUP POWERMAX	32 fl oz/a B				
INTACT	0.5 % v/v B				
MSO	1 % v/v B				
WARRANT	48 fl oz/a C				
XTENDIMAX	22 fl oz/a C				
ROUNDUP POWERMAX	32 fl oz/a C				
INTACT	0.5 % v/v C				
7 SHARPEN	1 fl oz/a B		0.5	0.0	0.0
LIBERTY 280 SL	29 fl oz/a B				
MSO	1 % v/v B				
ZIDUA	2 oz/a C				
ENGENIA	12.8 fl oz/a C				
ROUNDUP POWERMAX	32 fl oz/a C				
INTACT	0.5 % v/v C				
8 ELEVORE	1 fl oz/a B		1.0	0.0	0.3
ROUNDUP POWERMAX	32 fl oz/a B				
MSO	1 % v/v B				
DUAL II MAGNUM	16 fl oz/a C				
XTENDIMAX	22 fl oz/a C				
ROUNDUP POWERMAX	32 fl oz/a C				
INTACT	0.5 % v/v C				
LSD P=.05	1.63	.	3.45	.	9.87
Standard Deviation	1.11	0.00	2.35	0.00	6.71
CV	208.06	0.0	159.95	0.0	275.44
Replicate F	6.301	0.000	1.410	0.000	2.073
Replicate Prob(F)	0.0032	1.0000	0.2678	1.0000	0.1344
Treatment F	1.078	0.000	5.558	0.000	0.694
Treatment Prob(F)	0.4114	1.0000	0.0010	1.0000	0.6768

t=Mean descriptions are reported in transformed data units, and are not de-transformed.

Missing data estimates are included in columns:Yates=31,71

Excluded replicate 1 in column 13; 1 in 61; 3 in 73; 3 in 77; 3 in 81

Could not calculate LSD (% mean diff) for columns

1,2,3,4,5,6,7,8,16,17,18,19,20,21,22,23,24,25,31,44,45,46,52,53,54,55,56,57,59,61,64,66,70,73,74,75,76,77,78,79 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	OXAST	DIGSA	SORHA	SIDSP	LOLMG		
Pest Scientific Name	Oxalis stricta	Digitaria sang>	Sorghum halepe>	Sida spinosa	Lolium multifi>		
Pest Name	European wood >	large crabgrass	Johnson grass	Prickly sida	Annual ryegrass		
Crop Type, Code	C -	C -	C -	C -	C -		
BBCH Scale							
Crop Scientific Name							
Crop Name							
Rating Date	6-24-2019	6-24-2019	6-24-2019	6-24-2019	6-24-2019		
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P		
Rating Type	COUNT	COUNT	COUNT	COUNT	COUNT		
Rating Unit	FT2	FT2	FT2	FT2	FT2		
Number of Subsamples	1	1	1	1	1		
Days After First/Last Applic.	70 24	70 24	70 24	70 24	70 24		
Plant-Eval Interval	41 DP-1	41 DP-1	41 DP-1	41 DP-1	41 DP-1		
ARM Action Codes	AL	EC					
Number of Decimals							
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code	68	69	70	71	72
1 UNTREATED CHECK			2.1	5.5	0.0	0.0	0.0
2 Crusher - 1 oz/A			1.5	0.5	0.0	0.5	0.3
SOLIDA	1 oz/a A						
HARMONY SG	0.5 oz/a A						
METRIBUZIN	5 oz/a A						
ROUNDUP POWERMAX	32 fl oz/a A						
2,4-D	16 fl oz/a A						
MSO	1 % v/v A						
ANTHEM MAXX	3.25 fl oz/a C						
XTENDIMAX	22 fl oz/a C						
ROUNDUP POWERMAX	32 fl oz/a C						
INTACT	0.5 % v/v C						
3 Firstshot - 0.5 oz/A			1.6	0.5	0.0	0.0	0.8
HARMONY SG	0.25 oz/a B						
EXPRESS SG	0.25 oz/a B						
METRIBUZIN	5 oz/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
2,4-D	16 fl oz/a B						
MSO	1 % v/v B						
ANTHEM MAXX	3.25 fl oz/a C						
XTENDIMAX	22 fl oz/a C						
ROUNDUP POWERMAX	32 fl oz/a C						
INTACT	0.5 % v/v C						
4 AUTHORITY FIRST	6 oz/a B		0.7	0.0	0.0	0.0	0.3
METRIBUZIN	5 oz/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
2,4-D	16 fl oz/a B						
MSO	1 % v/v B						
ANTHEM MAXX	3.25 fl oz/a C						
XTENDIMAX	22 fl oz/a C						
ROUNDUP POWERMAX	32 fl oz/a C						
INTACT	0.5 % v/v C						
5 GRAMOXONE SL 2.0	48 fl oz/a B		0.7	0.3	0.0	0.0	0.0
METRIBUZIN	5 oz/a B						
NIS	0.5 % v/v B						
ANTHEM MAXX	3.25 fl oz/a C						
XTENDIMAX	22 fl oz/a C						
ROUNDUP POWERMAX	32 fl oz/a C						
INTACT	0.5 % v/v C						

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Missing data estimates are included in columns:Yates=31,71

Excluded replicate 1 in column 13; 1 in 61; 3 in 73; 3 in 77; 3 in 81

Could not calculate LSD (% mean diff) for columns

1,2,3,4,5,6,7,8,16,17,18,19,20,21,22,23,24,25,31,44,45,46,52,53,54,55,56,57,59,61,64,66,70,73,74,75,76,77,78,79 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	OXAST	DIGSA	SORHA	SIDSP	LOLMG
Pest Scientific Name	Oxalis stricta	Digitaria sang>	Sorghum halepe>	Sida spinosa	Lolium multifi>
Pest Name	European wood >	large crabgrass	Johnson grass	Prickly sida	Annual ryegrass
Crop Type, Code	C -	C -	C -	C -	C -
BBCH Scale					
Crop Scientific Name					
Crop Name					
Rating Date	6-24-2019	6-24-2019	6-24-2019	6-24-2019	6-24-2019
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P
Rating Type	COUNT	COUNT	COUNT	COUNT	COUNT
Rating Unit	FT2	FT2	FT2	FT2	FT2
Number of Subsamples	1	1	1	1	1
Days After First/Last Applic.	70 24	70 24	70 24	70 24	70 24
Plant-Eval Interval	41 DP-1	41 DP-1	41 DP-1	41 DP-1	41 DP-1
ARM Action Codes	AL	EC			
Number of Decimals					
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	68	69	70
6 VALOR SX	2 oz/a B		0.3	1.0	0.0
XTENDIMAX	22 fl oz/a B				
ROUNDUP POWERMAX	32 fl oz/a B				
INTACT	0.5 % v/v B				
MSO	1 % v/v B				
WARRANT	48 fl oz/a C				
XTENDIMAX	22 fl oz/a C				
ROUNDUP POWERMAX	32 fl oz/a C				
INTACT	0.5 % v/v C				
7 SHARPEN	1 fl oz/a B		0.6	0.0	0.0
LIBERTY 280 SL	29 fl oz/a B				
MSO	1 % v/v B				
ZIDUA	2 oz/a C				
ENGENIA	12.8 fl oz/a C				
ROUNDUP POWERMAX	32 fl oz/a C				
INTACT	0.5 % v/v C				
8 ELEVORE	1 fl oz/a B		2.1	0.5	0.0
ROUNDUP POWERMAX	32 fl oz/a B				
MSO	1 % v/v B				
DUAL II MAGNUM	16 fl oz/a C				
XTENDIMAX	22 fl oz/a C				
ROUNDUP POWERMAX	32 fl oz/a C				
INTACT	0.5 % v/v C				
LSD P=.05			1.97 - 2.23	1.10	.
Standard Deviation			0.29t	0.74	0.00
CV			91.04t	189.05	0.0
Replicate F			2.142	1.101	0.000
Replicate Prob(F)			0.1252	0.3745	1.0000
Treatment F			0.999	0.885	0.000
Treatment Prob(F)			0.4593	0.5258	1.0000
					0.61
					0.41
					405.6
					0.838
					0.4889
					0.794
					0.6009
					1.362
					0.2816
					0.855
					0.5561

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Missing data estimates are included in columns:Yates=31,71

Excluded replicate 1 in column 13; 1 in 61; 3 in 73; 3 in 77; 3 in 81

Could not calculate LSD (% mean diff) for columns

1,2,3,4,5,6,7,8,16,17,18,19,20,21,22,23,24,25,31,44,45,46,52,53,54,55,56,57,59,61,64,66,70,73,74,75,76,77,78,79 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	TAROF	SETPU	SOLNI	SETVI	PHBPU		
Pest Scientific Name	Taraxacum offi>	Setaria helvola	Solanum nigrum	Setaria viridis	Ipomoea purpur>		
Pest Name	Blowball	yellow foxtail	Black nightsha>	Green foxtail	Tall morning g>		
Crop Type, Code	C -	C -	C -	C -	C -		
BBCH Scale							
Crop Scientific Name							
Crop Name							
Rating Date	6-24-2019	6-24-2019	6-24-2019	6-24-2019	6-24-2019		
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P		
Rating Type	COUNT	COUNT	COUNT	COUNT	COUNT		
Rating Unit	FT2	FT2	FT2	FT2	FT2		
Number of Subsamples	1	1	1	1	1		
Days After First/Last Applic.	70 24	70 24	70 24	70 24	70 24		
Plant-Eval Interval	41 DP-1	41 DP-1	41 DP-1	41 DP-1	41 DP-1		
ARM Action Codes	ER3	ET7					
Number of Decimals							
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code	73	74	75	76	77
1 UNTREATED CHECK			0.0	0.0	0.0	0.0	0.0
2 Crusher - 1 oz/A			0.0	0.0	0.0	0.0	0.0
SOLIDA	1 oz/a	A					
HARMONY SG	0.5 oz/a	A					
METRIBUZIN	5 oz/a	A					
ROUNDUP POWERMAX	32 fl oz/a	A					
2,4-D	16 fl oz/a	A					
MSO	1 % v/v	A					
ANTHEM MAXX	3.25 fl oz/a	C					
XTENDIMAX	22 fl oz/a	C					
ROUNDUP POWERMAX	32 fl oz/a	C					
INTACT	0.5 % v/v	C					
3 Firstshot - 0.5 oz/A			0.0	0.0	0.0	0.0	0.0
HARMONY SG	0.25 oz/a	B					
EXPRESS SG	0.25 oz/a	B					
METRIBUZIN	5 oz/a	B					
ROUNDUP POWERMAX	32 fl oz/a	B					
2,4-D	16 fl oz/a	B					
MSO	1 % v/v	B					
ANTHEM MAXX	3.25 fl oz/a	C					
XTENDIMAX	22 fl oz/a	C					
ROUNDUP POWERMAX	32 fl oz/a	C					
INTACT	0.5 % v/v	C					
4 AUTHORITY FIRST	6 oz/a	B	0.0	0.0	0.0	0.0	0.0
METRIBUZIN	5 oz/a	B					
ROUNDUP POWERMAX	32 fl oz/a	B					
2,4-D	16 fl oz/a	B					
MSO	1 % v/v	B					
ANTHEM MAXX	3.25 fl oz/a	C					
XTENDIMAX	22 fl oz/a	C					
ROUNDUP POWERMAX	32 fl oz/a	C					
INTACT	0.5 % v/v	C					
5 GRAMOXONE SL 2.0	48 fl oz/a	B	0.0	0.0	0.0	0.0	0.0
METRIBUZIN	5 oz/a	B					
NIS	0.5 % v/v	B					
ANTHEM MAXX	3.25 fl oz/a	C					
XTENDIMAX	22 fl oz/a	C					
ROUNDUP POWERMAX	32 fl oz/a	C					
INTACT	0.5 % v/v	C					

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Missing data estimates are included in columns:Yates=31,71

Excluded replicate 1 in column 13; 1 in 61; 3 in 73; 3 in 77; 3 in 81

Could not calculate LSD (% mean diff) for columns

1,2,3,4,5,6,7,8,16,17,18,19,20,21,22,23,24,25,31,44,45,46,52,53,54,55,56,57,59,61,64,66,70,73,74,75,76,77,78,79 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	TAROF	SETPU	SOLNI	SETVI	PHBPU
Pest Scientific Name	Taraxacum offi>	Setaria helvola	Solanum nigrum	Setaria viridis	Ipomoea purpur>
Pest Name	Blowball	yellow foxtail	Black nightsha>	Green foxtail	Tall morning g>
Crop Type, Code	C -	C -	C -	C -	C -
BBCH Scale					
Crop Scientific Name					
Crop Name					
Rating Date	6-24-2019	6-24-2019	6-24-2019	6-24-2019	6-24-2019
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P
Rating Type	COUNT	COUNT	COUNT	COUNT	COUNT
Rating Unit	FT2	FT2	FT2	FT2	FT2
Number of Subsamples	1	1	1	1	1
Days After First/Last Applic.	70 24	70 24	70 24	70 24	70 24
Plant-Eval Interval	41 DP-1	41 DP-1	41 DP-1	41 DP-1	41 DP-1
ARM Action Codes	ER3	ET7			ER3
Number of Decimals					
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	73	74	75
6 VALOR SX	2 oz/a B		0.0	0.0	0.0
XTENDIMAX	22 fl oz/a B				
ROUNDUP POWERMAX	32 fl oz/a B				
INTACT	0.5 % v/v B				
MSO	1 % v/v B				
WARRANT	48 fl oz/a C				
XTENDIMAX	22 fl oz/a C				
ROUNDUP POWERMAX	32 fl oz/a C				
INTACT	0.5 % v/v C				
7 SHARPEN	1 fl oz/a B		0.0	0.3	0.0
LIBERTY 280 SL	29 fl oz/a B				
MSO	1 % v/v B				
ZIDUA	2 oz/a C				
ENGENIA	12.8 fl oz/a C				
ROUNDUP POWERMAX	32 fl oz/a C				
INTACT	0.5 % v/v C				
8 ELEVORE	1 fl oz/a B		0.0	0.0	0.0
ROUNDUP POWERMAX	32 fl oz/a B				
MSO	1 % v/v B				
DUAL II MAGNUM	16 fl oz/a C				
XTENDIMAX	22 fl oz/a C				
ROUNDUP POWERMAX	32 fl oz/a C				
INTACT	0.5 % v/v C				
LSD P=.05			.	.	.
Standard Deviation			0.00	0.00	0.00
CV			0.0	0.0	0.0
Replicate F			0.000	0.000	0.000
Replicate Prob(F)			1.0000	1.0000	1.0000
Treatment F			0.000	0.000	0.000
Treatment Prob(F)			1.0000	1.0000	1.0000

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Missing data estimates are included in columns:Yates=31,71

Excluded replicate 1 in column 13; 1 in 61; 3 in 73; 3 in 77; 3 in 81

Could not calculate LSD (% mean diff) for columns

1,2,3,4,5,6,7,8,16,17,18,19,20,21,22,23,24,25,31,44,45,46,52,53,54,55,56,57,59,61,64,66,70,73,74,75,76,77,78,79 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed						
Pest Code	EPHSS	SIYAN						
Pest Scientific Name	Euphorbia sp.	Sicyos angulat>						
Pest Name	Spurge	Bur-cucumber						
Crop Type, Code	C -	C -	C GLXMA	C GLXMA	C GLXMA	C GLXMA		
BBCH Scale			BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name			Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name			Soybean	Soybean	Soybean	Soybean		
Rating Date	6-24-2019	6-24-2019	10-10-2019	10-10-2019	10-10-2019	10-10-2019		
Part Rated	PLANT P	PLANT P	plant c	plant c	plant c	plant c		
Rating Type	COUNT	COUNT	plot length	weight	moistcon	test weight		
Rating Unit	FT2	FT2	ft	lb	%	lb		
Number of Subsamples	1	1	1	1	1	1		
Days After First/Last Applic.	70 24	70 24	178 132	178 132	178 132	178 132		
Plant-Eval Interval	41 DP-1	41 DP-1	149 DP-1	149 DP-1	149 DP-1	149 DP-1		
ARM Action Codes	EC	ET7	ET2	ER3		ET7		
Number of Decimals								
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	78	79	80	81	82	83
1 UNTREATED CHECK			0.5	0.0	22.925	9.663	13.075	50.60
2 Crusher - 1 oz/A			0.0	0.0	24.025	13.617	13.525	50.83
SOLIDA	1 oz/a	A						
HARMONY SG	0.5 oz/a	A						
METRIBUZIN	5 oz/a	A						
ROUNDUP POWERMAX	32 fl oz/a	A						
2,4-D	16 fl oz/a	A						
MSO	1 % v/v	A						
ANTHEM MAXX	3.25 fl oz/a	C						
XTENDIMAX	22 fl oz/a	C						
ROUNDUP POWERMAX	32 fl oz/a	C						
INTACT	0.5 % v/v	C						
3 Firstshot - 0.5 oz/A			0.0	0.0	25.775	15.120	12.875	50.95
HARMONY SG	0.25 oz/a	B						
EXPRESS SG	0.25 oz/a	B						
METRIBUZIN	5 oz/a	B						
ROUNDUP POWERMAX	32 fl oz/a	B						
2,4-D	16 fl oz/a	B						
MSO	1 % v/v	B						
ANTHEM MAXX	3.25 fl oz/a	C						
XTENDIMAX	22 fl oz/a	C						
ROUNDUP POWERMAX	32 fl oz/a	C						
INTACT	0.5 % v/v	C						
4 AUTHORITY FIRST	6 oz/a	B	0.0	0.0	25.325	14.190	12.170	49.90
METRIBUZIN	5 oz/a	B						
ROUNDUP POWERMAX	32 fl oz/a	B						
2,4-D	16 fl oz/a	B						
MSO	1 % v/v	B						
ANTHEM MAXX	3.25 fl oz/a	C						
XTENDIMAX	22 fl oz/a	C						
ROUNDUP POWERMAX	32 fl oz/a	C						
INTACT	0.5 % v/v	C						
5 GRAMOXONE SL 2.0	48 fl oz/a	B	0.0	0.0	25.888	15.433	13.050	50.88
METRIBUZIN	5 oz/a	B						
NIS	0.5 % v/v	B						
ANTHEM MAXX	3.25 fl oz/a	C						
XTENDIMAX	22 fl oz/a	C						
ROUNDUP POWERMAX	32 fl oz/a	C						
INTACT	0.5 % v/v	C						

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Missing data estimates are included in columns:Yates=31,71

Excluded replicate 1 in column 13; 1 in 61; 3 in 73; 3 in 77; 3 in 81

Could not calculate LSD (% mean diff) for columns

1,2,3,4,5,6,7,8,16,17,18,19,20,21,22,23,24,25,31,44,45,46,52,53,54,55,56,57,59,61,64,66,70,73,74,75,76,77,78,79 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed						
Pest Code	EPHSS	SIYAN						
Pest Scientific Name	Euphorbia sp.	Sicyos angulat>						
Pest Name	Spurge	Bur-cucumber						
Crop Type, Code	C -	C -	C GLXMA	C GLXMA	C GLXMA	C GLXMA		
BBCH Scale			BSOY	BSOY	BSOY	BSOY		
Crop Scientific Name			Glycine max	Glycine max	Glycine max	Glycine max		
Crop Name			Soybean	Soybean	Soybean	Soybean		
Rating Date	6-24-2019	6-24-2019	10-10-2019	10-10-2019	10-10-2019	10-10-2019		
Part Rated	PLANT P	PLANT P	plant c	plant c	plant c	plant c		
Rating Type	COUNT	COUNT	plot length	weight	moistcon	test weight		
Rating Unit	FT2	FT2	ft	lb	%	lb		
Number of Subsamples	1	1	1	1	1	1		
Days After First/Last Applic.	70 24	70 24	178 132	178 132	178 132	178 132		
Plant-Eval Interval	41 DP-1	41 DP-1	149 DP-1	149 DP-1	149 DP-1	149 DP-1		
ARM Action Codes	EC	ET7	ET2	ER3		ET7		
Number of Decimals								
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	78	79	80	81	82	83
6 VALOR SX	2 oz/a B		0.0	0.0	24.313	12.753	10.975	50.13
XTENDIMAX	22 fl oz/a B							
ROUNDUP POWERMAX	32 fl oz/a B							
INTACT	0.5 % v/v B							
MSO	1 % v/v B							
WARRANT	48 fl oz/a C							
XTENDIMAX	22 fl oz/a C							
ROUNDUP POWERMAX	32 fl oz/a C							
INTACT	0.5 % v/v C							
7 SHARPEN	1 fl oz/a B		0.0	0.3	23.988	13.390	11.998	49.63
LIBERTY 280 SL	29 fl oz/a B							
MSO	1 % v/v B							
ZIDUA	2 oz/a C							
ENGENIA	12.8 fl oz/a C							
ROUNDUP POWERMAX	32 fl oz/a C							
INTACT	0.5 % v/v C							
8 ELEVORE	1 fl oz/a B		0.0	0.0	24.350	13.677	11.423	50.93
ROUNDUP POWERMAX	32 fl oz/a B							
MSO	1 % v/v B							
DUAL II MAGNUM	16 fl oz/a C							
XTENDIMAX	22 fl oz/a C							
ROUNDUP POWERMAX	32 fl oz/a C							
INTACT	0.5 % v/v C							
LSD P=.05					3.0430	2.4790	3.3007	1.910
Standard Deviation			0.00	0.00	2.0484	1.4156	2.2446	1.286
CV			0.0	0.0	8.31	10.5	18.12	2.54
Replicate F			0.000	0.000	1.295	2.606	1.029	2.599
Replicate Prob(F)			1.0000	1.0000	0.3065	0.1091	0.3998	0.0840
Treatment F			0.000	0.000	1.092	4.742	0.632	0.432
Treatment Prob(F)			1.0000	1.0000	0.4044	0.0065	0.7247	0.8483

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Missing data estimates are included in columns:Yates=31,71

Excluded replicate 1 in column 13; 1 in 61; 3 in 73; 3 in 77; 3 in 81

Could not calculate LSD (% mean diff) for columns

1,2,3,4,5,6,7,8,16,17,18,19,20,21,22,23,24,25,31,44,45,46,52,53,54,55,56,57,59,61,64,66,70,73,74,75,76,77,78,79 because error mean square = 0.

University of Kentucky

Pest Type			
Pest Code			
Pest Scientific Name			
Pest Name			
Crop Type, Code			C GLXMA
BBCH Scale			BSOY
Crop Scientific Name			Glycine max
Crop Name			Soybean
Rating Date			10-10-2019
Part Rated			plant c
Rating Type			YIELD
Rating Unit			BU
Number of Subsamples			1
Days After First/Last Applic.			178 132
Plant-Eval Interval			149 DP-1
ARM Action Codes			AA TY1
Number of Decimals			1
Trt Treatment	Rate	Appl	
No. Name	Rate Unit	Code	84
1 UNTREATED CHECK			60.2
2 Crusher - 1 oz/A			84.8
SOLIDA	1 oz/a	A	
HARMONY SG	0.5 oz/a	A	
METRIBUZIN	5 oz/a	A	
ROUNDUP POWERMAX	32 fl oz/a	A	
2,4-D	16 fl oz/a	A	
MSO	1 % v/v	A	
ANTHEM MAXX	3.25 fl oz/a	C	
XTENDIMAX	22 fl oz/a	C	
ROUNDUP POWERMAX	32 fl oz/a	C	
INTACT	0.5 % v/v	C	
3 Firstshot - 0.5 oz/A			87.0
HARMONY SG	0.25 oz/a	B	
EXPRESS SG	0.25 oz/a	B	
METRIBUZIN	5 oz/a	B	
ROUNDUP POWERMAX	32 fl oz/a	B	
2,4-D	16 fl oz/a	B	
MSO	1 % v/v	B	
ANTHEM MAXX	3.25 fl oz/a	C	
XTENDIMAX	22 fl oz/a	C	
ROUNDUP POWERMAX	32 fl oz/a	C	
INTACT	0.5 % v/v	C	
4 AUTHORITY FIRST	6 oz/a	B	84.4
METRIBUZIN	5 oz/a	B	
ROUNDUP POWERMAX	32 fl oz/a	B	
2,4-D	16 fl oz/a	B	
MSO	1 % v/v	B	
ANTHEM MAXX	3.25 fl oz/a	C	
XTENDIMAX	22 fl oz/a	C	
ROUNDUP POWERMAX	32 fl oz/a	C	
INTACT	0.5 % v/v	C	
5 GRAMOXONE SL 2.0	48 fl oz/a	B	87.1
METRIBUZIN	5 oz/a	B	
NIS	0.5 % v/v	B	
ANTHEM MAXX	3.25 fl oz/a	C	
XTENDIMAX	22 fl oz/a	C	
ROUNDUP POWERMAX	32 fl oz/a	C	
INTACT	0.5 % v/v	C	

t=Mean descriptions are reported in transformed data units, and are not de-transformed.

Missing data estimates are included in columns:Yates=31,71

Excluded replicate 1 in column 13; 1 in 61; 3 in 73; 3 in 77; 3 in 81

Could not calculate LSD (% mean diff) for columns

1,2,3,4,5,6,7,8,16,17,18,19,20,21,22,23,24,25,31,44,45,46,52,53,54,55,56,57,59,61,64,66,70,73,74,75,76,77,78,79 because error mean square = 0.

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Pest Type			
Pest Code			
Pest Scientific Name			
Pest Name			
Crop Type, Code	C	GLXMA	
BBCH Scale		BSOY	
Crop Scientific Name		Glycine max	
Crop Name		Soybean	
Rating Date	10-10-2019		
Part Rated		plant c	
Rating Type		YIELD	
Rating Unit		BU	
Number of Subsamples		1	
Days After First/Last Applic.	178	132	
Plant-Eval Interval	149	DP-1	
ARM Action Codes	AA	TY1	
Number of Decimals		1	
Trt Treatment	Rate	Appl	
No. Name	Rate Unit	Code	84
6 VALOR SX	2 oz/a	B	84.1
XTENDIMAX	22 fl oz/a	B	
ROUNDUP POWERMAX	32 fl oz/a	B	
INTACT	0.5 % v/v	B	
MSO	1 % v/v	B	
WARRANT	48 fl oz/a	C	
XTENDIMAX	22 fl oz/a	C	
ROUNDUP POWERMAX	32 fl oz/a	C	
INTACT	0.5 % v/v	C	
7 SHARPEN	1 fl oz/a	B	85.9
LIBERTY 280 SL	29 fl oz/a	B	
MSO	1 % v/v	B	
ZIDUA	2 oz/a	C	
ENGENIA	12.8 fl oz/a	C	
ROUNDUP POWERMAX	32 fl oz/a	C	86.8
INTACT	0.5 % v/v	C	
8 ELEVORE	1 fl oz/a	B	
ROUNDUP POWERMAX	32 fl oz/a	B	
MSO	1 % v/v	B	
DUAL II MAGNUM	16 fl oz/a	C	
XTENDIMAX	22 fl oz/a	C	
ROUNDUP POWERMAX	32 fl oz/a	C	
INTACT	0.5 % v/v	C	
LSD P=.05			5.70 - 7.54
Standard Deviation			3.06t
CV			4.66t
Replicate F			7.868
Replicate Prob(F)			0.0010
Treatment F			15.703
Treatment Prob(F)			0.0001

t=Mean descriptions are reported in transformed data units, and are not de-transformed.

Missing data estimates are included in columns: Yates=31,71

Excluded replicate 1 in column 13; 1 in 61; 3 in 73; 3 in 77; 3 in 81

Could not calculate LSD (% mean diff) for columns

1,2,3,4,5,6,7,8,16,17,18,19,20,21,22,23,24,25,31,44,45,46,52,53,54,55,56,57,59,61,64,66,70,73,74,75,76,77,78,79 because error mean square = 0.

University of Kentucky

EVALUATING EARLY PRE PLANT HERBICIDE PROGRAMS IN DICAMBA-TOLERANT SOYBEAN

Trial ID: 19-34 SOY-REC Location: UKREC - K200A Trial Year: 2019
 Protocol ID: USA-19-773 Investigator: Travis Legleiter
 Project ID: Study Director:
 Sponsor Contact: Matthew Wiggins

Pest Type

W, Weed = Weed or volunteer crop

Pest Code

ERICA, Erigeron canadensis, Canada horseweed = US
 LAMPU, Lamium purpureum, Purple deadnettle = US
 GERCA, Geranium carolinianum, Carolina geranium = US
 LOLMG, Lolium multiflorum gaudini, Annual ryegrass = US
 ELEIN, Eleusine indica, Goosegrass = US
 AMARE, Amaranthus retroflexus, Redroot pigweed = US
 MOLVE, Mollugo verticillata, Carpetweed = US
 TRFRE, Trifolium repens, White clover = US
 VIOAR, Viola arvensis, Field violet = US
 CYPES, Cyperus esculentus, Yellow nutsedge = US
 OXAST, Oxalis stricta, European wood sorrel = US
 DIGSA, Digitaria sanguinalis, large crabgrass = US
 SORHA, Sorghum halepense, Johnson grass = US
 SIDSP, Sida spinosa, Prickly sida = US
 TAROF, Taraxacum officinale, Blowball = US
 SETPU, Setaria helvola, yellow foxtail = US
 SOLNI, Solanum nigrum, Black nightshade = US
 SETVI, Setaria viridis, Green foxtail = US
 PHBPU, Ipomoea purpurea, Tall morning glory = US
 EPHSS, Euphorbia sp., Spurge = US
 SIYAN, Sicyos angulatus, Bur-cucumber = US

Crop Type Code

C = EPPO species (Bayer) codes
 GLXMA, BSOY, Glycine max, Soybean = US

Part Rated

PLANT = plant
 P = Pest is Part Rated
 C = Crop is Part Rated

Rating Type

CONTRO = control / burndown or knockdown
 PHYGEN = phytotoxicity - general / injury
 PHYCHL = phytotoxicity - chlorosis
 PHYNEC = phytotoxicity - necrosis /burn
 PHYSTU = phytotoxicity - stunting
 COUNT = count
 YIELD = yield

Rating Unit

% = percent
 FT2 = square foot
 ft = foot
 lb = pound
 BU = bushel

Plant-Eval Interval

-22 DP-1 = 1 GLXMA 5-14-2019
 -13 DP-1 = 1 GLXMA 5-14-2019
 -4 DP-1 = 1 GLXMA 5-14-2019
 3 DP-1 = 1 GLXMA 5-14-2019
 9 DP-1 = 1 GLXMA 5-14-2019
 16 DP-1 = 1 GLXMA 5-14-2019
 17 DP-1 = 1 GLXMA 5-14-2019
 22 DP-1 = 1 GLXMA 5-14-2019
 31 DP-1 = 1 GLXMA 5-14-2019
 43 DP-1 = 1 GLXMA 5-14-2019
 41 DP-1 = 1 GLXMA 5-14-2019
 149 DP-1 = 1 GLXMA 5-14-2019

ARM Action Codes

ET2 = Excluded treatment 2
 EC = Do not analyze untreated check, while still reporting treatment mean on AOV Means Table
 ER1 = Excluded replicate 1
 AS = Automatic square root transformation of X+0.5
 AA = Automatic arcsine square root % transformation
 AL = Automatic log transformation of X+1
 ET8 = Excluded treatment 8
 ET7 = Excluded treatment 7
 ER3 = Excluded replicate 3
 TY1 = $(726/(5*[80]))*[81]*(100-[82])/86.5$

University of Kentucky

EVALUATING AUTHORITY BRANDS AND ANTHEM MAXX FOR WEED CONTROL IN DICAMBA-TOLERANT SOYBEANS

Trial ID: 19-36 SOY-REC Location: UKREC - 201-D Trial Year: 2019
 Protocol ID: USA-19-764 Investigator: Travis Legleiter
 Project ID: Study Director:
 Sponsor Contact: Matthew Wiggins

General Trial Information

Investigator: Travis Legleiter **Title:** Assistant Extension Professor

Trial Status: E established

ARM Trial Created On: 4-5-2019

Trial Location

City: Princeton
State/Prov.: Kentucky
Postal Code: 42445

Latitude of LL Corner °: 37.096763 N
Longitude of LL Corner °: 87.856503 W

Conducted Under GLP: No
Conducted Under GEP: No

Investigator: Travis Legleiter **Title:** Assistant Extension Professor
Organization: University of Kentucky
Address: 1205 Hopkinsville Street **Phone No.:** 859-562-1323
City+State/Prov: Princeton, KY
Postal Code: 42445 **E-mail:** Travis.Legleiter@uky.edu

Crop Description

Crop 1: C GLXMA Glycine max Soybean **BBCH Scale:** BSOY
Entry Date: 8-27-2019
Variety: Asgrow 42X6
Planting Date: 5-14-2019 **Planting Rate:** 140000 S/A
Depth: 1 IN
Rows per Plot: 7 **Planting Method:** PLANTD planted
Row Spacing: 15 IN **Planting Equipment:** VP vacuum planter
Soil Moisture: SLIDRY slightly dry
Harvested Width: 5 FT
% Standard Moisture: 13.5

Pest Description

Pest 1 Type: W **Code:** AMAPA *Amaranthus palmeri*
Common Name: Palmer amaranth

Pest 2 Type: W **Code:** IPOLA *Ipomoea lacunosa*
Common Name: pitted morning glory

Pest 3 Type: W **Code:** ECHCG *Echinochloa crus-galli*
Common Name: Common barnyard grass

Pest 4 Type: W **Code:** AMATU *Amaranthus tuberculatus*
Common Name: Tall waterhemp

Pest 5 Type: W **Code:** ABUTH *Abutilon theophrasti*
Common Name: velvetleaf

Pest 6 Type: W **Code:** CHEAL *Chenopodium album*
Common Name: common lambsquarters

Site and Design

Treated Plot Width: 10 FT
Treated Plot Length: 30 FT
Treated Plot Area: 300 FT² **Treatments:** 10 **Tillage Type:** CONTIL conventional-till
Replications: 4 **Study Design:** RACOB� Randomized Complete Block (RCB)

Field Prep./Maintenance:

Disced -4/29/19
 Field Cultivated and Cultipacked - 5/14/19

Soil Description

% Sand: 4 **% OM:** 3 **Texture:** SIL silt loam
% Silt: 77 **Soil Name:** Crider Silt Loam
% Clay: 19

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Moisture and Weather Conditions
Overall Moisture Conditions: ABONOR above normal

Closest Weather Station: Princeton Mesonet **Distance:** 0.25 mi

Application Description

	A	B
Application Date	5-16-2019	6-3-2019
Appl. Start Time	8:38 AM	10:10 AM
Appl. Stop Time	9:00 AM	10:30 AM
Interval to Prev. Appl.		18 DAYS
Application Method	SPRAY	SPRAY
Application Timing	PREPRE	POSPOS
Application Placement	BROSOI	BROFOL
Appl. Entry Date	8-27-2019	8-27-2019
Air Temperature Start, Stop	74 F	72 F
% Relative Humidity Start, Stop	63	45
Wind Velocity+Dir. Start	2 MPH SW	4.6 MPH E
Wet Leaves (Y/N)	N no	N no
Soil Temperature	64 F	71 F
Soil Moisture	wet	
% Cloud Cover	2	0

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale	GLXMA BSOY	GLXMA BSOY
Stage Majority, Percent	00	13

Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale	AMAPA W	AMAPA W
Pest 2 Code, Type, Scale	IPOLA W	IPOLA W
Pest 3 Code, Type, Scale	ECHCG W	ECHCG W
Pest 4 Code, Type, Scale	AMATU W	AMATU W
Pest 5 Code, Type, Scale	ABUTH W	ABUTH W
Pest 6 Code, Type, Scale	CHEAL W	CHEAL W

Application Equipment

	A	B
Appl. Equipment	CO2 BACKPACK	CO2 BACKPACK
Equipment Type	BACCAI	BACCAI
Operation Pressure	31 PSI	49 PSI
Nozzle Type	FLAFXR	TTI110015
Nozzle Size	02	015
Nozzle Spacing	20 IN	20 IN
Boom Length	6.7 FT	6.7 FT
Boom Height	18 IN	18 IN
Ground Speed	3 MPH	3 MPH
Carrier	H2O	H2O
Application Amount	15 GAL/AC	15 GAL/AC
Mix Overage	436 mL	436 mL
Mix Size	2 L	2 L
Propellant	COMCO2	COMCO2

Context	Date	By	Notes
STATUS	4-5-2019	Travis Legleiter	Automatically added by ARM: Trial Status updated to 'S' during trial creation.
STATUS	8-27-2019	Travis Legleiter	Automatically added by ARM: Trial Status updated to 'E' when Planting Date entered.

University of Kentucky

EVALUATING AUTHORITY BRANDS AND ANTHEM MAXX FOR WEED CONTROL IN DICAMBA-TOLERANT SOYBEANS

Trial ID: 19-36_SOY-REC Location: UKREC - 201-D Trial Year: 2019
 Protocol ID: USA-19-764 Investigator: Travis Legleiter
 Project ID: Study Director:
 Sponsor Contact: Matthew Wiggins

Pest Type					W Weed IPOLA Ipomoea lacuno> pitted morning> C -	W Weed DIGSA Digitaria sang> large crabgrass C -		
Pest Code								
Pest Scientific Name								
Pest Name								
Crop Type, Code	C GLXMA BSOY	C GLXMA BSOY	C GLXMA BSOY	C GLXMA BSOY				
BBCH Scale								
Crop Scientific Name	Glycine max Soybean	Glycine max Soybean	Glycine max Soybean	Glycine max Soybean				
Crop Name								
Rating Date	5-23-2019	5-23-2019	5-23-2019	5-23-2019	5-23-2019	5-23-2019		
Part Rated	PLANT C	PLANT C	PLANT C	PLANT C	PLANT P	PLANT P		
Rating Type	PHYGEN	PHYCHL	PHYNEC	PHYSTU	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%		
Sample Size								
Number of Subsamples	1	1	1	1	1	1		
Data Entry Date	8-27-2019	8-27-2019	8-27-2019	8-27-2019	8-27-2019	8-27-2019		
Days After First/Last Applic.	7 7	7 7	7 7	7 7	7 7	7 7		
Plant-Eval Interval	9 DP-1	9 DP-1	9 DP-1	9 DP-1	9 DP-1	9 DP-1		
ARM Action Codes								
Number of Decimals								
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	1	2	3	4	5	6
1 UNTREATED CHECK			0.0	0.0	0.0	0.0	0.0	0.0
2 VHP58-R002	7 fl oz/a A		0.0	0.0	0.0	0.0	91.3	100.0
ROUNDUP POWERMAX	32 fl oz/a A							
ANTHEM MAXX	3.25 fl oz/a B							
XTENDIMAX	22 fl oz/a B							
ROUNDUP POWERMAX	32 fl oz/a B							
INTACT	0.5 % v/v B							
3 VHP58-R002	9 fl oz/a A		0.0	0.0	0.0	0.0	91.3	100.0
ROUNDUP POWERMAX	32 fl oz/a A							
ANTHEM MAXX	2.5 fl oz/a B							
XTENDIMAX	22 fl oz/a B							
ROUNDUP POWERMAX	32 fl oz/a B							
INTACT	0.5 % v/v B							
4 AUTHORITY ELITE	26 fl oz/a A		0.0	0.0	0.0	0.0	88.8	100.0
ROUNDUP POWERMAX	32 fl oz/a A							
ANTHEM MAXX	3.25 fl oz/a B							
XTENDIMAX	22 fl oz/a B							
ROUNDUP POWERMAX	32 fl oz/a B							
INTACT	0.5 % v/v B							
5 AUTHORITY SUPREME	6.4 fl oz/a A		0.0	0.0	0.0	0.0	90.0	100.0
ROUNDUP POWERMAX	32 fl oz/a A							
ANTHEM MAXX	2.5 fl oz/a B							
XTENDIMAX	22 fl oz/a B							
ROUNDUP POWERMAX	32 fl oz/a B							
INTACT	0.5 % v/v B							
6 ANTHEM MAXX	3.25 fl oz/a A		0.0	0.0	0.0	0.0	86.3	100.0
METRIBUZIN	5 oz/a A							
ROUNDUP POWERMAX	32 fl oz/a A							
ANTHEM MAXX	2.5 fl oz/a B							
XTENDIMAX	22 fl oz/a B							
ROUNDUP POWERMAX	32 fl oz/a B							
INTACT	0.5 % v/v B							
7 VALOR SX	2 oz/a A		0.0	0.0	0.0	0.0	91.3	100.0
ROUNDUP POWERMAX	32 fl oz/a A							
WARRANT	48 fl oz/a B							
XTENDIMAX	22 fl oz/a B							
ROUNDUP POWERMAX	32 fl oz/a B							
INTACT	0.5 % v/v B							

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 Missing data estimates are included in columns: Yates=63,64,65,66,67
 Excluded replicate 4 in column 19; 1 in 36; 1 in 38; 3 in 63; 1 in 66; 1 in 67
 Could not calculate LSD (% mean diff) for columns 1,2,3,4,6,7,8,9,10,19,21,23,24,26,29,31,34,35,36,37,38,39,42,43,46,47,48,49,51,54,56,57,59,61
 because error mean square = 0.

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Pest Type					W Weed IPOLA	W Weed DIGSA		
Pest Code					Ipomoea lacuno>	Digitaria sang>		
Pest Scientific Name					pitted morning>	large crabgrass		
Pest Name					C -	C -		
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA	C GLXMA				
BBCH Scale	BSOY	BSOY	BSOY	BSOY				
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max				
Crop Name	Soybean	Soybean	Soybean	Soybean				
Rating Date	5-23-2019	5-23-2019	5-23-2019	5-23-2019	5-23-2019	5-23-2019		
Part Rated	PLANT C	PLANT C	PLANT C	PLANT C	PLANT P	PLANT P		
Rating Type	PHYGEN	PHYCHL	PHYNEC	PHYSTU	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%		
Sample Size								
Number of Subsamples	1	1	1	1	1	1		
Data Entry Date	8-27-2019	8-27-2019	8-27-2019	8-27-2019	8-27-2019	8-27-2019		
Days After First/Last Applic.	7 7	7 7	7 7	7 7	7 7	7 7		
Plant-Eval Interval	9 DP-1	9 DP-1	9 DP-1	9 DP-1	9 DP-1	9 DP-1		
ARM Action Codes								
Number of Decimals								
Trt Treatment No. Name	Rate Rate Unit	Appl Code	1	2	3	4	5	6
8 ZIDUA PRO	6 fl oz/a A		0.0	0.0	0.0	0.0	92.5	100.0
ROUNDUP POWERMAX	32 fl oz/a A							
OUTLOOK	12 fl oz/a B							
ENGENIA	12.8 fl oz/a B							
ROUNDUP POWERMAX	32 fl oz/a B							
INTACT	0.5 % v/v B							
9 FIERCE	3 oz/a A		0.0	0.0	0.0	0.0	95.0	100.0
ROUNDUP POWERMAX	32 fl oz/a A							
DUAL II MAGNUM	16 fl oz/a B							
XTENDIMAX	22 fl oz/a B							
ROUNDUP POWERMAX	32 fl oz/a B							
INTACT	0.5 % v/v B							
10 BOUNDARY	24 oz/a A		0.0	0.0	0.0	0.0	93.8	100.0
ROUNDUP POWERMAX	32 fl oz/a A							
TAVIUM	56.5 fl oz/a B							
ROUNDUP POWERMAX	32 fl oz/a B							
INTACT	0.5 % v/v B							
LSD P=.05							7.63	
Standard Deviation			0.00	0.00	0.00	0.00	5.26	0.00
CV			0.0	0.0	0.0	0.0	6.42	0.0
Replicate F			0.000	0.000	0.000	0.000	5.298	0.000
Replicate Prob(F)			1.0000	1.0000	1.0000	1.0000	0.0053	1.0000
Treatment F			0.000	0.000	0.000	0.000	120.813	0.000
Treatment Prob(F)			1.0000	1.0000	1.0000	1.0000	0.0001	1.0000

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Missing data estimates are included in columns:Yates=63,64,65,66,67

Excluded replicate 4 in column 19; 1 in 36; 1 in 38; 3 in 63; 1 in 66; 1 in 67

Could not calculate LSD (% mean diff) for columns 1,2,3,4,6,7,8,9,10,19,21,23,24,26,29,31,34,35,36,37,38,39,42,43,46,47,48,49,51,54,56,57,59,61 because error mean square = 0.

University of Kentucky

Pest Type					W Weed DIGSA	W Weed IPOLA		
Pest Code					Digitaria sang>	Ipomoea lacuno>		
Pest Scientific Name					large crabgrass	pitted morning>		
Pest Name					C -	C -		
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA	C GLXMA				
BBCH Scale	BSOY	BSOY	BSOY	BSOY				
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max				
Crop Name	Soybean	Soybean	Soybean	Soybean				
Rating Date	5-30-2019	5-30-2019	5-30-2019	5-30-2019	5-30-2019	5-30-2019		
Part Rated	PLANT C	PLANT C	PLANT C	PLANT C	PLANT P	PLANT P		
Rating Type	PHYGEN	PHYCHL	PHYNEC	PHYSTU	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%		
Sample Size								
Number of Subsamples	1	1	1	1	1	1		
Data Entry Date	8-27-2019	8-27-2019	8-27-2019	8-27-2019	8-27-2019	8-27-2019		
Days After First/Last Applic.	14 14	14 14	14 14	14 14	14 14	14 14		
Plant-Eval Interval	16 DP-1	16 DP-1	16 DP-1	16 DP-1	16 DP-1	16 DP-1		
ARM Action Codes								
Number of Decimals								
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	7	8	9	10	11	12
1 UNTREATED CHECK			0.0	0.0	0.0	0.0	0.0	0.0
2 VHP58-R002	7 fl oz/a A		0.0	0.0	0.0	0.0	88.8	89.3
ROUNDUP POWERMAX	32 fl oz/a A							
ANTHEM MAXX	3.25 fl oz/a B							
XTENDIMAX	22 fl oz/a B							
ROUNDUP POWERMAX	32 fl oz/a B							
INTACT	0.5 % v/v B							
3 VHP58-R002	9 fl oz/a A		0.0	0.0	0.0	0.0	90.5	89.3
ROUNDUP POWERMAX	32 fl oz/a A							
ANTHEM MAXX	2.5 fl oz/a B							
XTENDIMAX	22 fl oz/a B							
ROUNDUP POWERMAX	32 fl oz/a B							
INTACT	0.5 % v/v B							
4 AUTHORITY ELITE	26 fl oz/a A		0.0	0.0	0.0	0.0	90.5	86.8
ROUNDUP POWERMAX	32 fl oz/a A							
ANTHEM MAXX	3.25 fl oz/a B							
XTENDIMAX	22 fl oz/a B							
ROUNDUP POWERMAX	32 fl oz/a B							
INTACT	0.5 % v/v B							
5 AUTHORITY SUPREME	6.4 fl oz/a A		0.0	0.0	0.0	0.0	88.8	88.0
ROUNDUP POWERMAX	32 fl oz/a A							
ANTHEM MAXX	2.5 fl oz/a B							
XTENDIMAX	22 fl oz/a B							
ROUNDUP POWERMAX	32 fl oz/a B							
INTACT	0.5 % v/v B							
6 ANTHEM MAXX	3.25 fl oz/a A		0.0	0.0	0.0	0.0	86.3	85.5
METRIBUZIN	5 oz/a A							
ROUNDUP POWERMAX	32 fl oz/a A							
ANTHEM MAXX	2.5 fl oz/a B							
XTENDIMAX	22 fl oz/a B							
ROUNDUP POWERMAX	32 fl oz/a B							
INTACT	0.5 % v/v B							
7 VALOR SX	2 oz/a A		0.0	0.0	0.0	0.0	85.0	93.8
ROUNDUP POWERMAX	32 fl oz/a A							
WARRANT	48 fl oz/a B							
XTENDIMAX	22 fl oz/a B							
ROUNDUP POWERMAX	32 fl oz/a B							
INTACT	0.5 % v/v B							

t=Mean descriptions are reported in transformed data units, and are not de-transformed.
Missing data estimates are included in columns:Yates=63,64,65,66,67
Excluded replicate 4 in column 19; 1 in 36; 1 in 38; 3 in 63; 1 in 66; 1 in 67
Could not calculate LSD (% mean diff) for columns 1,2,3,4,6,7,8,9,10,19,21,23,24,26,29,31,34,35,36,37,38,39,42,43,46,47,48,49,51,54,56,57,59,61
because error mean square = 0.

University of Kentucky

Pest Type					W Weed DIGSA	W Weed IPOLA		
Pest Code					Digitaria sang>	Ipomoea lacuno>		
Pest Scientific Name					large crabgrass	pitted morning>		
Pest Name					C -	C -		
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA	C GLXMA				
BBCH Scale	BSOY	BSOY	BSOY	BSOY				
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max				
Crop Name	Soybean	Soybean	Soybean	Soybean				
Rating Date	5-30-2019	5-30-2019	5-30-2019	5-30-2019	5-30-2019	5-30-2019		
Part Rated	PLANT C	PLANT C	PLANT C	PLANT C	PLANT P	PLANT P		
Rating Type	PHYGEN	PHYCHL	PHYNEC	PHYSTU	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%		
Sample Size								
Number of Subsamples	1	1	1	1	1	1		
Data Entry Date	8-27-2019	8-27-2019	8-27-2019	8-27-2019	8-27-2019	8-27-2019		
Days After First/Last Applic.	14 14	14 14	14 14	14 14	14 14	14 14		
Plant-Eval Interval	16 DP-1	16 DP-1	16 DP-1	16 DP-1	16 DP-1	16 DP-1		
ARM Action Codes								
Number of Decimals								
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	7	8	9	10	11	12
8 ZIDUA PRO	6 fl oz/a	A	0.0	0.0	0.0	0.0	90.0	94.3
ROUNDUP POWERMAX	32 fl oz/a	A						
OUTLOOK	12 fl oz/a	B						
ENGENIA	12.8 fl oz/a	B						
ROUNDUP POWERMAX	32 fl oz/a	B						
INTACT	0.5 % v/v	B						
9 FIERCE	3 oz/a	A	0.0	0.0	0.0	0.0	91.3	94.3
ROUNDUP POWERMAX	32 fl oz/a	A						
DUAL II MAGNUM	16 fl oz/a	B						
XTENDIMAX	22 fl oz/a	B						
ROUNDUP POWERMAX	32 fl oz/a	B						
INTACT	0.5 % v/v	B						
10 BOUNDARY	24 oz/a	A	0.0	0.0	0.0	0.0	94.3	88.8
ROUNDUP POWERMAX	32 fl oz/a	A						
TAVIUM	56.5 fl oz/a	B						
ROUNDUP POWERMAX	32 fl oz/a	B						
INTACT	0.5 % v/v	B						
LSD P=.05			.	.	.	.	10.04	8.65
Standard Deviation			0.00	0.00	0.00	0.00	6.92	5.96
CV			0.0	0.0	0.0	0.0	8.59	7.36
Replicate F			0.000	0.000	0.000	0.000	0.386	4.064
Replicate Prob(F)			1.0000	1.0000	1.0000	1.0000	0.7637	0.0166
Treatment F			0.000	0.000	0.000	0.000	67.458	92.244
Treatment Prob(F)			1.0000	1.0000	1.0000	1.0000	0.0001	0.0001

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Missing data estimates are included in columns: Yates=63,64,65,66,67

Excluded replicate 4 in column 19; 1 in 36; 1 in 38; 3 in 63; 1 in 66; 1 in 67

Could not calculate LSD (% mean diff) for columns 1,2,3,4,6,7,8,9,10,19,21,23,24,26,29,31,34,35,36,37,38,39,42,43,46,47,48,49,51,54,56,57,59,61 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	AMARE	SIDSP	ELEIN	AMARE	IPOHE		
Pest Scientific Name	Amaranthus ret>	Sida spinosa	Eleusine indica	Amaranthus ret>	Ipomoea hederata>		
Pest Name	Redroot pigweed	Prickly sida	Goosegrass	Redroot pigweed	ivy-leaf morni>		
Crop Type, Code	C -	C -	C -	C -	C -		
BBCH Scale							
Crop Scientific Name							
Crop Name							
Rating Date	5-30-2019	5-30-2019	6-3-2019	6-3-2019	6-3-2019		
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P		
Rating Type	CONTRO	CONTRO	COUNT	COUNT	COUNT		
Rating Unit	%	%	FT2	FT2	FT2		
Sample Size							
Number of Subsamples	1	1	1	1	1		
Data Entry Date	8-27-2019	8-27-2019	8-27-2019	8-27-2019	8-27-2019		
Days After First/Last Applic.	14 14	14 14	18 18	18 18	18 18		
Plant-Eval Interval	16 DP-1	16 DP-1	20 DP-1	20 DP-1	20 DP-1		
ARM Action Codes			AL	AA	AA		
Number of Decimals							
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code	13	14	15	16	17
1 UNTREATED CHECK			0.0	0.0	9.7	3.3	0.2
2 VHP58-R002	7 fl oz/a A		95.3	95.3	2.9	0.2	0.1
ROUNDUP POWERMAX	32 fl oz/a A						
ANTHEM MAXX	3.25 fl oz/a B						
XTENDIMAX	22 fl oz/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
INTACT	0.5 % v/v B						
3 VHP58-R002	9 fl oz/a A		96.5	96.5	1.9	0.0	0.2
ROUNDUP POWERMAX	32 fl oz/a A						
ANTHEM MAXX	2.5 fl oz/a B						
XTENDIMAX	22 fl oz/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
INTACT	0.5 % v/v B						
4 AUTHORITY ELITE	26 fl oz/a A		97.0	97.0	0.3	0.0	0.5
ROUNDUP POWERMAX	32 fl oz/a A						
ANTHEM MAXX	3.25 fl oz/a B						
XTENDIMAX	22 fl oz/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
INTACT	0.5 % v/v B						
5 AUTHORITY SUPREME	6.4 fl oz/a A		96.5	96.5	1.3	0.0	0.7
ROUNDUP POWERMAX	32 fl oz/a A						
ANTHEM MAXX	2.5 fl oz/a B						
XTENDIMAX	22 fl oz/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
INTACT	0.5 % v/v B						
6 ANTHEM MAXX	3.25 fl oz/a A		96.5	96.5	0.4	0.0	0.8
METRIBUZIN	5 oz/a A						
ROUNDUP POWERMAX	32 fl oz/a A						
ANTHEM MAXX	2.5 fl oz/a B						
XTENDIMAX	22 fl oz/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
INTACT	0.5 % v/v B						
7 VALOR SX	2 oz/a A		97.0	97.0	8.8	0.0	0.0
ROUNDUP POWERMAX	32 fl oz/a A						
WARRANT	48 fl oz/a B						
XTENDIMAX	22 fl oz/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
INTACT	0.5 % v/v B						

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Missing data estimates are included in columns: Yates=63,64,65,66,67

Excluded replicate 4 in column 19; 1 in 36; 1 in 38; 3 in 63; 1 in 66; 1 in 67

Could not calculate LSD (% mean diff) for columns 1,2,3,4,6,7,8,9,10,19,21,23,24,26,29,31,34,35,36,37,38,39,42,43,46,47,48,49,51,54,56,57,59,61 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	AMARE	SIDSP	ELEIN	AMARE	IPOHE		
Pest Scientific Name	Amaranthus ret>	Sida spinosa	Eleusine indica	Amaranthus ret>	Ipomoea heder>		
Pest Name	Redroot pigweed	Prickly sida	Goosegrass	Redroot pigweed	ivy-leaf morni>		
Crop Type, Code	C -	C -	C -	C -	C -		
BBCH Scale							
Crop Scientific Name							
Crop Name							
Rating Date	5-30-2019	5-30-2019	6-3-2019	6-3-2019	6-3-2019		
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P		
Rating Type	CONTRO	CONTRO	COUNT	COUNT	COUNT		
Rating Unit	%	%	FT2	FT2	FT2		
Sample Size							
Number of Subsamples	1	1	1	1	1		
Data Entry Date	8-27-2019	8-27-2019	8-27-2019	8-27-2019	8-27-2019		
Days After First/Last Applic.	14 14	14 14	18 18	18 18	18 18		
Plant-Eval Interval	16 DP-1	16 DP-1	20 DP-1	20 DP-1	20 DP-1		
ARM Action Codes			AL	AA	AA		
Number of Decimals							
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code	13	14	15	16	17
8 ZIDUA PRO	6 fl oz/a	A	97.0	97.0	2.1	0.0	0.1
ROUNDUP POWERMAX	32 fl oz/a	A					
OUTLOOK	12 fl oz/a	B					
ENGENIA	12.8 fl oz/a	B					
ROUNDUP POWERMAX	32 fl oz/a	B					
INTACT	0.5 % v/v	B					
9 FIERCE	3 oz/a	A	97.0	97.0	0.7	0.0	0.1
ROUNDUP POWERMAX	32 fl oz/a	A					
DUAL II MAGNUM	16 fl oz/a	B					
XTENDIMAX	22 fl oz/a	B					
ROUNDUP POWERMAX	32 fl oz/a	B					
INTACT	0.5 % v/v	B					
10 BOUNDARY	24 oz/a	A	97.0	97.0	0.5	0.1	0.1
ROUNDUP POWERMAX	32 fl oz/a	A					
TAVIUM	56.5 fl oz/a	B					
ROUNDUP POWERMAX	32 fl oz/a	B					
INTACT	0.5 % v/v	B					
LSD P=.05			1.77	1.77	2.66 - 7.18	0.50 - 1.56	0.84 - 1.14
Standard Deviation			1.22	1.22	0.33t	1.98t	3.35t
CV			1.4	1.4	71.61t	136.68t	132.91t
Replicate F			1.223	1.223	9.234	1.443	8.223
Replicate Prob(F)			0.3203	0.3203	0.0002	0.2522	0.0005
Treatment F			2505.119	2505.119	3.966	11.180	0.961
Treatment Prob(F)			0.0001	0.0001	0.0026	0.0001	0.4917

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Missing data estimates are included in columns:Yates=63,64,65,66,67

Excluded replicate 4 in column 19; 1 in 36; 1 in 38; 3 in 63; 1 in 66; 1 in 67

Could not calculate LSD (% mean diff) for columns 1,2,3,4,6,7,8,9,10,19,21,23,24,26,29,31,34,35,36,37,38,39,42,43,46,47,48,49,51,54,56,57,59,61 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	SORHA	AMBTR	DIGSA	CHEAL	SETPU		
Pest Scientific Name	Sorghum halepe>	Ambrosia trifi>	Digitaria sang>	Chenopodium al>	Setaria helvola		
Pest Name	Johnson grass	Giant ragweed	large crabgrass	common lambsqu>	yellow foxtail		
Crop Type, Code	C -	C -	C -	C -	C -		
BBCH Scale							
Crop Scientific Name							
Crop Name							
Rating Date	6-3-2019	6-3-2019	6-3-2019	6-3-2019	6-3-2019		
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P		
Rating Type	COUNT	COUNT	COUNT	COUNT	COUNT		
Rating Unit	FT2	FT2	FT2	FT2	FT2		
Sample Size							
Number of Subsamples	1	1	1	1	1		
Data Entry Date	8-27-2019	8-27-2019	8-27-2019	8-27-2019	8-27-2019		
Days After First/Last Applic.	18 18	18 18	18 18	18 18	18 18		
Plant-Eval Interval	20 DP-1	20 DP-1	20 DP-1	20 DP-1	20 DP-1		
ARM Action Codes		ER4	EC	EC			
Number of Decimals							
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code	18	19	20	21	22
1 UNTREATED CHECK			0.0	0.0	11.3	0.3	2.5
2 VHP58-R002	7 fl oz/a A		0.8	0.0	1.8	0.0	0.3
ROUNDUP POWERMAX	32 fl oz/a A						
ANTHEM MAXX	3.25 fl oz/a B						
XTENDIMAX	22 fl oz/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
INTACT	0.5 % v/v B						
3 VHP58-R002	9 fl oz/a A		0.0	0.0	1.5	0.0	0.0
ROUNDUP POWERMAX	32 fl oz/a A						
ANTHEM MAXX	2.5 fl oz/a B						
XTENDIMAX	22 fl oz/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
INTACT	0.5 % v/v B						
4 AUTHORITY ELITE	26 fl oz/a A		0.3	0.0	0.0	0.0	1.0
ROUNDUP POWERMAX	32 fl oz/a A						
ANTHEM MAXX	3.25 fl oz/a B						
XTENDIMAX	22 fl oz/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
INTACT	0.5 % v/v B						
5 AUTHORITY SUPREME	6.4 fl oz/a A		0.0	0.0	1.8	0.0	0.0
ROUNDUP POWERMAX	32 fl oz/a A						
ANTHEM MAXX	2.5 fl oz/a B						
XTENDIMAX	22 fl oz/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
INTACT	0.5 % v/v B						
6 ANTHEM MAXX	3.25 fl oz/a A		0.0	0.0	0.5	0.0	0.0
METRIBUZIN	5 oz/a A						
ROUNDUP POWERMAX	32 fl oz/a A						
ANTHEM MAXX	2.5 fl oz/a B						
XTENDIMAX	22 fl oz/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
INTACT	0.5 % v/v B						
7 VALOR SX	2 oz/a A		0.3	0.0	2.5	0.0	0.0
ROUNDUP POWERMAX	32 fl oz/a A						
WARRANT	48 fl oz/a B						
XTENDIMAX	22 fl oz/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
INTACT	0.5 % v/v B						

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 Missing data estimates are included in columns: Yates=63,64,65,66,67
 Excluded replicate 4 in column 19; 1 in 36; 1 in 38; 3 in 63; 1 in 66; 1 in 67
 Could not calculate LSD (% mean diff) for columns 1,2,3,4,6,7,8,9,10,19,21,23,24,26,29,31,34,35,36,37,38,39,42,43,46,47,48,49,51,54,56,57,59,61
 because error mean square = 0.

University of Kentucky

	W Weed SORHA	W Weed AMBTR	W Weed DIGSA	W Weed CHEAL	W Weed SETPU	
Pest Type	Sorghum halepense	Ambrosia trifida	Digitaria sanguinalis	Chenopodium album	Setaria helvola	
Pest Code	Johnson grass	Giant ragweed	large crabgrass	common lambsquarters	yellow foxtail	
Pest Scientific Name	C -	C -	C -	C -	C -	
Pest Name						
Crop Type, Code						
BBCH Scale						
Crop Scientific Name						
Crop Name						
Rating Date	6-3-2019	6-3-2019	6-3-2019	6-3-2019	6-3-2019	
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P	
Rating Type	COUNT	COUNT	COUNT	COUNT	COUNT	
Rating Unit	FT2	FT2	FT2	FT2	FT2	
Sample Size						
Number of Subsamples	1	1	1	1	1	
Data Entry Date	8-27-2019	8-27-2019	8-27-2019	8-27-2019	8-27-2019	
Days After First/Last Applic.	18 18	18 18	18 18	18 18	18 18	
Plant-Eval Interval	20 DP-1	20 DP-1	20 DP-1	20 DP-1	20 DP-1	
ARM Action Codes		ER4	EC	EC		
Number of Decimals						
Trt Treatment No. Name	Rate Unit Appl Code					
		18	19	20	21	22
8 ZIDUA PRO	6 fl oz/a A	0.5	0.0	1.0	0.0	0.0
ROUNDUP POWERMAX	32 fl oz/a A					
OUTLOOK	12 fl oz/a B					
ENGENIA	12.8 fl oz/a B					
ROUNDUP POWERMAX	32 fl oz/a B					
INTACT	0.5 % v/v B					
9 FIERCE	3 oz/a A	0.0	0.0	0.0	0.0	0.0
ROUNDUP POWERMAX	32 fl oz/a A					
DUAL II MAGNUM	16 fl oz/a B					
XTENDIMAX	22 fl oz/a B					
ROUNDUP POWERMAX	32 fl oz/a B					
INTACT	0.5 % v/v B					
10 BOUNDARY	24 oz/a A	0.0	0.0	0.0	0.0	0.0
ROUNDUP POWERMAX	32 fl oz/a A					
TAVIUM	56.5 fl oz/a B					
ROUNDUP POWERMAX	32 fl oz/a B					
INTACT	0.5 % v/v B					
LSD P=.05	0.58	.	2.87	.	1.85	
Standard Deviation	0.40	0.00	1.96	0.00	1.28	
CV	230.02	0.0	196.32	0.0	340.71	
Replicate F	1.800	0.000	4.670	0.000	2.384	
Replicate Prob(F)	0.1710	1.0000	0.0104	1.0000	0.0913	
Treatment F	1.731	0.000	0.892	0.000	1.608	
Treatment Prob(F)	0.1301	1.0000	0.5381	1.0000	0.1630	

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Missing data estimates are included in columns: Yates=63,64,65,66,67

Excluded replicate 4 in column 19; 1 in 36; 1 in 38; 3 in 63; 1 in 66; 1 in 67

Could not calculate LSD (% mean diff) for columns 1,2,3,4,6,7,8,9,10,19,21,23,24,26,29,31,34,35,36,37,38,39,42,43,46,47,48,49,51,54,56,57,59,61 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	MOLVE	ECHCG	SIDSP	SOLCA	IPOLA
Pest Scientific Name	Mollugo vertic>	Echinochloa cr>	Sida spinosa	Solanum caroli>	Ipomoea lacuno>
Pest Name	Carpetweed	Common barnyar>	Prickly sida	Horsenettle	pitted morning>
Crop Type, Code	C -	C -	C -	C -	C -
BBCH Scale					
Crop Scientific Name					
Crop Name					
Rating Date	6-3-2019	6-3-2019	6-3-2019	6-3-2019	6-3-2019
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P
Rating Type	COUNT	COUNT	COUNT	COUNT	COUNT
Rating Unit	FT2	FT2	FT2	FT2	FT2
Sample Size					
Number of Subsamples	1	1	1	1	1
Data Entry Date	8-27-2019	8-27-2019	8-27-2019	8-27-2019	8-27-2019
Days After First/Last Applic.	18 18	18 18	18 18	18 18	18 18
Plant-Eval Interval	20 DP-1	20 DP-1	20 DP-1	20 DP-1	20 DP-1
ARM Action Codes	EC	ET5		EC	AA
Number of Decimals					
Trt Treatment					
No. Name	23	24	25	26	27
1 UNTREATED CHECK	0.3	0.0	1.3	0.3	0.3
2 VHP58-R002	0.0	0.0	0.0	0.0	0.0
ROUNDUP POWERMAX	7 fl oz/a A				
ANTHEM MAXX	32 fl oz/a A				
XTENDIMAX	3.25 fl oz/a B				
ROUNDUP POWERMAX	22 fl oz/a B				
INTACT	32 fl oz/a B				
	0.5 % v/v B				
3 VHP58-R002	0.0	0.0	0.3	0.0	0.0
ROUNDUP POWERMAX	9 fl oz/a A				
ANTHEM MAXX	32 fl oz/a A				
XTENDIMAX	2.5 fl oz/a B				
ROUNDUP POWERMAX	22 fl oz/a B				
INTACT	32 fl oz/a B				
	0.5 % v/v B				
4 AUTHORITY ELITE	0.0	0.0	0.3	0.0	0.3
ROUNDUP POWERMAX	26 fl oz/a A				
ANTHEM MAXX	32 fl oz/a A				
XTENDIMAX	3.25 fl oz/a B				
ROUNDUP POWERMAX	22 fl oz/a B				
INTACT	32 fl oz/a B				
	0.5 % v/v B				
5 AUTHORITY SUPREME	0.0	0.3	0.8	0.0	0.1
ROUNDUP POWERMAX	6.4 fl oz/a A				
ANTHEM MAXX	32 fl oz/a A				
XTENDIMAX	2.5 fl oz/a B				
ROUNDUP POWERMAX	22 fl oz/a B				
INTACT	32 fl oz/a B				
	0.5 % v/v B				
6 ANTHEM MAXX	0.0	0.0	0.3	0.0	0.3
METRIBUZIN	3.25 fl oz/a A				
ROUNDUP POWERMAX	5 oz/a A				
ANTHEM MAXX	32 fl oz/a A				
XTENDIMAX	2.5 fl oz/a B				
ROUNDUP POWERMAX	22 fl oz/a B				
INTACT	32 fl oz/a B				
	0.5 % v/v B				
7 VALOR SX	0.0	0.0	0.0	0.0	0.1
ROUNDUP POWERMAX	2 oz/a A				
WARRANT	32 fl oz/a A				
XTENDIMAX	48 fl oz/a B				
ROUNDUP POWERMAX	22 fl oz/a B				
INTACT	32 fl oz/a B				
	0.5 % v/v B				

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 Missing data estimates are included in columns: Yates=63,64,65,66,67
 Excluded replicate 4 in column 19; 1 in 36; 1 in 38; 3 in 63; 1 in 66; 1 in 67
 Could not calculate LSD (% mean diff) for columns 1,2,3,4,6,7,8,9,10,19,21,23,24,26,29,31,34,35,36,37,38,39,42,43,46,47,48,49,51,54,56,57,59,61
 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	MOLVE	ECHCG	SIDSP	SOLCA	IPOLA
Pest Scientific Name	Mollugo vertic>	Echinochloa cr>	Sida spinosa	Solanum caroli>	Ipomoea lacuno>
Pest Name	Carpetweed	Common barnyar>	Prickly sida	Horsenettle	pitted morning>
Crop Type, Code	C -	C -	C -	C -	C -
BBCH Scale					
Crop Scientific Name					
Crop Name					
Rating Date	6-3-2019	6-3-2019	6-3-2019	6-3-2019	6-3-2019
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P
Rating Type	COUNT	COUNT	COUNT	COUNT	COUNT
Rating Unit	FT2	FT2	FT2	FT2	FT2
Sample Size					
Number of Subsamples	1	1	1	1	1
Data Entry Date	8-27-2019	8-27-2019	8-27-2019	8-27-2019	8-27-2019
Days After First/Last Applic.	18 18	18 18	18 18	18 18	18 18
Plant-Eval Interval	20 DP-1	20 DP-1	20 DP-1	20 DP-1	20 DP-1
ARM Action Codes	EC	ET5		EC	AA
Number of Decimals					
Trt Treatment					
No. Name	23	24	25	26	27
Rate Unit Appl					
Code					
8 ZIDUA PRO	6 fl oz/a A				
ROUNDUP POWERMAX	32 fl oz/a A				
OUTLOOK	12 fl oz/a B				
ENGENIA	12.8 fl oz/a B				
ROUNDUP POWERMAX	32 fl oz/a B				
INTACT	0.5 % v/v B				
9 FIERCE	3 oz/a A				
ROUNDUP POWERMAX	32 fl oz/a A				
DUAL II MAGNUM	16 fl oz/a B				
XTENDIMAX	22 fl oz/a B				
ROUNDUP POWERMAX	32 fl oz/a B				
INTACT	0.5 % v/v B				
10 BOUNDARY	24 oz/a A		0.8		
ROUNDUP POWERMAX	32 fl oz/a A				
TAVIUM	56.5 fl oz/a B				
ROUNDUP POWERMAX	32 fl oz/a B				
INTACT	0.5 % v/v B				
LSD P=.05			1.01		1.36 - 99999.88
Standard Deviation	0.00	0.00	0.69	0.00	3.74t
CV	0.0	0.0	198.25	0.0	157.13t
Replicate F	0.000	0.000	2.423	0.000	2.725
Replicate Prob(F)	1.0000	1.0000	0.0876	1.0000	0.0638
Treatment F	0.000	0.000	1.523	0.000	0.890
Treatment Prob(F)	1.0000	1.0000	0.1901	1.0000	0.5464

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Missing data estimates are included in columns:Yates=63,64,65,66,67

Excluded replicate 4 in column 19; 1 in 36; 1 in 38; 3 in 63; 1 in 66; 1 in 67

Could not calculate LSD (% mean diff) for columns 1,2,3,4,6,7,8,9,10,19,21,23,24,26,29,31,34,35,36,37,38,39,42,43,46,47,48,49,51,54,56,57,59,61 because error mean square = 0.

University of Kentucky

Pest Type					W Weed DIGSA Digitaria sang> large crabgrass C -	W Weed IPOLA Ipomoea lacuno> pitted morning> C -		
Pest Code								
Pest Scientific Name								
Pest Name								
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA	C GLXMA				
BBCH Scale	BSOY	BSOY	BSOY	BSOY				
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max				
Crop Name	Soybean	Soybean	Soybean	Soybean				
Rating Date	6-14-2019	6-14-2019	6-14-2019	6-14-2019	6-14-2019	6-14-2019		
Part Rated	PLANT C	PLANT C	PLANT C	PLANT C	PLANT P	PLANT P		
Rating Type	PHYGEN	PHYCHL	PHYNEC	PHYSTU	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%		
Sample Size								
Number of Subsamples	1	1	1	1	1	1		
Data Entry Date	8-27-2019	8-27-2019	8-27-2019	8-27-2019	8-27-2019	8-27-2019		
Days After First/Last Applic.	29 11	29 11	29 11	29 11	29 11	29 11		
Plant-Eval Interval	31 DP-1	31 DP-1	31 DP-1	31 DP-1	31 DP-1	31 DP-1		
ARM Action Codes								
Number of Decimals								
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	28	29	30	31	32	33
1 UNTREATED CHECK			0.0	0.0	0.0	0.0	0.0	0.0
2 VHP58-R002	7 fl oz/a A		2.0	0.0	2.0	0.0	99.3	98.5
ROUNDUP POWERMAX	32 fl oz/a A							
ANTHEM MAXX	3.25 fl oz/a B							
XTENDIMAX	22 fl oz/a B							
ROUNDUP POWERMAX	32 fl oz/a B							
INTACT	0.5 % v/v B							
3 VHP58-R002	9 fl oz/a A		1.0	0.0	1.0	0.0	100.0	98.8
ROUNDUP POWERMAX	32 fl oz/a A							
ANTHEM MAXX	2.5 fl oz/a B							
XTENDIMAX	22 fl oz/a B							
ROUNDUP POWERMAX	32 fl oz/a B							
INTACT	0.5 % v/v B							
4 AUTHORITY ELITE	26 fl oz/a A		1.3	0.0	1.8	0.0	100.0	99.3
ROUNDUP POWERMAX	32 fl oz/a A							
ANTHEM MAXX	3.25 fl oz/a B							
XTENDIMAX	22 fl oz/a B							
ROUNDUP POWERMAX	32 fl oz/a B							
INTACT	0.5 % v/v B							
5 AUTHORITY SUPREME	6.4 fl oz/a A		1.0	0.0	1.0	0.0	100.0	98.8
ROUNDUP POWERMAX	32 fl oz/a A							
ANTHEM MAXX	2.5 fl oz/a B							
XTENDIMAX	22 fl oz/a B							
ROUNDUP POWERMAX	32 fl oz/a B							
INTACT	0.5 % v/v B							
6 ANTHEM MAXX	3.25 fl oz/a A		1.5	0.0	1.5	0.0	100.0	99.3
METRIBUZIN	5 oz/a A							
ROUNDUP POWERMAX	32 fl oz/a A							
ANTHEM MAXX	2.5 fl oz/a B							
XTENDIMAX	22 fl oz/a B							
ROUNDUP POWERMAX	32 fl oz/a B							
INTACT	0.5 % v/v B							
7 VALOR SX	2 oz/a A		0.0	0.0	0.0	0.0	100.0	100.0
ROUNDUP POWERMAX	32 fl oz/a A							
WARRANT	48 fl oz/a B							
XTENDIMAX	22 fl oz/a B							
ROUNDUP POWERMAX	32 fl oz/a B							
INTACT	0.5 % v/v B							

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 Missing data estimates are included in columns: Yates=63,64,65,66,67
 Excluded replicate 4 in column 19; 1 in 36; 1 in 38; 3 in 63; 1 in 66; 1 in 67
 Could not calculate LSD (% mean diff) for columns 1,2,3,4,6,7,8,9,10,19,21,23,24,26,29,31,34,35,36,37,38,39,42,43,46,47,48,49,51,54,56,57,59,61
 because error mean square = 0.

University of Kentucky

Pest Type					W Weed DIGSA	W Weed IPOLA			
Pest Code					Digitaria sang>	Ipomoea lacuno>			
Pest Scientific Name					large crabgrass	pitted morning>			
Pest Name					C -	C -			
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA	C GLXMA					
BBCH Scale	BSOY	BSOY	BSOY	BSOY					
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max					
Crop Name	Soybean	Soybean	Soybean	Soybean					
Rating Date	6-14-2019	6-14-2019	6-14-2019	6-14-2019	6-14-2019	6-14-2019			
Part Rated	PLANT C	PLANT C	PLANT C	PLANT C	PLANT P	PLANT P			
Rating Type	PHYGEN	PHYCHL	PHYNEC	PHYSTU	CONTRO	CONTRO			
Rating Unit	%	%	%	%	%	%			
Sample Size									
Number of Subsamples	1	1	1	1	1	1			
Data Entry Date	8-27-2019	8-27-2019	8-27-2019	8-27-2019	8-27-2019	8-27-2019			
Days After First/Last Applic.	29 11	29 11	29 11	29 11	29 11	29 11			
Plant-Eval Interval	31 DP-1	31 DP-1	31 DP-1	31 DP-1	31 DP-1	31 DP-1			
ARM Action Codes									
Number of Decimals									
Trt Treatment No. Name	Rate Rate	Appl Unit	Code	28	29	30	31	32	33
8 ZIDUA PRO	6 fl oz/a	A		0.0	0.0	0.0	0.0	100.0	98.5
ROUNDUP POWERMAX	32 fl oz/a	A							
OUTLOOK	12 fl oz/a	B							
ENGENIA	12.8 fl oz/a	B							
ROUNDUP POWERMAX	32 fl oz/a	B							
INTACT	0.5 % v/v	B							
9 FIERCE	3 oz/a	A		1.3	0.0	1.3	0.0	100.0	99.3
ROUNDUP POWERMAX	32 fl oz/a	A							
DUAL II MAGNUM	16 fl oz/a	B							
XTENDIMAX	22 fl oz/a	B							
ROUNDUP POWERMAX	32 fl oz/a	B							
INTACT	0.5 % v/v	B							
10 BOUNDARY	24 oz/a	A		0.5	0.0	0.5	0.0	100.0	100.0
ROUNDUP POWERMAX	32 fl oz/a	A							
TAVIUM	56.5 fl oz/a	B							
ROUNDUP POWERMAX	32 fl oz/a	B							
INTACT	0.5 % v/v	B							
LSD P=.05	1.14	.		1.03	.			0.69	2.06
Standard Deviation	0.78	0.00		0.71	0.00			0.47	1.42
CV	92.25	0.0		79.15	0.0			0.53	1.59
Replicate F	0.488	0.000		1.182	0.000			1.000	3.469
Replicate Prob(F)	0.6935	1.0000		0.3349	1.0000			0.4079	0.0298
Treatment F	3.181	0.000		4.401	0.000			17749.150	1942.015
Treatment Prob(F)	0.0095	1.0000		0.0013	1.0000			0.0001	0.0001

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Excluded replicate 4 in column 19; 1 in 36; 1 in 38; 3 in 63; 1 in 66; 1 in 67

Could not calculate LSD (% mean diff) for columns 1,2,3,4,6,7,8,9,10,19,21,23,24,26,29,31,34,35,36,37,38,39,42,43,46,47,48,49,51,54,56,57,59,61 because error mean square = 0.

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Trt Treatment No. Name	Rate Rate Unit	Appl Code	34	35	36	37	38	39
1 UNTREATED CHECK			0.0	0.0	0.0	0.0	0.0	0.0
2 VHP58-R002 ROUNDUP POWERMAX ANTHEM MAXX XTENDIMAX ROUNDUP POWERMAX INTACT	7 fl oz/a A 32 fl oz/a A 3.25 fl oz/a B 22 fl oz/a B 32 fl oz/a B 0.5 % v/v B		100.0	100.0	0.0	0.0	0.0	0.0
3 VHP58-R002 ROUNDUP POWERMAX ANTHEM MAXX XTENDIMAX ROUNDUP POWERMAX INTACT	9 fl oz/a A 32 fl oz/a A 2.5 fl oz/a B 22 fl oz/a B 32 fl oz/a B 0.5 % v/v B		100.0	100.0	0.0	0.0	0.0	0.0
4 AUTHORITY ELITE ROUNDUP POWERMAX ANTHEM MAXX XTENDIMAX ROUNDUP POWERMAX INTACT	26 fl oz/a A 32 fl oz/a A 3.25 fl oz/a B 22 fl oz/a B 32 fl oz/a B 0.5 % v/v B		100.0	100.0	0.0	0.0	0.0	0.0
5 AUTHORITY SUPREME ROUNDUP POWERMAX ANTHEM MAXX XTENDIMAX ROUNDUP POWERMAX INTACT	6.4 fl oz/a A 32 fl oz/a A 2.5 fl oz/a B 22 fl oz/a B 32 fl oz/a B 0.5 % v/v B		100.0	100.0	0.0	0.0	0.0	0.0
6 ANTHEM MAXX METRIBUZIN ROUNDUP POWERMAX ANTHEM MAXX XTENDIMAX ROUNDUP POWERMAX INTACT	3.25 fl oz/a A 5 oz/a A 32 fl oz/a A 2.5 fl oz/a B 22 fl oz/a B 32 fl oz/a B 0.5 % v/v B		100.0	100.0	0.0	0.0	0.0	0.0
7 VALOR SX ROUNDUP POWERMAX WARRANT XTENDIMAX ROUNDUP POWERMAX INTACT	2 oz/a A 32 fl oz/a A 48 fl oz/a B 22 fl oz/a B 32 fl oz/a B 0.5 % v/v B		100.0	100.0	0.0	0.0	0.0	0.0

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Missing data estimates are included in columns: Yates=63,64,65,66,67

Excluded replicate 4 in column 19; 1 in 36; 1 in 38; 3 in 63; 1 in 66; 1 in 67

Could not calculate LSD (% mean diff) for columns 1,2,3,4,6,7,8,9,10,19,21,23,24,26,29,31,34,35,36,37,38,39,42,43,46,47,48,49,51,54,56,57,59,61 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed				
Pest Code	AMARE	SIDSP				
Pest Scientific Name	Amaranthus ret>	Sida spinosa				
Pest Name	Redroot pigweed	Prickly sida				
Crop Type, Code	C -	C -	C GLXMA	C GLXMA	C GLXMA	C GLXMA
BBCH Scale			BSOY	BSOY	BSOY	BSOY
Crop Scientific Name			Glycine max	Glycine max	Glycine max	Glycine max
Crop Name			Soybean	Soybean	Soybean	Soybean
Rating Date	6-14-2019	6-14-2019	6-20-2019	6-20-2019	6-20-2019	6-20-2019
Part Rated	PLANT P	PLANT P	PLANT C	PLANT C	PLANT C	PLANT C
Rating Type	CONTRO	CONTRO	PHYGEN	PHYCHL	PHYNEC	PHYSTU
Rating Unit	%	%	%	%	%	%
Sample Size						
Number of Subsamples	1	1	1	1	1	1
Data Entry Date	8-27-2019	8-27-2019	8-27-2019	8-27-2019	8-27-2019	8-27-2019
Days After First/Last Applic.	29 11	29 11	35 17	35 17	35 17	35 17
Plant-Eval Interval	31 DP-1	31 DP-1	37 DP-1	37 DP-1	37 DP-1	37 DP-1
ARM Action Codes			ER1		ER1	
Number of Decimals						
Trt No.	Treatment	Rate	Appl			
	Name	Rate Unit	Code	34	35	36
				37	38	39
8	ZIDUA PRO	6 fl oz/a A		100.0	100.0	0.0
	ROUNDUP POWERMAX	32 fl oz/a A				0.0
	OUTLOOK	12 fl oz/a B				
	ENGENIA	12.8 fl oz/a B				
	ROUNDUP POWERMAX	32 fl oz/a B				
	INTACT	0.5 % v/v B				
9	FIERCE	3 oz/a A		100.0	100.0	0.0
	ROUNDUP POWERMAX	32 fl oz/a A				0.0
	DUAL II MAGNUM	16 fl oz/a B				
	XTENDIMAX	22 fl oz/a B				
	ROUNDUP POWERMAX	32 fl oz/a B				
	INTACT	0.5 % v/v B				
10	BOUNDARY	24 oz/a A		100.0	100.0	0.0
	ROUNDUP POWERMAX	32 fl oz/a A				0.0
	TAVIUM	56.5 fl oz/a B				
	ROUNDUP POWERMAX	32 fl oz/a B				
	INTACT	0.5 % v/v B				
LSD P=.05				0.00	0.00	0.00
Standard Deviation				0.00	0.00	0.00
CV				0.0	0.0	0.0
Replicate F				0.000	0.000	0.000
Replicate Prob(F)				1.0000	1.0000	1.0000
Treatment F				0.000	0.000	0.000
Treatment Prob(F)				1.0000	1.0000	1.0000

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Missing data estimates are included in columns: Yates=63,64,65,66,67

Excluded replicate 4 in column 19; 1 in 36; 1 in 38; 3 in 63; 1 in 66; 1 in 67

Could not calculate LSD (% mean diff) for columns 1,2,3,4,6,7,8,9,10,19,21,23,24,26,29,31,34,35,36,37,38,39,42,43,46,47,48,49,51,54,56,57,59,61 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	DIGSA	IPOLA	AMARE	SIDSP	DIGSA		
Pest Scientific Name	Digitaria sang>	Ipomoea lacuno>	Amaranthus ret>	Sida spinosa	Digitaria sang>		
Pest Name	large crabgrass	pitted morning>	Redroot pigweed	Prickly sida	large crabgrass		
Crop Type, Code	C -	C -	C -	C -	C -		
BBCH Scale							
Crop Scientific Name							
Crop Name							
Rating Date	6-20-2019	6-20-2019	6-20-2019	6-20-2019	7-5-2019		
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%		
Sample Size							
Number of Subsamples	1	1	1	1	1		
Data Entry Date	8-27-2019	8-27-2019	8-27-2019	8-27-2019	8-27-2019		
Days After First/Last Applic.	35 17	35 17	35 17	35 17	50 32		
Plant-Eval Interval	37 DP-1	37 DP-1	37 DP-1	37 DP-1	52 DP-1		
ARM Action Codes	EC				EC		
Number of Decimals							
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code	40	41	42	43	44
1 UNTREATED CHECK			0.0	0.0	0.0	0.0	0.0
2 VHP58-R002	7 fl oz/a A		96.0	98.0	100.0	100.0	96.0
ROUNDUP POWERMAX	32 fl oz/a A						
ANTHEM MAXX	3.25 fl oz/a B						
XTENDIMAX	22 fl oz/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
INTACT	0.5 % v/v B						
3 VHP58-R002	9 fl oz/a A		97.8	99.3	100.0	100.0	97.8
ROUNDUP POWERMAX	32 fl oz/a A						
ANTHEM MAXX	2.5 fl oz/a B						
XTENDIMAX	22 fl oz/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
INTACT	0.5 % v/v B						
4 AUTHORITY ELITE	26 fl oz/a A		99.3	98.0	100.0	100.0	99.3
ROUNDUP POWERMAX	32 fl oz/a A						
ANTHEM MAXX	3.25 fl oz/a B						
XTENDIMAX	22 fl oz/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
INTACT	0.5 % v/v B						
5 AUTHORITY SUPREME	6.4 fl oz/a A		99.3	98.5	100.0	100.0	99.3
ROUNDUP POWERMAX	32 fl oz/a A						
ANTHEM MAXX	2.5 fl oz/a B						
XTENDIMAX	22 fl oz/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
INTACT	0.5 % v/v B						
6 ANTHEM MAXX	3.25 fl oz/a A		100.0	93.0	100.0	100.0	100.0
METRIBUZIN	5 oz/a A						
ROUNDUP POWERMAX	32 fl oz/a A						
ANTHEM MAXX	2.5 fl oz/a B						
XTENDIMAX	22 fl oz/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
INTACT	0.5 % v/v B						
7 VALOR SX	2 oz/a A		96.0	97.5	100.0	100.0	95.5
ROUNDUP POWERMAX	32 fl oz/a A						
WARRANT	48 fl oz/a B						
XTENDIMAX	22 fl oz/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
INTACT	0.5 % v/v B						

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Missing data estimates are included in columns: Yates=63,64,65,66,67

Excluded replicate 4 in column 19; 1 in 36; 1 in 38; 3 in 63; 1 in 66; 1 in 67

Could not calculate LSD (% mean diff) for columns 1,2,3,4,6,7,8,9,10,19,21,23,24,26,29,31,34,35,36,37,38,39,42,43,46,47,48,49,51,54,56,57,59,61 because error mean square = 0.

University of Kentucky

	W Weed DIGSA	W Weed IPOLA	W Weed AMARE	W Weed SIDSP	W Weed DIGSA
Pest Type	Digitaria sang>	Ipomoea lacuno>	Amaranthus ret>	Sida spinosa	Digitaria sang>
Pest Code	large crabgrass	pitted morning>	Redroot pigweed	Prickly sida	large crabgrass
Pest Scientific Name	C -	C -	C -	C -	C -
Pest Name					
Crop Type, Code					
BBCH Scale					
Crop Scientific Name					
Crop Name					
Rating Date	6-20-2019	6-20-2019	6-20-2019	6-20-2019	7-5-2019
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Sample Size					
Number of Subsamples	1	1	1	1	1
Data Entry Date	8-27-2019	8-27-2019	8-27-2019	8-27-2019	8-27-2019
Days After First/Last Applic.	35 17	35 17	35 17	35 17	50 32
Plant-Eval Interval	37 DP-1	37 DP-1	37 DP-1	37 DP-1	52 DP-1
ARM Action Codes	EC				EC
Number of Decimals					
Trt Treatment No. Name	Rate Appl Rate Unit Code				
		40	41	42	43
44					
8 ZIDUA PRO	6 fl oz/a A	97.8	97.3	100.0	100.0
ROUNDUP POWERMAX	32 fl oz/a A				
OUTLOOK	12 fl oz/a B				
ENGENIA	12.8 fl oz/a B				
ROUNDUP POWERMAX	32 fl oz/a B				
INTACT	0.5 % v/v B				
9 FIERCE	3 oz/a A	99.3	96.0	100.0	100.0
ROUNDUP POWERMAX	32 fl oz/a A				
DUAL II MAGNUM	16 fl oz/a B				
XTENDIMAX	22 fl oz/a B				
ROUNDUP POWERMAX	32 fl oz/a B				
INTACT	0.5 % v/v B				
10 BOUNDARY	24 oz/a A	98.5	97.3	100.0	100.0
ROUNDUP POWERMAX	32 fl oz/a A				
TAVIUM	56.5 fl oz/a B				
ROUNDUP POWERMAX	32 fl oz/a B				
INTACT	0.5 % v/v B				
LSD P=.05		1.79	4.75	.	1.93
Standard Deviation		1.23	3.28	0.00	1.32
CV		1.25	3.75	0.0	1.35
Replicate F		3.209	1.312	0.000	1.879
Replicate Prob(F)		0.0410	0.2909	1.0000	0.1602
Treatment F		5.540	352.931	0.000	5.121
Treatment Prob(F)		0.0005	0.0001	1.0000	0.0008

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Excluded replicate 4 in column 19; 1 in 36; 1 in 38; 3 in 63; 1 in 66; 1 in 67

Could not calculate LSD (% mean diff) for columns 1,2,3,4,6,7,8,9,10,19,21,23,24,26,29,31,34,35,36,37,38,39,42,43,46,47,48,49,51,54,56,57,59,61 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	IPOLA	AMARE	SIDSP	ELEIN	AMARE		
Pest Scientific Name	Ipomoea lacuno>	Amaranthus ret>	Sida spinosa	Eleusine indica	Amaranthus ret>		
Pest Name	pitted morning>	Redroot pigweed	Prickly sida	Goosegrass	Redroot pigweed		
Crop Type, Code	C -	C -	C -	C -	C -		
BBCH Scale							
Crop Scientific Name							
Crop Name							
Rating Date	7-5-2019	7-5-2019	7-5-2019	7-2-2019	7-2-2019		
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P		
Rating Type	CONTRO	CONTRO	CONTRO	COUNT	COUNT		
Rating Unit	%	%	%	FT2	FT2		
Sample Size							
Number of Subsamples	1	1	1	1	1		
Data Entry Date	8-27-2019	8-27-2019	8-27-2019	8-27-2019	8-27-2019		
Days After First/Last Applic.	50 32	50 32	50 32	47 29	47 29		
Plant-Eval Interval	52 DP-1	52 DP-1	52 DP-1	49 DP-1	49 DP-1		
ARM Action Codes				ET4	EC		
Number of Decimals							
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code	45	46	47	48	49
1 UNTREATED CHECK			0.0	0.0	0.0	0.0	4.8
2 VHP58-R002	7 fl oz/a A		98.0	100.0	100.0	0.0	0.0
ROUNDUP POWERMAX	32 fl oz/a A						
ANTHEM MAXX	3.25 fl oz/a B						
XTENDIMAX	22 fl oz/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
INTACT	0.5 % v/v B						
3 VHP58-R002	9 fl oz/a A		99.3	100.0	100.0	0.0	0.0
ROUNDUP POWERMAX	32 fl oz/a A						
ANTHEM MAXX	2.5 fl oz/a B						
XTENDIMAX	22 fl oz/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
INTACT	0.5 % v/v B						
4 AUTHORITY ELITE	26 fl oz/a A		98.0	100.0	100.0	0.5	0.0
ROUNDUP POWERMAX	32 fl oz/a A						
ANTHEM MAXX	3.25 fl oz/a B						
XTENDIMAX	22 fl oz/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
INTACT	0.5 % v/v B						
5 AUTHORITY SUPREME	6.4 fl oz/a A		98.5	100.0	100.0	0.0	0.0
ROUNDUP POWERMAX	32 fl oz/a A						
ANTHEM MAXX	2.5 fl oz/a B						
XTENDIMAX	22 fl oz/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
INTACT	0.5 % v/v B						
6 ANTHEM MAXX	3.25 fl oz/a A		93.0	100.0	100.0	0.0	0.0
METRIBUZIN	5 oz/a A						
ROUNDUP POWERMAX	32 fl oz/a A						
ANTHEM MAXX	2.5 fl oz/a B						
XTENDIMAX	22 fl oz/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
INTACT	0.5 % v/v B						
7 VALOR SX	2 oz/a A		97.5	100.0	100.0	0.0	0.0
ROUNDUP POWERMAX	32 fl oz/a A						
WARRANT	48 fl oz/a B						
XTENDIMAX	22 fl oz/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
INTACT	0.5 % v/v B						

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Missing data estimates are included in columns: Yates=63,64,65,66,67

Excluded replicate 4 in column 19; 1 in 36; 1 in 38; 3 in 63; 1 in 66; 1 in 67

Could not calculate LSD (% mean diff) for columns 1,2,3,4,6,7,8,9,10,19,21,23,24,26,29,31,34,35,36,37,38,39,42,43,46,47,48,49,51,54,56,57,59,61 because error mean square = 0.

University of Kentucky

	W Weed IPOLA	W Weed AMARE	W Weed SIDSP	W Weed ELEIN	W Weed AMARE		
Pest Type	Ipomoea lacuno>	Amaranthus ret>	Sida spinosa	Eleusine indica	Amaranthus ret>		
Pest Code	pitted morning>	Redroot pigweed	Prickly sida	Goosegrass	Redroot pigweed		
Pest Scientific Name							
Pest Name							
Crop Type, Code	C -	C -	C -	C -	C -		
BBCH Scale							
Crop Scientific Name							
Crop Name							
Rating Date	7-5-2019	7-5-2019	7-5-2019	7-2-2019	7-2-2019		
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P		
Rating Type	CONTRO	CONTRO	CONTRO	COUNT	COUNT		
Rating Unit	%	%	%	FT2	FT2		
Sample Size							
Number of Subsamples	1	1	1	1	1		
Data Entry Date	8-27-2019	8-27-2019	8-27-2019	8-27-2019	8-27-2019		
Days After First/Last Applic.	50 32	50 32	50 32	47 29	47 29		
Plant-Eval Interval	52 DP-1	52 DP-1	52 DP-1	49 DP-1	49 DP-1		
ARM Action Codes				ET4	EC		
Number of Decimals							
Trt Treatment No. Name	Rate Rate Unit	Appl Code					
			45	46	47	48	49
8 ZIDUA PRO	6 fl oz/a A		97.3	100.0	100.0	0.0	0.0
ROUNDUP POWERMAX	32 fl oz/a A						
OUTLOOK	12 fl oz/a B						
ENGENIA	12.8 fl oz/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
INTACT	0.5 % v/v B						
9 FIERCE	3 oz/a A		96.0	100.0	100.0	0.0	0.0
ROUNDUP POWERMAX	32 fl oz/a A						
DUAL II MAGNUM	16 fl oz/a B						
XTENDIMAX	22 fl oz/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
INTACT	0.5 % v/v B						
10 BOUNDARY	24 oz/a A		97.3	100.0	100.0	0.0	0.0
ROUNDUP POWERMAX	32 fl oz/a A						
TAVIUM	56.5 fl oz/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
INTACT	0.5 % v/v B						
LSD P=.05	4.75	.					
Standard Deviation	3.28	0.00		0.00	0.00	0.00	0.00
CV	3.75	0.0		0.0	0.0	0.0	0.0
Replicate F	1.312	0.000		0.000	0.000	0.000	0.000
Replicate Prob(F)	0.2909	1.0000		1.0000	1.0000	1.0000	1.0000
Treatment F	352.931	0.000		0.000	0.000	0.000	0.000
Treatment Prob(F)	0.0001	1.0000		1.0000	1.0000	1.0000	1.0000

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Missing data estimates are included in columns:Yates=63,64,65,66,67

Excluded replicate 4 in column 19; 1 in 36; 1 in 38; 3 in 63; 1 in 66; 1 in 67

Could not calculate LSD (% mean diff) for columns 1,2,3,4,6,7,8,9,10,19,21,23,24,26,29,31,34,35,36,37,38,39,42,43,46,47,48,49,51,54,56,57,59,61 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	IPOHE	SORHA	AMBTR	DIGSA	CHEAL		
Pest Scientific Name	Ipomoea hederata>	Sorghum halepense>	Ambrosia trifida>	Digitaria sanguinalis>	Chenopodium album>		
Pest Name	ivy-leaf morning glory	Johnson grass	Giant ragweed	large crabgrass	common lambsquarters		
Crop Type, Code	C -	C -	C -	C -	C -		
BBCH Scale							
Crop Scientific Name							
Crop Name							
Rating Date	7-2-2019	7-2-2019	7-2-2019	7-2-2019	7-2-2019		
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P		
Rating Type	COUNT	COUNT	COUNT	COUNT	COUNT		
Rating Unit	FT2	FT2	FT2	FT2	FT2		
Sample Size							
Number of Subsamples	1	1	1	1	1		
Data Entry Date	8-27-2019	8-27-2019	8-27-2019	8-27-2019	8-27-2019		
Days After First/Last Applic.	47 29	47 29	47 29	47 29	47 29		
Plant-Eval Interval	49 DP-1	49 DP-1	49 DP-1	49 DP-1	49 DP-1		
ARM Action Codes	AA			AL			
Number of Decimals							
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code	50	51	52	53	54
1 UNTREATED CHECK			0.1	0.0	0.3	9.5	0.0
2 VHP58-R002	7 fl oz/a A		0.1	0.0	0.3	1.1	0.0
ROUNDUP POWERMAX	32 fl oz/a A						
ANTHEM MAXX	3.25 fl oz/a B						
XTENDIMAX	22 fl oz/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
INTACT	0.5 % v/v B						
3 VHP58-R002	9 fl oz/a A		0.2	0.0	0.0	0.0	0.0
ROUNDUP POWERMAX	32 fl oz/a A						
ANTHEM MAXX	2.5 fl oz/a B						
XTENDIMAX	22 fl oz/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
INTACT	0.5 % v/v B						
4 AUTHORITY ELITE	26 fl oz/a A		0.1	0.0	0.0	0.4	0.0
ROUNDUP POWERMAX	32 fl oz/a A						
ANTHEM MAXX	3.25 fl oz/a B						
XTENDIMAX	22 fl oz/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
INTACT	0.5 % v/v B						
5 AUTHORITY SUPREME	6.4 fl oz/a A		0.6	0.0	0.0	0.2	0.0
ROUNDUP POWERMAX	32 fl oz/a A						
ANTHEM MAXX	2.5 fl oz/a B						
XTENDIMAX	22 fl oz/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
INTACT	0.5 % v/v B						
6 ANTHEM MAXX	3.25 fl oz/a A		0.2	0.0	0.0	0.2	0.0
METRIBUZIN	5 oz/a A						
ROUNDUP POWERMAX	32 fl oz/a A						
ANTHEM MAXX	2.5 fl oz/a B						
XTENDIMAX	22 fl oz/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
INTACT	0.5 % v/v B						
7 VALOR SX	2 oz/a A		0.0	0.0	0.0	3.2	0.0
ROUNDUP POWERMAX	32 fl oz/a A						
WARRANT	48 fl oz/a B						
XTENDIMAX	22 fl oz/a B						
ROUNDUP POWERMAX	32 fl oz/a B						
INTACT	0.5 % v/v B						

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Excluded replicate 4 in column 19; 1 in 36; 1 in 38; 3 in 63; 1 in 66; 1 in 67

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University of Kentucky

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	IPOHE	SORHA	AMBTR	DIGSA	CHEAL
Pest Scientific Name	Ipomoea heder>	Sorghum halepe>	Ambrosia trifi>	Digitaria sang>	Chenopodium al>
Pest Name	ivy-leaf morni>	Johnson grass	Giant ragweed	large crabgrass	common lambsqu>
Crop Type, Code	C -	C -	C -	C -	C -
BBCH Scale					
Crop Scientific Name					
Crop Name					
Rating Date	7-2-2019	7-2-2019	7-2-2019	7-2-2019	7-2-2019
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P
Rating Type	COUNT	COUNT	COUNT	COUNT	COUNT
Rating Unit	FT2	FT2	FT2	FT2	FT2
Sample Size					
Number of Subsamples	1	1	1	1	1
Data Entry Date	8-27-2019	8-27-2019	8-27-2019	8-27-2019	8-27-2019
Days After First/Last Applic.	47 29	47 29	47 29	47 29	47 29
Plant-Eval Interval	49 DP-1	49 DP-1	49 DP-1	49 DP-1	49 DP-1
ARM Action Codes	AA			AL	
Number of Decimals					
Trt Treatment					
No. Name	50	51	52	53	54
Rate Unit Code					
8 ZIDUA PRO	6 fl oz/a A				
ROUNDUP POWERMAX	32 fl oz/a A				
OUTLOOK	12 fl oz/a B				
ENGENIA	12.8 fl oz/a B				
ROUNDUP POWERMAX	32 fl oz/a B				
INTACT	0.5 % v/v B				
9 FIERCE	3 oz/a A				
ROUNDUP POWERMAX	32 fl oz/a A				
DUAL II MAGNUM	16 fl oz/a B				
XTENDIMAX	22 fl oz/a B				
ROUNDUP POWERMAX	32 fl oz/a B				
INTACT	0.5 % v/v B				
10 BOUNDARY	24 oz/a A				
ROUNDUP POWERMAX	32 fl oz/a A				
TAVIUM	56.5 fl oz/a B				
ROUNDUP POWERMAX	32 fl oz/a B				
INTACT	0.5 % v/v B				
LSD P=.05	1.54 - 99999.74	.	0.33	1.96 - 6.54	.
Standard Deviation	4.03t	0.00	0.23	0.29t	0.00
CV	159.8t	0.0	455.42	103.43t	0.0
Replicate F	1.089	0.000	0.643	1.750	0.000
Replicate Prob(F)	0.3705	1.0000	0.5941	0.1805	1.0000
Treatment F	0.561	0.000	0.857	4.726	0.000
Treatment Prob(F)	0.8164	1.0000	0.5728	0.0008	1.0000

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Excluded replicate 4 in column 19; 1 in 36; 1 in 38; 3 in 63; 1 in 66; 1 in 67

Could not calculate LSD (% mean diff) for columns 1,2,3,4,6,7,8,9,10,19,21,23,24,26,29,31,34,35,36,37,38,39,42,43,46,47,48,49,51,54,56,57,59,61 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	SETPU	MOLVE	ECHCG	SIDSP	SOLCA
Pest Scientific Name	Setaria helvola	Mollugo vertic>	Echinochloa cr>	Sida spinosa	Solanum caroli>
Pest Name	yellow foxtail	Carpetweed	Common barnyar>	Prickly sida	Horsenettle
Crop Type, Code	C -	C -	C -	C -	C -
BBCH Scale					
Crop Scientific Name					
Crop Name					
Rating Date	7-2-2019	7-2-2019	7-2-2019	7-2-2019	7-2-2019
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P
Rating Type	COUNT	COUNT	COUNT	COUNT	COUNT
Rating Unit	FT2	FT2	FT2	FT2	FT2
Sample Size					
Number of Subsamples	1	1	1	1	1
Data Entry Date	8-27-2019	8-27-2019	8-27-2019	8-27-2019	8-27-2019
Days After First/Last Applic.	47 29	47 29	47 29	47 29	47 29
Plant-Eval Interval	49 DP-1	49 DP-1	49 DP-1	49 DP-1	49 DP-1
ARM Action Codes					
Number of Decimals					
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	55	56	57
1 UNTREATED CHECK			3.0	0.0	0.0
2 VHP58-R002	7 fl oz/a A		0.0	0.0	0.0
ROUNDUP POWERMAX	32 fl oz/a A				
ANTHEM MAXX	3.25 fl oz/a B				
XTENDIMAX	22 fl oz/a B				
ROUNDUP POWERMAX	32 fl oz/a B				
INTACT	0.5 % v/v B				
3 VHP58-R002	9 fl oz/a A		0.0	0.0	0.0
ROUNDUP POWERMAX	32 fl oz/a A				
ANTHEM MAXX	2.5 fl oz/a B				
XTENDIMAX	22 fl oz/a B				
ROUNDUP POWERMAX	32 fl oz/a B				
INTACT	0.5 % v/v B				
4 AUTHORITY ELITE	26 fl oz/a A		0.0	0.0	0.0
ROUNDUP POWERMAX	32 fl oz/a A				
ANTHEM MAXX	3.25 fl oz/a B				
XTENDIMAX	22 fl oz/a B				
ROUNDUP POWERMAX	32 fl oz/a B				
INTACT	0.5 % v/v B				
5 AUTHORITY SUPREME	6.4 fl oz/a A		0.0	0.0	0.0
ROUNDUP POWERMAX	32 fl oz/a A				
ANTHEM MAXX	2.5 fl oz/a B				
XTENDIMAX	22 fl oz/a B				
ROUNDUP POWERMAX	32 fl oz/a B				
INTACT	0.5 % v/v B				
6 ANTHEM MAXX	3.25 fl oz/a A		0.0	0.0	0.0
METRIBUZIN	5 oz/a A				
ROUNDUP POWERMAX	32 fl oz/a A				
ANTHEM MAXX	2.5 fl oz/a B				
XTENDIMAX	22 fl oz/a B				
ROUNDUP POWERMAX	32 fl oz/a B				
INTACT	0.5 % v/v B				
7 VALOR SX	2 oz/a A		0.0	0.0	0.0
ROUNDUP POWERMAX	32 fl oz/a A				
WARRANT	48 fl oz/a B				
XTENDIMAX	22 fl oz/a B				
ROUNDUP POWERMAX	32 fl oz/a B				
INTACT	0.5 % v/v B				

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University of Kentucky

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	SETPU	MOLVE	ECHCG	SIDSP	SOLCA		
Pest Scientific Name	Setaria helvola	Mollugo vertic>	Echinochloa cr>	Sida spinosa	Solanum caroli>		
Pest Name	yellow foxtail	Carpetweed	Common barnyar>	Prickly sida	Horsenettle		
Crop Type, Code	C -	C -	C -	C -	C -		
BBCH Scale							
Crop Scientific Name							
Crop Name							
Rating Date	7-2-2019	7-2-2019	7-2-2019	7-2-2019	7-2-2019		
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P		
Rating Type	COUNT	COUNT	COUNT	COUNT	COUNT		
Rating Unit	FT2	FT2	FT2	FT2	FT2		
Sample Size							
Number of Subsamples	1	1	1	1	1		
Data Entry Date	8-27-2019	8-27-2019	8-27-2019	8-27-2019	8-27-2019		
Days After First/Last Applic.	47 29	47 29	47 29	47 29	47 29		
Plant-Eval Interval	49 DP-1	49 DP-1	49 DP-1	49 DP-1	49 DP-1		
ARM Action Codes							
Number of Decimals							
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code	55	56	57	58	59
8 ZIDUA PRO	6 fl oz/a	A	0.3	0.0	0.0	0.0	0.0
ROUNDUP POWERMAX	32 fl oz/a	A					
OUTLOOK	12 fl oz/a	B					
ENGENIA	12.8 fl oz/a	B					
ROUNDUP POWERMAX	32 fl oz/a	B					
INTACT	0.5 % v/v	B					
9 FIERCE	3 oz/a	A	0.0	0.0	0.0	0.0	0.0
ROUNDUP POWERMAX	32 fl oz/a	A					
DUAL II MAGNUM	16 fl oz/a	B					
XTENDIMAX	22 fl oz/a	B					
ROUNDUP POWERMAX	32 fl oz/a	B					
INTACT	0.5 % v/v	B					
10 BOUNDARY	24 oz/a	A	0.0	0.0	0.0	1.0	0.0
ROUNDUP POWERMAX	32 fl oz/a	A					
TAVIUM	56.5 fl oz/a	B					
ROUNDUP POWERMAX	32 fl oz/a	B					
INTACT	0.5 % v/v	B					
LSD P=.05			2.77	.	.	0.83	.
Standard Deviation			1.91	0.00	0.00	0.57	0.00
CV			587.62	0.0	0.0	175.41	0.0
Replicate F			0.939	0.000	0.000	1.513	0.000
Replicate Prob(F)			0.4355	1.0000	1.0000	0.2337	1.0000
Treatment F			0.976	0.000	0.000	4.282	0.000
Treatment Prob(F)			0.4812	1.0000	1.0000	0.0016	1.0000

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Excluded replicate 4 in column 19; 1 in 36; 1 in 38; 3 in 63; 1 in 66; 1 in 67

Could not calculate LSD (% mean diff) for columns 1,2,3,4,6,7,8,9,10,19,21,23,24,26,29,31,34,35,36,37,38,39,42,43,46,47,48,49,51,54,56,57,59,61 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed		
Pest Code	IPOLA	XANST	ACCOS		
Pest Scientific Name	Ipomoea lacuno>	Xanthium strum>	Acalypha ostry>		
Pest Name	pitted morning>	Common cockleb>	Hop-hornbeam c>		
Crop Type, Code	C -	C -	C -	C GLXMA	C GLXMA
BBCH Scale				BSOY	BSOY
Crop Scientific Name				Glycine max	Glycine max
Crop Name				Soybean	Soybean
Rating Date	7-2-2019	7-2-2019	7-2-2019	10-10-2019	10-10-2019
Part Rated	PLANT P	PLANT P	PLANT P	plant c	plant c
Rating Type	COUNT	COUNT	COUNT	plot length	plot weight
Rating Unit	FT2	FT2	FT2	ft	lb
Sample Size				1	1
Number of Subsamples	1	1	1	1	1
Data Entry Date	8-27-2019	8-27-2019	8-27-2019	10-21-2019	10-21-2019
Days After First/Last Applic.	47 29	47 29	47 29	147 129	147 129
Plant-Eval Interval	49 DP-1	49 DP-1	49 DP-1	149 DP-1	149 DP-1
ARM Action Codes		EC		ER3	EC
Number of Decimals					
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	60	61	62
1 UNTREATED CHECK			0.3	0.3	0.8
2 VHP58-R002	7 fl oz/a A		0.8	0.0	0.0
ROUNDUP POWERMAX	32 fl oz/a A				
ANTHEM MAXX	3.25 fl oz/a B				
XTENDIMAX	22 fl oz/a B				
ROUNDUP POWERMAX	32 fl oz/a B				
INTACT	0.5 % v/v B				
3 VHP58-R002	9 fl oz/a A		0.0	0.0	0.0
ROUNDUP POWERMAX	32 fl oz/a A				
ANTHEM MAXX	2.5 fl oz/a B				
XTENDIMAX	22 fl oz/a B				
ROUNDUP POWERMAX	32 fl oz/a B				
INTACT	0.5 % v/v B				
4 AUTHORITY ELITE	26 fl oz/a A		0.0	0.0	0.0
ROUNDUP POWERMAX	32 fl oz/a A				
ANTHEM MAXX	3.25 fl oz/a B				
XTENDIMAX	22 fl oz/a B				
ROUNDUP POWERMAX	32 fl oz/a B				
INTACT	0.5 % v/v B				
5 AUTHORITY SUPREME	6.4 fl oz/a A		0.0	0.0	0.0
ROUNDUP POWERMAX	32 fl oz/a A				
ANTHEM MAXX	2.5 fl oz/a B				
XTENDIMAX	22 fl oz/a B				
ROUNDUP POWERMAX	32 fl oz/a B				
INTACT	0.5 % v/v B				
6 ANTHEM MAXX	3.25 fl oz/a A		0.3	0.0	0.3
METRIBUZIN	5 oz/a A				
ROUNDUP POWERMAX	32 fl oz/a A				
ANTHEM MAXX	2.5 fl oz/a B				
XTENDIMAX	22 fl oz/a B				
ROUNDUP POWERMAX	32 fl oz/a B				
INTACT	0.5 % v/v B				
7 VALOR SX	2 oz/a A		0.0	0.0	0.0
ROUNDUP POWERMAX	32 fl oz/a A				
WARRANT	48 fl oz/a B				
XTENDIMAX	22 fl oz/a B				
ROUNDUP POWERMAX	32 fl oz/a B				
INTACT	0.5 % v/v B				

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University of Kentucky

Pest Type	W Weed	W Weed	W Weed		
Pest Code	IPOLA	XANST	ACCOS		
Pest Scientific Name	Ipomoea lacuno>	Xanthium strum>	Acalypha ostry>		
Pest Name	pitted morning>	Common cockleb>	Hop-hornbeam c>		
Crop Type, Code	C -	C -	C -	C GLXMA	C GLXMA
BBCH Scale				BSOY	BSOY
Crop Scientific Name				Glycine max	Glycine max
Crop Name				Soybean	Soybean
Rating Date	7-2-2019	7-2-2019	7-2-2019	10-10-2019	10-10-2019
Part Rated	PLANT P	PLANT P	PLANT P	plant c	plant c
Rating Type	COUNT	COUNT	COUNT	plot length	plot weight
Rating Unit	FT2	FT2	FT2	ft	lb
Sample Size				1	1
Number of Subsamples	1	1	1	1	1
Data Entry Date	8-27-2019	8-27-2019	8-27-2019	10-21-2019	10-21-2019
Days After First/Last Applic.	47 29	47 29	47 29	147 129	147 129
Plant-Eval Interval	49 DP-1	49 DP-1	49 DP-1	149 DP-1	149 DP-1
ARM Action Codes		EC		ER3	EC
Number of Decimals					
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	60	61	62
8 ZIDUA PRO	6 fl oz/a	A	0.5	0.0	0.8
ROUNDUP POWERMAX	32 fl oz/a	A			27.40
OUTLOOK	12 fl oz/a	B			
ENGENIA	12.8 fl oz/a	B			
ROUNDUP POWERMAX	32 fl oz/a	B			
INTACT	0.5 % v/v	B			14.978
9 FIERCE	3 oz/a	A	0.0	0.0	0.0
ROUNDUP POWERMAX	32 fl oz/a	A			27.13
DUAL II MAGNUM	16 fl oz/a	B			
XTENDIMAX	22 fl oz/a	B			
ROUNDUP POWERMAX	32 fl oz/a	B			
INTACT	0.5 % v/v	B			14.278
10 BOUNDARY	24 oz/a	A	0.0	0.0	0.5
ROUNDUP POWERMAX	32 fl oz/a	A			27.47
TAVIUM	56.5 fl oz/a	B			
ROUNDUP POWERMAX	32 fl oz/a	B			
INTACT	0.5 % v/v	B			15.395
LSD P=.05			0.83	.	0.93
Standard Deviation			0.57	0.00	0.64
CV			325.76	0.0	285.93
Replicate F			2.538	0.000	1.671
Replicate Prob(F)			0.0776	1.0000	0.1967
Treatment F			0.863	0.000	1.000
Treatment Prob(F)			0.5679	1.0000	0.4635
					669.359
					4.467
					0.0001
					0.0130
					2.578
					0.984
					0.4730

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Missing data estimates are included in columns:Yates=63,64,65,66,67

Excluded replicate 4 in column 19; 1 in 36; 1 in 38; 3 in 63; 1 in 66; 1 in 67

Could not calculate LSD (% mean diff) for columns 1,2,3,4,6,7,8,9,10,19,21,23,24,26,29,31,34,35,36,37,38,39,42,43,46,47,48,49,51,54,56,57,59,61 because error mean square = 0.

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Pest Type			
Pest Code			
Pest Scientific Name			
Pest Name			
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA
BBCH Scale	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean
Rating Date	10-10-2019	10-10-2019	10-10-2019
Part Rated	plant c	plant c	plant c
Rating Type	moisture	test weight	YIELD
Rating Unit	%	lb	BU
Sample Size			1 A
Number of Subsamples	1	1	1
Data Entry Date	10-21-2019	10-21-2019	10-21-2019
Days After First/Last Applic.	147 129	147 129	147 129
Plant-Eval Interval	149 DP-1	149 DP-1	149 DP-1
ARM Action Codes	ET8	ER1	ER1 TY1
Number of Decimals			1
Trt Treatment	Rate	Appl	
No. Name	Rate Unit	Code	
			65 66 67
1 UNTREATED CHECK			11.925 48.82 58.3
2 VHP58-R002	7 fl oz/a A		12.425 49.57 79.6
ROUNDUP POWERMAX	32 fl oz/a A		
ANTHEM MAXX	3.25 fl oz/a B		
XTENDIMAX	22 fl oz/a B		
ROUNDUP POWERMAX	32 fl oz/a B		
INTACT	0.5 % v/v B		
3 VHP58-R002	9 fl oz/a A		10.578 47.47 78.6
ROUNDUP POWERMAX	32 fl oz/a A		
ANTHEM MAXX	2.5 fl oz/a B		
XTENDIMAX	22 fl oz/a B		
ROUNDUP POWERMAX	32 fl oz/a B		
INTACT	0.5 % v/v B		
4 AUTHORITY ELITE	26 fl oz/a A		11.675 49.90 78.6
ROUNDUP POWERMAX	32 fl oz/a A		
ANTHEM MAXX	3.25 fl oz/a B		
XTENDIMAX	22 fl oz/a B		
ROUNDUP POWERMAX	32 fl oz/a B		
INTACT	0.5 % v/v B		
5 AUTHORITY SUPREME	6.4 fl oz/a A		11.330 50.05 83.4
ROUNDUP POWERMAX	32 fl oz/a A		
ANTHEM MAXX	2.5 fl oz/a B		
XTENDIMAX	22 fl oz/a B		
ROUNDUP POWERMAX	32 fl oz/a B		
INTACT	0.5 % v/v B		
6 ANTHEM MAXX	3.25 fl oz/a A		11.360 49.67 78.7
METRIBUZIN	5 oz/a A		
ROUNDUP POWERMAX	32 fl oz/a A		
ANTHEM MAXX	2.5 fl oz/a B		
XTENDIMAX	22 fl oz/a B		
ROUNDUP POWERMAX	32 fl oz/a B		
INTACT	0.5 % v/v B		
7 VALOR SX	2 oz/a A		11.400 46.20 84.4
ROUNDUP POWERMAX	32 fl oz/a A		
WARRANT	48 fl oz/a B		
XTENDIMAX	22 fl oz/a B		
ROUNDUP POWERMAX	32 fl oz/a B		
INTACT	0.5 % v/v B		

t=Mean descriptions are reported in transformed data units, and are not de-transformed.

Missing data estimates are included in columns:Yates=63,64,65,66,67

Excluded replicate 4 in column 19; 1 in 36; 1 in 38; 3 in 63; 1 in 66; 1 in 67

Could not calculate LSD (% mean diff) for columns 1,2,3,4,6,7,8,9,10,19,21,23,24,26,29,31,34,35,36,37,38,39,42,43,46,47,48,49,51,54,56,57,59,61 because error mean square = 0.

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Pest Type			
Pest Code			
Pest Scientific Name			
Pest Name			
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA
BBCH Scale	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean
Rating Date	10-10-2019	10-10-2019	10-10-2019
Part Rated	plant c	plant c	plant c
Rating Type	moisture	test weight	YIELD
Rating Unit	%	lb	BU
Sample Size			1 A
Number of Subsamples	1	1	1
Data Entry Date	10-21-2019	10-21-2019	10-21-2019
Days After First/Last Applic.	147 129	147 129	147 129
Plant-Eval Interval	149 DP-1	149 DP-1	149 DP-1
ARM Action Codes	ET8	ER1	ER1 TY1
Number of Decimals			1
Trt Treatment	Rate Appl		
No. Name	Rate Unit Code	65	66
8 ZIDUA PRO	6 fl oz/a A	10.485	49.60
ROUNDUP POWERMAX	32 fl oz/a A		81.1
OUTLOOK	12 fl oz/a B		
ENGENIA	12.8 fl oz/a B		
ROUNDUP POWERMAX	32 fl oz/a B		
INTACT	0.5 % v/v B		
9 FIERCE	3 oz/a A	11.753	46.93
ROUNDUP POWERMAX	32 fl oz/a A		80.6
DUAL II MAGNUM	16 fl oz/a B		
XTENDIMAX	22 fl oz/a B		
ROUNDUP POWERMAX	32 fl oz/a B		
INTACT	0.5 % v/v B		
10 BOUNDARY	24 oz/a A	11.950	50.30
ROUNDUP POWERMAX	32 fl oz/a A		82.9
TAVIUM	56.5 fl oz/a B		
ROUNDUP POWERMAX	32 fl oz/a B		
INTACT	0.5 % v/v B		
LSD P=.05		1.9196	4.254
Standard Deviation		1.3090	2.458
CV		11.29	5.03
Replicate F		0.984	0.620
Replicate Prob(F)		0.4184	0.5505
Treatment F		0.628	1.048
Treatment Prob(F)		0.7454	0.4469

t=Mean descriptions are reported in transformed data units, and are not de-transformed.

Missing data estimates are included in columns: Yates=63,64,65,66,67

Excluded replicate 4 in column 19; 1 in 36; 1 in 38; 3 in 63; 1 in 66; 1 in 67

Could not calculate LSD (% mean diff) for columns 1,2,3,4,6,7,8,9,10,19,21,23,24,26,29,31,34,35,36,37,38,39,42,43,46,47,48,49,51,54,56,57,59,61 because error mean square = 0.

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EVALUATING AUTHORITY BRANDS AND ANTHEM MAXX FOR WEED CONTROL IN DICAMBA-TOLERANT SOYBEANS

Trial ID: 19-36_SOY-REC Location: UKREC - 201-D Trial Year: 2019
 Protocol ID: USA-19-764 Investigator: Travis Legleiter
 Project ID: Study Director:
 Sponsor Contact: Matthew Wiggins

Pest Type

W, Weed = Weed or volunteer crop

Pest Code

IPOLA, Ipomoea lacunosa, pitted morning glory = US
 DIGSA, Digitaria sanguinalis, large crabgrass = US
 AMARE, Amaranthus retroflexus, Redroot pigweed = US
 SIDSP, Sida spinosa, Prickly sida = US
 ELEIN, Eleusine indica, Goosegrass = US
 IPOHE, Ipomoea hederacea, ivy-leaf morning glory = US
 SORHA, Sorghum halepense, Johnson grass = US
 AMBTR, Ambrosia trifida, Giant ragweed = US
 CHEAL, Chenopodium album, common lambsquarters = US
 SETPU, Setaria helvola, yellow foxtail = US
 MOLVE, Mollugo verticillata, Carpetweed = US
 ECHCG, Echinochloa crus-galli, Common barnyard grass = US
 SOLCA, Solanum carolinense, Horsenettle = US
 XANST, Xanthium strumarium, Common cocklebur = US
 ACCOS, Acalypha ostryifolia, Hop-hornbeam copperleaf = US

Crop Type Code

C = EPPO species (Bayer) codes
 GLXMA, BSOY, Glycine max, Soybean = US

Part Rated

PLANT = plant
 C = Crop is Part Rated
 P = Pest is Part Rated

Rating Type

PHYGEN = phytotoxicity - general / injury
 PHYCHL = phytotoxicity - chlorosis
 PHYNEC = phytotoxicity - necrosis /burn
 PHYSTU = phytotoxicity - stunting
 CONTRO = control / burndown or knockdown
 COUNT = count
 YIELD = yield

Rating Unit

% = percent
 FT2 = square foot
 ft = foot
 lb = pound
 BU = bushel

PLOT = total plot
 A = acre

Plant-Eval Interval

9 DP-1 = 1 GLXMA 5-14-2019
 16 DP-1 = 1 GLXMA 5-14-2019
 20 DP-1 = 1 GLXMA 5-14-2019
 31 DP-1 = 1 GLXMA 5-14-2019
 37 DP-1 = 1 GLXMA 5-14-2019
 52 DP-1 = 1 GLXMA 5-14-2019
 49 DP-1 = 1 GLXMA 5-14-2019
 149 DP-1 = 1 GLXMA 5-14-2019

ARM Action Codes

AL = Automatic log transformation of X+1
 AA = Automatic arcsine square root % transformation
 ER4 = Excluded replicate 4
 EC = Do not analyze untreated check, while still reporting treatment mean on AOV Means Table
 ET5 = Excluded treatment 5
 ER1 = Excluded replicate 1
 ET4 = Excluded treatment 4
 ER3 = Excluded replicate 3
 ET8 = Excluded treatment 8
 TY1 = $(726/(5*[63]))*[64]*(100-@MVAVGREP([65]))/86.5$

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ENGENIA PRO VS COMPETITORS SPLIT PLOT / MED SOIL / NT

Trial ID: 19-37 SOY-REC Location: UKREC- 201-D Trial Year: 2019
 Protocol ID: MKD-H-2019-US-D04-B-01.0 Investigator: Travis Legleiter
 Project ID: Study Director: Chad Asmus
 Sponsor Contact: Greg Stapleton

General Trial Information

Study Director: Chad Asmus
Investigator: Travis Legleiter **Title:** Assistant Extension Professor

Trial Status: E established
ARM Trial Created On: 4-8-2019

Trial Location

City: Princeton
State/Prov.: Kentucky
Postal Code: 42445

Conducted Under GLP: No
Conducted Under GEP: No

Objectives:

To showcase the improved residual properties of Engenia PRO vs competitors.

Contacts

Study Director: Chad Asmus
Investigator: Travis Legleiter **Title:** Assistant Extension Professor
Organization: University of Kentucky
Address: 1205 Hopkinsville Street **Phone No.:** 859-562-1323
City+State/Prov: Princeton, KY
Postal Code: 42445 **E-mail:** Travis.Legleiter@uky.edu

Crop Description

Crop 1: C GLXMA Glycine max Soybean **BBCH Scale:** BSOY
Entry Date: 8-27-2019
Variety: Asgrow 42X6
Attributes: RR2Xtend
Planting Date: 5-14-2019 **Planting Rate:** 140000 S/A
Depth: 1 IN
Rows per Plot: 7 **Planting Method:** PLANTD planted
Row Spacing: 15 IN **Planting Equipment:** VP vacuum planter
Soil Moisture: SLIDRY slightly dry

Pest Description

Pest 1 Type: W **Code:** IPOHE Ipomoea hederacea
Common Name: ivy-leaf morning glory **Entry Date:** 8-27-2019

Pest 2 Type: W **Code:** ELEIN Eleusine indica
Common Name: Goosegrass **Entry Date:** 8-27-2019

Pest 3 Type: W **Code:** SIDSP Sida spinosa
Common Name: Prickly sida **Entry Date:** 8-27-2019

Pest 4 Type: W **Code:** EPHSS Euphorbia sp.
Common Name: Spurge **Entry Date:** 8-27-2019

Pest 5 Type: W **Code:** AMARE Amaranthus retroflexus
Common Name: Redroot pigweed **Entry Date:** 8-27-2019

Pest 6 Type: W **Code:** IPOLA Ipomoea lacunosa
Common Name: pitted morning glory **Entry Date:** 8-27-2019

Pest 7 Type: W **Code:** AMBTR Ambrosia trifida
Common Name: Giant ragweed **Entry Date:** 8-27-2019

Site and Design

Treated Plot Width: 6.7 FT
Treated Plot Length: 15 FT
Treated Plot Area: 100.5 FT² **Treatments:** 8 **Tillage Type:** CONTIL conventional-till
Replications: 3 **Study Design:** SPLPLO Split-Plot

Field Prep./Maintenance:

4/29/19 - Field Disced twice
 5/14/19- Field cultivated and cultipacked

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Soil Description

% Sand: 4 % OM: 3
 % Silt: 77 **Soil Name:** Crider Silt Loam
 % Clay: 19

Moisture and Weather Conditions

Overall Moisture Conditions: ABONOR above normal
Closest Weather Station: Princeton Mesonet **Distance:** 0.25 mi

Application Description

	A	B
Application Date	5-16-2019	6-12-2019
Appl. Start Time	9:05 AM	8:10 AM
Appl. Stop Time	9:10 AM	8:20 AM
Interval to Prev. Appl.		27 DAYS
Application Method	BROADC	BROADC
Application Timing	PRE	EPOST
Application Placement	SOIL	FOLIAR
Appl. Entry Date	8-27-2019	8-27-2019
Air Temperature Start, Stop	64 F	65 F
% Relative Humidity Start, Stop	64	68
Wind Velocity+Dir. Start	2 MPH SW	1 MPH SW
Wet Leaves (Y/N)	N no	Y yes
Soil Temperature	64 F	61 F
Soil Moisture	WET	DRY
% Cloud Cover	2	15

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale	GLXMA BSOY	GLXMA BSOY
Stage Scale Used		VR
Stage Majority, Percent		V3
Height Average		6 IN
Height Minimum, Maximum		4.5 8

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Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale	IPOHE W	IPOHE W
Height Average	2	IN
Height Minimum, Maximum	1	3.5
Density Average	5	FT2
Density Min, Max	1	9
Pest 2 Code, Type, Scale	ELEIN W	ELEIN W
Height Average	2	IN
Height Minimum, Maximum	1.5	4.75
Density Average	14	FT2
Density Min, Max	2	25
Pest 3 Code, Type, Scale	SIDSP W	SIDSP W
Height Average	3	IN
Height Minimum, Maximum	0.75	5
Density Average	4	FT2
Density Min, Max	0	8
Pest 4 Code, Type, Scale	EPHSS W	EPHSS W
Height Average	2	IN
Height Minimum, Maximum	0.75	3.5
Density Average	1	FT2
Density Min, Max	1	2
Pest 5 Code, Type, Scale	AMARE W	AMARE W
Height Average	1.5	IN
Height Minimum, Maximum	1	2.75
Density Average	1	FT2
Density Min, Max	0	3
Pest 6 Code, Type, Scale	IPOLA W	IPOLA W
Height Average	4.5	IN
Height Minimum, Maximum	4.5	5
Density Average	1	FT2
Density Min, Max	1	1
Pest 7 Code, Type, Scale	AMBTR W	AMBTR W
Height Average	1	IN
Density Average	0.25	FT2

Application Equipment

	A	B
Appl. Equipment	CO2 BACKPACK	CO2BACKPACK
Equipment Type	BACCAI	BACCAI
Operation Pressure	31 PSI	49 PSI
Nozzle Type	FLAFXR	TTI110015
Nozzle Size	02	015
Nozzle Spacing	20 IN	20 IN
Boom Length	6.7 FT	6.7 IN
Boom Height	18 IN	18 IN
Ground Speed	3 MPH	3 KPH
Carrier	H2O	H2O
Application Amount	15 GAL/AC	15 GAL/AC
Mix Overage	1476 mL	1476 mL
Mix Size	2 L	2 L
Propellant	COMCO2	COMCO2

Context	Date	By	Notes
STATUS	4-8-2019	Travis Legleiter	Automatically added by ARM: Trial Status updated to 'S' during trial creation.
STATUS	8-27-2019	Travis Legleiter	Automatically added by ARM: Trial Status updated to 'E' when Planting Date entered.

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SE Definitions		
	1.	2.
SE Description	Broadle af weed control by species	Grass weed control by species
Pest Type, Code	BBBAN	GGGAN
Crop Type, Code	C	C

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ENGENIA PRO VS COMPETITORS SPLIT PLOT / MED SOIL / NT

Trial ID: 19-37 SOY-REC	Location: UKREC- 201-D	Trial Year: 2019
Protocol ID: MKD-H-2019-US-D04-B-01.0	Investigator: Travis Legleiter	
Project ID:	Study Director: Chad Asmus	
	Sponsor Contact: Greg Stapleton	

	W Weed DIGSA	W Weed AMARE	W Weed IPOSS	W Weed DIGSA
Pest Type	Digitaria sang>	Amaranthus ret>	Ipomoea sp.	Digitaria sang>
Pest Code	large crabgrass	Redroot pigweed	Morning glory	large crabgrass
Pest Scientific Name	C -	C -	C -	C -
Pest Name	6-20-2019	6-20-2019	6-20-2019	6-26-2019
Crop Type, Code	PLANT P	PLANT P	PLANT P	PLANT P
Rating Date	CONTRO	CONTRO	CONTRO	CONTRO
Part Rated	%	%	%	%
Rating Type	1	1	1	1
Rating Unit	8-27-2019	8-27-2019	8-27-2019	8-27-2019
Number of Subsamples	35 8	35 8	35 8	41 14
Data Entry Date	37 DP-1	37 DP-1	37 DP-1	43 DP-1
Days After First/Last Applic.				
Plant-Eval Interval				
Trt Treatment	Rate	Appl		
No. Name	Rate Unit	Code	1	2
1 Zidua PRO	6 fl oz/a	A	77.5	96.5
ROUNDUP POWERMAX	32.0 fl oz/a	A		81.3
MSO	1.0 % v/v	A		55.0
Amsol AMS	17.0 lb ai/100 gal	A		
UNTREATED		B		
2 Zidua PRO	6 fl oz/a	A	100.0	100.0
ROUNDUP POWERMAX	32.0 fl oz/a	A		93.8
MSO	1.0 % v/v	A		100.0
Amsol AMS	17.0 lb ai/100 gal	A		
ENGENIA PRO	16.0 fl oz/a	B		
ROUNDUP POWERMAX	32.0 fl oz/a	B		
INDUCE	0.25 % v/v	B		
3 Zidua PRO	6 fl oz/a	A	100.0	100.0
ROUNDUP POWERMAX	32.0 fl oz/a	A		92.5
MSO	1.0 % v/v	A		100.0
Amsol AMS	17.0 lb ai/100 gal	A		
XTENDIMAX WITH VAPORGRIP TECHN	22.0 fl oz/a	B		
DUAL MAGNUM	16.0 fl oz/a	B		
ROUNDUP POWERMAX	32.0 fl oz/a	B		
INDUCE	0.25 % v/v	B		
4 Zidua PRO	6 fl oz/a	A	98.8	100.0
ROUNDUP POWERMAX	32.0 fl oz/a	A		91.0
MSO	1.0 % v/v	A		100.0
Amsol AMS	17.0 lb ai/100 gal	A		
XTENDIMAX WITH VAPORGRIP TECHN	22.0 fl oz/a	B		
WARRANT	48.0 fl oz/a	B		
ROUNDUP POWERMAX	32.0 fl oz/a	B		
INDUCE	0.25 % v/v	B		
5 UNTREATED		A	0.0	0.0
UNTREATED		B		0.0
6 UNTREATED		A	92.5	92.5
ENGENIA PRO	16.0 fl oz/a	B		87.5
ROUNDUP POWERMAX	32.0 fl oz/a	B		94.3
INDUCE	0.25 % v/v	B		
7 UNTREATED		A	96.3	90.0
XTENDIMAX WITH VAPORGRIP TECHN	22.0 fl oz/a	B		90.0
DUAL MAGNUM	16.0 fl oz/a	B		97.3
ROUNDUP POWERMAX	32.0 fl oz/a	B		
INDUCE	0.25 % v/v	B		
8 UNTREATED		A	96.0	90.0
XTENDIMAX WITH VAPORGRIP TECHN	22.0 fl oz/a	B		90.0
WARRANT	48.0 fl oz/a	B		95.5
ROUNDUP POWERMAX	32.0 fl oz/a	B		
INDUCE	0.25 % v/v	B		
LSD P=.05			4.41	2.68
Standard Deviation			2.97	1.80
CV			3.59	2.16
Replicate F			3.470	1.128
Replicate Prob(F)			0.0379	0.3641
Treatment F			530.351	1428.286
Treatment Prob(F)			0.0001	0.0001

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Pest Type	W Weed	W Weed	W Weed	W Weed		
Pest Code	AMARE	IPOSS	DIGSA	AMARE		
Pest Scientific Name	Amaranthus ret>	Ipomoea sp.	Digitaria sang>	Amaranthus ret>		
Pest Name	Redroot pigweed	Morning glory	large crabgrass	Redroot pigweed		
Crop Type, Code	C -	C -	C -	C -		
Rating Date	6-26-2019	6-26-2019	7-12-2019	7-12-2019		
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P		
Rating Type	CONTRO	CONTRO	CONTRO	COTNRO		
Rating Unit	%	%	%	%		
Number of Subsamples	1	1	1	1		
Data Entry Date	8-27-2019	8-27-2019	8-27-2019	8-27-2019		
Days After First/Last Applic.	41 14	41 14	57 30	57 30		
Plant-Eval Interval	43 DP-1	43 DP-1	59 DP-1	59 DP-1		
Trt Treatment	Rate	Appl				
No. Name	Rate Unit	Code	5	6		
1 Zidua PRO	6 fl oz/a	A	82.5	67.5	67.5	87.5
ROUNDUP POWERMAX	32.0 fl oz/a	A				
MSO	1.0 % v/v	A				
Amsol AMS	17.0 lb ai/100 gal	A				
UNTREATED		B				
2 Zidua PRO	6 fl oz/a	A	100.0	96.0	100.0	100.0
ROUNDUP POWERMAX	32.0 fl oz/a	A				
MSO	1.0 % v/v	A				
Amsol AMS	17.0 lb ai/100 gal	A				
ENGENIA PRO	16.0 fl oz/a	B				
ROUNDUP POWERMAX	32.0 fl oz/a	B				
INDUCE	0.25 % v/v	B				
3 Zidua PRO	6 fl oz/a	A	100.0	96.5	100.0	100.0
ROUNDUP POWERMAX	32.0 fl oz/a	A				
MSO	1.0 % v/v	A				
Amsol AMS	17.0 lb ai/100 gal	A				
XTENDIMAX WITH VAPORGRIP TECHN	22.0 fl oz/a	B				
DUAL MAGNUM	16.0 fl oz/a	B				
ROUNDUP POWERMAX	32.0 fl oz/a	B				
INDUCE	0.25 % v/v	B				
4 Zidua PRO	6 fl oz/a	A	100.0	97.8	100.0	100.0
ROUNDUP POWERMAX	32.0 fl oz/a	A				
MSO	1.0 % v/v	A				
Amsol AMS	17.0 lb ai/100 gal	A				
XTENDIMAX WITH VAPORGRIP TECHN	22.0 fl oz/a	B				
WARRANT	48.0 fl oz/a	B				
ROUNDUP POWERMAX	32.0 fl oz/a	B				
INDUCE	0.25 % v/v	B				
5 UNTREATED		A	0.0	0.0	0.0	0.0
UNTREATED		B				
6 UNTREATED		A	100.0	95.5	100.0	100.0
ENGENIA PRO	16.0 fl oz/a	B				
ROUNDUP POWERMAX	32.0 fl oz/a	B				
INDUCE	0.25 % v/v	B				
7 UNTREATED		A	100.0	95.0	100.0	100.0
XTENDIMAX WITH VAPORGRIP TECHN	22.0 fl oz/a	B				
DUAL MAGNUM	16.0 fl oz/a	B				
ROUNDUP POWERMAX	32.0 fl oz/a	B				
INDUCE	0.25 % v/v	B				
8 UNTREATED		A	100.0	96.3	100.0	100.0
XTENDIMAX WITH VAPORGRIP TECHN	22.0 fl oz/a	B				
WARRANT	48.0 fl oz/a	B				
ROUNDUP POWERMAX	32.0 fl oz/a	B				
INDUCE	0.25 % v/v	B				
LSD P=.05			5.03	7.34	6.61	2.63
Standard Deviation			3.39	4.94	4.45	1.77
CV			3.97	6.13	5.33	2.06
Replicate F			1.000	1.370	1.000	1.000
Replicate Prob(F)			0.4155	0.2838	0.4155	0.4155
Treatment F			427.909	190.129	255.857	1567.857
Treatment Prob(F)			0.0001	0.0001	0.0001	0.0001

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Pest Type				W Weed
Pest Code				IPOSS
Pest Scientific Name				Ipomoea sp.
Pest Name				Morning glory
Crop Type, Code				C -
Rating Date				7-12-2019
Part Rated				PLANT P
Rating Type				CONTRO
Rating Unit				%
Number of Subsamples				1
Data Entry Date				8-27-2019
Days After First/Last Applic.				57 30
Plant-Eval Interval				59 DP-1
Trt Treatment	Rate	Appl		
No. Name	Rate Unit	Code	9	
1 Zidua PRO	6 fl oz/a	A	77.5	
ROUNDUP POWERMAX	32.0 fl oz/a	A		
MSO	1.0 % v/v	A		
Amsol AMS	17.0 lb ai/100 gal	A		
UNTREATED		B		
2 Zidua PRO	6 fl oz/a	A	100.0	
ROUNDUP POWERMAX	32.0 fl oz/a	A		
MSO	1.0 % v/v	A		
Amsol AMS	17.0 lb ai/100 gal	A		
ENGENIA PRO	16.0 fl oz/a	B		
ROUNDUP POWERMAX	32.0 fl oz/a	B		
INDUCE	0.25 % v/v	B		
3 Zidua PRO	6 fl oz/a	A	100.0	
ROUNDUP POWERMAX	32.0 fl oz/a	A		
MSO	1.0 % v/v	A		
Amsol AMS	17.0 lb ai/100 gal	A		
XTENDIMAX WITH VAPORGRIP TECHN	22.0 fl oz/a	B		
DUAL MAGNUM	16.0 fl oz/a	B		
ROUNDUP POWERMAX	32.0 fl oz/a	B		
INDUCE	0.25 % v/v	B		
4 Zidua PRO	6 fl oz/a	A	100.0	
ROUNDUP POWERMAX	32.0 fl oz/a	A		
MSO	1.0 % v/v	A		
Amsol AMS	17.0 lb ai/100 gal	A		
XTENDIMAX WITH VAPORGRIP TECHN	22.0 fl oz/a	B		
WARRANT	48.0 fl oz/a	B		
ROUNDUP POWERMAX	32.0 fl oz/a	B		
INDUCE	0.25 % v/v	B		
5 UNTREATED		A	0.0	
UNTREATED		B		
6 UNTREATED		A	100.0	
ENGENIA PRO	16.0 fl oz/a	B		
ROUNDUP POWERMAX	32.0 fl oz/a	B		
INDUCE	0.25 % v/v	B		
7 UNTREATED		A	100.0	
XTENDIMAX WITH VAPORGRIP TECHN	22.0 fl oz/a	B		
DUAL MAGNUM	16.0 fl oz/a	B		
ROUNDUP POWERMAX	32.0 fl oz/a	B		
INDUCE	0.25 % v/v	B		
8 UNTREATED		A	100.0	
XTENDIMAX WITH VAPORGRIP TECHN	22.0 fl oz/a	B		
WARRANT	48.0 fl oz/a	B		
ROUNDUP POWERMAX	32.0 fl oz/a	B		
INDUCE	0.25 % v/v	B		
LSD P=.05				2.63
Standard Deviation				1.77
CV				2.09
Replicate F				1.000
Replicate Prob(F)				0.4155
Treatment F				1578.143
Treatment Prob(F)				0.0001

University of Kentucky

ENGENIA PRO VS COMPETITORS SPLIT PLOT / MED SOIL / NT

Trial ID: 19-37 SOY-REC Location: UKREC- 201-D Trial Year: 2019
Protocol ID: MKD-H-2019-US-D04-B-01.0 Investigator: Travis Legleiter
Project ID: Study Director: Chad Asmus
Sponsor Contact: Greg Stapleton

Pest Type

W, Weed = Weed or volunteer crop

Pest Code

DIGSA, Digitaria sanguinalis, large crabgrass = US
AMARE, Amaranthus retroflexus, Redroot pigweed = US
IPOSS, Ipomoea sp., Morning glory = US

Crop Type, Code

C = EPPO species (Bayer) codes

Part Rated

PLANT = plant
P = Pest is Part Rated

Rating Type

CONTRO = control / burndown or knockdown

Rating Unit

% = percent

Plant-Eval Interval

37 DP-1 = 1 GLXMA 5-14-2019
43 DP-1 = 1 GLXMA 5-14-2019
59 DP-1 = 1 GLXMA 5-14-2019

University of Kentucky

LIBERTY/ LIBERTYLINK CORN SYSTEM / EFFICACY/TOLERANCE

Trial ID: 19-38_COR-REC Location: UKREC - 108C3 Trial Year: 2019
 Protocol ID: MKD-H-2019-US-C41-A-01.0 Investigator: Travis Legleiter
 Project ID: Study Director: Darren Unland
 Sponsor Contact: Greg Stapleton

General Trial Information

Study Director: Darren Unland
Investigator: Travis Legleiter **Title:** Assistant Extension Professor

Trial Status: E established
ARM Trial Created On: 4-8-2019

Trial Location

City: Princeton
State/Prov.: Kentucky
Postal Code: 42445

Conducted Under GLP: No
Conducted Under GEP: No

Contacts

Study Director: Darren Unland

Investigator: Travis Legleiter **Title:** Assistant Extension Professor
Organization: University of Kentucky
Address: 1205 Hopkinsville Street **Phone No.:** 859-562-1323
City+State/Prov: Princeton, KY
Postal Code: 42445 **E-mail:** Travis.Legleiter@uky.edu

Crop Description

Crop 1: C ZEAMX Zea mays Corn **BBCH Scale:** BCOR
Entry Date: 9-12-2019
Planting Date: 4-17-2019 **Planting Rate:** 32000 S/A
Depth: 1.5 IN
Rows per Plot: 4 **Planting Method:** PLANTD planted
Row Spacing: 30 IN **Planting Equipment:** VP vacuum planter
Soil Temperature: 51 F **Soil Moisture:** WET wet
Emergence Date: 4-26-2019
Harvest Date: 9-12-2019
Harvested Width: 5 FT
% Standard Moisture: 15.5

Pest Description

Pest 1 Type: W **Code:** ELEIN Eleusine indica
Common Name: Goosegrass **Entry Date:** 9-12-2019

Pest 2 Type: W **Code:** TAROF Taraxacum officinale
Common Name: Blowball **Entry Date:** 9-12-2019

Pest 3 Type: W **Code:** AMBTR Ambrosia trifida
Common Name: Giant ragweed **Entry Date:** 9-12-2019

Pest 4 Type: W **Code:** IPOLA Ipomoea lacunosa
Common Name: pitted morning glory **Entry Date:** 9-12-2019

Pest 5 Type: W **Code:** AMARE Amaranthus retroflexus
Common Name: Redroot pigweed **Entry Date:** 9-12-2019

Pest 6 Type: W **Code:** IPOHE Ipomoea hederacea
Common Name: ivy-leaf morning glory **Entry Date:** 9-12-2019

Site and Design

Treated Plot Width: 6.7 FT
Treated Plot Length: 30 FT
Treated Plot Area: 201 FT² **Treatments:** 14 **Tillage Type:** NOTILL no-till
Replications: 4 **Study Design:** RACOB L Randomized Complete Block (RCB)

Maintenance

No.	Date	Type	Maintenance Product Name	Form Conc	Form Unit	Form Type	Description	Rate	Rate Unit
1.	3-20-2019	FERT	0-0-60					50	lb/a
2.	3-21-2019	FERT	DAP	46	% P2O5	GR	18-46-0	100	lb/a
3.	4-10-2019	FERT	Urea	46	% N	SG	46-0-0	170	LB A/A
4.	4-12-2019	HERB	Liberty	2.34	lba/gal	L		32	fl oz/a

University of Kentucky

Soil Description	
% Sand: 4	% OM: 3
% Silt: 77	Texture: SIL silt loam
% Clay: 19	Soil Name: Crider Silt Loam

Moisture and Weather Conditions	
Overall Moisture Conditions: ABONOR above normal	
Closest Weather Station: Princeton Mesonet	Distance: 0.2 MI

Application Description		
	A	B
Application Date	4-17-2019	5-23-2019
Appl. Start Time	6:50 AM	9:30 AM
Appl. Stop Time	7:31 AM	10:08 AM
Interval to Prev. Appl.		36 DAYS
Application Method	BROADC	BROADC
Application Timing	PRE	EPOST
Application Placement	soil	Foliar
Appl. Entry Date	9-12-2019	9-12-2019
Air Temperature Start, Stop	65 F	83 F
% Relative Humidity Start, Stop	64	71
Wind Velocity+Dir. Start	1 MPH S	4 MPH SW
Wind Velocity+Dir. Max	5.7 MPH S	7 MPH SW
Wet Leaves (Y/N)	Y yes	N no
Soil Temperature	51 F	70 F
Soil Moisture	wet	dry
% Cloud Cover	75	80

Crop Stage At Each Application		
	A	B
Crop 1 Code, BBCH Scale	ZEAMX BCOR	ZEAMX BCOR
Days after Emergence	-9	27
Stage Scale Used		VR
Stage Majority, Percent		V4
Stage Minimum, Percent		V4
Stage Maximum, Percent		V5
Height Average		20 in
Height Minimum, Maximum		18 22.5

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Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale	ELEIN W	ELEIN W
Height Average		3 IN
Height Minimum, Maximum		1 5
Density Average		12.5 FT2
Density Min, Max		0 25
Pest 2 Code, Type, Scale	TAROF W	TAROF W
Height Average		2.25 IN
Density Average		1 FT2
Density Min, Max		0 1
Pest 3 Code, Type, Scale	AMBTR W	AMBTR W
Height Average		4 IN
Height Minimum, Maximum		1.25 8
Density Average		6 FT2
Density Min, Max		1 11
Pest 4 Code, Type, Scale	IPOLA W	IPOLA W
Height Average		2 IN
Height Minimum, Maximum		1.25 2.25
Density Average		0.5 FT2
Density Min, Max		0 1
Pest 5 Code, Type, Scale	AMARE W	AMARE W
Height Average		2 IN
Height Minimum, Maximum		1.25 2.25
Density Average		1 FT2
Density Min, Max		0 2
Pest 6 Code, Type, Scale	IPOHE W	IPOHE W
Height Average		2 IN
Density Average		0.5 FT2
Density Min, Max		0 1

Application Equipment

	A	B
Appl. Equipment	BACKPACK	BACKPACK
Equipment Type	BACCAI	BACCAI
Operation Pressure	31 PSI	31 PSI
Nozzle Type	FLFXR	FLFXR
Nozzle Size	02	02
Nozzle Spacing	20 IN	20 IN
Boom Length	6.7 FT	6.7 FT
Boom Height	18 IN	18 IN
Ground Speed	3 MPH	3 KPH
Carrier	H2O	H2O
Application Amount	15 GAL/AC	15 GAL/AC
Mix Overage	952 mL	952 mL
Mix Size	2 L	2 L
Propellant	COMCO2	COMCO2

Protocol Equipment Comment:

Use nozzles that produce medium/coarse droplet-XR or TTJ60

Context	Date	By	Notes
STATUS	4-8-2019	Travis Legleiter	Automatically added by ARM: Trial Status updated to 'S' during trial creation.
STATUS	9-12-2019	Travis Legleiter	Automatically added by ARM: Trial Status updated to 'E' when Planting Date entered.

University of Kentucky

LIBERTY/ LIBERTYLINK CORN SYSTEM / EFFICACY/TOLERANCE

Trial ID: 19-38_COR-REC Location: UKREC - 108C3 Trial Year: 2019
 Protocol ID: MKD-H-2019-US-C41-A-01.0 Investigator: Travis Legleiter
 Project ID: Study Director: Darren Unland
 Sponsor Contact: Greg Stapleton

Pest Type		W Weed AMBTR Ambrosia trifi> Giant ragweed		W Weed AMBTR Ambrosia trifi> Giant ragweed	W Weed AMARE Amaranthus ret> Redroot pigweed	W Weed DIGSA Digitaria sang> large crabgrass		
Pest Code		C -		C -	C -	C -		
Pest Scientific Name								
Pest Name								
Crop Type, Code	C ZEAMX		C ZEAMX					
BBCH Scale	BCOR		BCOR					
Crop Scientific Name	Zea mays		Zea mays					
Crop Name	Corn		Corn					
Rating Date	5-1-2019	5-1-2019	5-15-2019	5-15-2019	5-15-2019	5-15-2019		
Part Rated	PLANT C	PLANT P	PLANT C	PLANT P	PLANT P	PLANT P		
Rating Type	PHYGEN	CONTRO	PHYGEN	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%		
Sample Size								
Number of Subsamples	1	1	1	1	1	1		
Data Entry Date	9-12-2019	9-12-2019	9-12-2019	9-12-2019	9-12-2019	9-12-2019		
Days After First/Last Applic.	14 14	14 14	28 28	28 28	28 28	28 28		
Plant-Eval Interval	14 DP-1	14 DP-1	28 DP-1	28 DP-1	28 DP-1	28 DP-1		
Days After Emergence	5 DE-1	5 DE-1	19 DE-1	19 DE-1	19 DE-1	19 DE-1		
ARM Action Codes				EC				
Number of Decimals								
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	1	2	3	4	5	6
1 CHECK			0.0	0.0	0.0	0.0	0.0	0.0
2 VERDICT	10.0 fl oz/a	A	0.0	93.8	0.0	77.5	97.5	88.8
ATRAZINE 4L	16.0 fl oz/a	A						
LIBERTY 280 SL	32.0 fl oz/a	B						
ATRAZINE 4L	16.0 fl oz/a	B						
Amsol AMS	3.0 lb ai/a	B						
3 VERDICT	10.0 fl oz/a	A	0.0	93.8	0.0	78.8	100.0	92.5
ATRAZINE 4L	16.0 fl oz/a	A						
LIBERTY 280 SL	32.0 fl oz/a	B						
STATUS HERBICIDE	2.5 oz wt/a	B						
ATRAZINE 4L	16.0 fl oz/a	B						
Amsol AMS	3.0 lb ai/a	B						
4 VERDICT	10.0 fl oz/a	A	0.0	90.0	0.0	70.0	97.5	88.8
ATRAZINE 4L	16.0 fl oz/a	A						
LIBERTY 280 SL	32.0 fl oz/a	B						
ARMEZON	1.0 fl oz/a	B						
ATRAZINE 4L	16.0 fl oz/a	B						
Amsol AMS	3.0 lb ai/a	B						
5 VERDICT	10.0 fl oz/a	A	0.0	92.5	0.0	67.5	91.3	86.3
ATRAZINE 4L	16.0 fl oz/a	A						
LIBERTY 280 SL	32.0 fl oz/a	B						
ARMEZON PRO	16.0 fl oz/a	B						
ATRAZINE 4L	16.0 fl oz/a	B						
Amsol AMS	3.0 lb ai/a	B						
6 VERDICT	10.0 fl oz/a	A	0.0	91.3	0.0	71.3	97.5	97.5
ATRAZINE 4L	16.0 fl oz/a	A						
LIBERTY 280 SL	32.0 fl oz/a	B						
ZIDUA SC	4.0 fl oz/a	B						
ATRAZINE 4L	16.0 fl oz/a	B						
Amsol AMS	3.0 lb ai/a	B						
7 VERDICT	10.0 fl oz/a	A	0.0	83.8	0.0	62.5	96.3	86.3
ATRAZINE 4L	16.0 fl oz/a	A						
LIBERTY 280 SL	22.0 fl oz/a	B						
STATUS HERBICIDE	5.0 oz wt/a	B						
ATRAZINE 4L	16.0 fl oz/a	B						
Amsol AMS	3.0 lb ai/a	B						
8 VERDICT	10.0 fl oz/a	A	0.0	93.8	0.0	72.5	100.0	97.5
ATRAZINE 4L	16.0 fl oz/a	A						
ROUNDUP POWERMAX	32.0 fl oz/a	B						
ATRAZINE 4L	16.0 fl oz/a	B						
Amsol AMS	3.0 lb ai/a	B						

Excluded replicate 1 in column 26

Could not calculate LSD (% mean diff) for columns 1,3,7,9,10,11,13,14,16,18,21,23 because error mean square = 0.

University of Kentucky

Pest Type		W Weed		W Weed		W Weed	
Pest Code		AMBTR		AMBTR		AMARE	
Pest Scientific Name		Ambrosia trifi>		Ambrosia trifi>		Amaranthus ret>	
Pest Name		Giant ragweed		Giant ragweed		Redroot pigweed	
Crop Type, Code	C ZEAMX	C -	C ZEAMX	C -	C -	C -	C -
BBCH Scale	BCOR		BCOR				
Crop Scientific Name	Zea mays		Zea mays				
Crop Name	Corn		Corn				
Rating Date	5-1-2019	5-1-2019	5-15-2019	5-15-2019	5-15-2019	5-15-2019	5-15-2019
Part Rated	PLANT C	PLANT P	PLANT C	PLANT P	PLANT P	PLANT P	PLANT P
Rating Type	PHYGEN	CONTRO	PHYGEN	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%	%	%
Sample Size							
Number of Subsamples	1	1	1	1	1	1	1
Data Entry Date	9-12-2019	9-12-2019	9-12-2019	9-12-2019	9-12-2019	9-12-2019	9-12-2019
Days After First/Last Applic.	14 14	14 14	28 28	28 28	28 28	28 28	28 28
Plant-Eval Interval	14 DP-1	14 DP-1	28 DP-1	28 DP-1	28 DP-1	28 DP-1	28 DP-1
Days After Emergence	5 DE-1	5 DE-1	19 DE-1	19 DE-1	19 DE-1	19 DE-1	19 DE-1
ARM Action Codes				EC			
Number of Decimals							
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code	1	2	3	4	5
9 VERDICT	10.0 fl oz/a	A	0.0	87.5	0.0	60.0	98.8
ATRAZINE 4L	16.0 fl oz/a	A					
ROUNDUP POWERMAX	32.0 fl oz/a	B					
STATUS HERBICIDE	2.5 oz wt/a	B					
ATRAZINE 4L	16.0 fl oz/a	B					
Amsol AMS	3.0 lb ai/a	B					
10 VERDICT	10.0 fl oz/a	A	0.0	88.5	0.0	72.5	96.3
ATRAZINE 4L	16.0 fl oz/a	A					
ROUNDUP POWERMAX	32.0 fl oz/a	B					
ARMEZON	1.0 fl oz/a	B					
ATRAZINE 4L	16.0 fl oz/a	B					
Amsol AMS	3.0 lb ai/a	B					
11 RESICORE	80.0 fl oz/a	A	0.0	90.5	0.0	83.8	97.5
ATRAZINE 4L	16.0 fl oz/a	A					
DURANGO DMA	32.0 fl oz/a	B					
ATRAZINE 4L	16.0 fl oz/a	B					
Amsol AMS	3.0 lb ai/a	B					
12 RESICORE	80.0 fl oz/a	A	0.0	86.3	0.0	71.3	97.5
ATRAZINE 4L	16.0 fl oz/a	A					
LIBERTY 280 SL	32.0 fl oz/a	B					
STATUS HERBICIDE	2.5 oz wt/a	B					
ATRAZINE 4L	16.0 fl oz/a	B					
Amsol AMS	3.0 lb ai/a	B					
13 ACURON	80.0 fl oz/a	A	0.0	86.3	0.0	77.5	97.5
ROUNDUP POWERMAX	32.0 fl oz/a	B					
ATRAZINE 4L	16.0 fl oz/a	B					
Amsol AMS	3.0 lb ai/a	B					
14 ACURON	80.0 fl oz/a	A	0.0	90.0	0.0	82.5	98.8
LIBERTY 280 SL	32.0 fl oz/a	B					
STATUS HERBICIDE	2.5 oz wt/a	B					
ATRAZINE 4L	16.0 fl oz/a	B					
Amsol AMS	3.0 lb ai/a	B					
LSD P=.05				9.47		19.27	6.39
Standard Deviation	0.00		0.00	6.62	0.00	13.44	4.47
CV	0.0		0.0	7.94	0.0	18.43	4.94
Replicate F	0.000		0.000	2.662	0.000	4.620	2.767
Replicate Prob(F)	1.0000		1.0000	0.0614	1.0000	0.0078	0.0546
Treatment F	0.000		0.000	53.432	0.000	1.116	136.752
Treatment Prob(F)	1.0000		1.0000	0.0001	1.0000	0.3778	0.0001

Excluded replicate 1 in column 26

Could not calculate LSD (% mean diff) for columns 1,3,7,9,10,11,13,14,16,18,21,23 because error mean square = 0.

University of Kentucky

Pest Type		W Weed AMBTR	W Weed AMARE	W Weed DIGSA		W Weed AMBTR		
Pest Code		Ambrosia trifi>	Amaranthus ret>	Digitaria sang>		Ambrosia trifi>		
Pest Scientific Name		Giant ragweed	Redroot pigweed	large crabgrass		Giant ragweed		
Pest Name		C -	C -	C -		C -		
Crop Type, Code	C ZEAMX				C ZEAMX			
BBCH Scale	BCOR				BCOR			
Crop Scientific Name	Zea mays				Zea mays			
Crop Name	Corn				Corn			
Rating Date	5-31-2019	5-31-2019	5-31-2019	5-31-2019	6-5-2019	6-5-2019		
Part Rated	PLANT C	PLANT P	PLANT P	PLANT P	PLANT C	PLANT P		
Rating Type	PHYGEN	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO		
Rating Unit	%	%	%	%	%	%		
Sample Size								
Number of Subsamples	1	1	1	1	1	1		
Data Entry Date	9-12-2019	9-12-2019	9-12-2019	9-12-2019	9-12-2019	9-12-2019		
Days After First/Last Applic.	44 8	44 8	44 8	44 8	49 13	49 13		
Plant-Eval Interval	44 DP-1	44 DP-1	44 DP-1	44 DP-1	49 DP-1	49 DP-1		
Days After Emergence	35 DE-1	35 DE-1	35 DE-1	35 DE-1	40 DE-1	40 DE-1		
ARM Action Codes	ET10							
Number of Decimals								
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	7	8	9	10	11	12
1 CHECK			0.0	0.0	0.0	0.0	0.0	0.0
2 VERDICT	10.0 fl oz/a	A	0.0	96.3	100.0	100.0	0.0	93.8
ATRAZINE 4L	16.0 fl oz/a	A						
LIBERTY 280 SL	32.0 fl oz/a	B						
ATRAZINE 4L	16.0 fl oz/a	B						
Amsol AMS	3.0 lb ai/a	B						
3 VERDICT	10.0 fl oz/a	A	0.0	97.8	100.0	100.0	0.0	97.3
ATRAZINE 4L	16.0 fl oz/a	A						
LIBERTY 280 SL	32.0 fl oz/a	B						
STATUS HERBICIDE	2.5 oz wt/a	B						
ATRAZINE 4L	16.0 fl oz/a	B						
Amsol AMS	3.0 lb ai/a	B						
4 VERDICT	10.0 fl oz/a	A	0.0	97.5	100.0	100.0	0.0	94.3
ATRAZINE 4L	16.0 fl oz/a	A						
LIBERTY 280 SL	32.0 fl oz/a	B						
ARMEZON	1.0 fl oz/a	B						
ATRAZINE 4L	16.0 fl oz/a	B						
Amsol AMS	3.0 lb ai/a	B						
5 VERDICT	10.0 fl oz/a	A	0.0	97.3	100.0	100.0	0.0	94.8
ATRAZINE 4L	16.0 fl oz/a	A						
LIBERTY 280 SL	32.0 fl oz/a	B						
ARMEZON PRO	16.0 fl oz/a	B						
ATRAZINE 4L	16.0 fl oz/a	B						
Amsol AMS	3.0 lb ai/a	B						
6 VERDICT	10.0 fl oz/a	A	0.0	96.8	100.0	100.0	0.0	94.8
ATRAZINE 4L	16.0 fl oz/a	A						
LIBERTY 280 SL	32.0 fl oz/a	B						
ZIDUA SC	4.0 fl oz/a	B						
ATRAZINE 4L	16.0 fl oz/a	B						
Amsol AMS	3.0 lb ai/a	B						
7 VERDICT	10.0 fl oz/a	A	0.0	94.8	100.0	100.0	0.0	90.5
ATRAZINE 4L	16.0 fl oz/a	A						
LIBERTY 280 SL	22.0 fl oz/a	B						
STATUS HERBICIDE	5.0 oz wt/a	B						
ATRAZINE 4L	16.0 fl oz/a	B						
Amsol AMS	3.0 lb ai/a	B						
8 VERDICT	10.0 fl oz/a	A	0.0	96.8	100.0	100.0	0.0	94.8
ATRAZINE 4L	16.0 fl oz/a	A						
ROUNDUP POWERMAX	32.0 fl oz/a	B						
ATRAZINE 4L	16.0 fl oz/a	B						
Amsol AMS	3.0 lb ai/a	B						

Excluded replicate 1 in column 26

Could not calculate LSD (% mean diff) for columns 1,3,7,9,10,11,13,14,16,18,21,23 because error mean square = 0.

University of Kentucky

Pest Type		W Weed AMBTR	W Weed AMARE	W Weed DIGSA	W Weed AMBTR			
Pest Code		Ambrosia trifi>	Amaranthus ret>	Digitaria sang>	Ambrosia trifi>			
Pest Scientific Name		Giant ragweed	Redroot pigweed	large crabgrass	Giant ragweed			
Pest Name		C -	C -	C -	C -			
Crop Type, Code	C ZEAMX				C ZEAMX			
BBCH Scale	BCOR				BCOR			
Crop Scientific Name	Zea mays				Zea mays			
Crop Name	Corn				Corn			
Rating Date	5-31-2019	5-31-2019	5-31-2019	5-31-2019	6-5-2019			
Part Rated	PLANT C	PLANT P	PLANT P	PLANT P	PLANT C			
Rating Type	PHYGEN	CONTRO	CONTRO	CONTRO	PHYGEN			
Rating Unit	%	%	%	%	%			
Sample Size								
Number of Subsamples	1	1	1	1	1			
Data Entry Date	9-12-2019	9-12-2019	9-12-2019	9-12-2019	9-12-2019			
Days After First/Last Applic.	44 8	44 8	44 8	44 8	49 13			
Plant-Eval Interval	44 DP-1	44 DP-1	44 DP-1	44 DP-1	49 DP-1			
Days After Emergence	35 DE-1	35 DE-1	35 DE-1	35 DE-1	40 DE-1			
ARM Action Codes	ET10							
Number of Decimals								
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	7	8	9	10	11	12
9 VERDICT	10.0 fl oz/a	A	0.0	95.0	100.0	100.0	0.0	94.3
ATRAZINE 4L	16.0 fl oz/a	A						
ROUNDUP POWERMAX	32.0 fl oz/a	B						
STATUS HERBICIDE	2.5 oz wt/a	B						
ATRAZINE 4L	16.0 fl oz/a	B						
Amsol AMS	3.0 lb ai/a	B						
10 VERDICT	10.0 fl oz/a	A	0.5	98.0	100.0	100.0	0.0	95.5
ATRAZINE 4L	16.0 fl oz/a	A						
ROUNDUP POWERMAX	32.0 fl oz/a	B						
ARMEZON	1.0 fl oz/a	B						
ATRAZINE 4L	16.0 fl oz/a	B						
Amsol AMS	3.0 lb ai/a	B						
11 RESICORE	80.0 fl oz/a	A	0.0	100.0	100.0	100.0	0.0	95.5
ATRAZINE 4L	16.0 fl oz/a	A						
DURANGO DMA	32.0 fl oz/a	B						
ATRAZINE 4L	16.0 fl oz/a	B						
Amsol AMS	3.0 lb ai/a	B						
12 RESICORE	80.0 fl oz/a	A	0.0	98.5	100.0	100.0	0.0	93.5
ATRAZINE 4L	16.0 fl oz/a	A						
LIBERTY 280 SL	32.0 fl oz/a	B						
STATUS HERBICIDE	2.5 oz wt/a	B						
ATRAZINE 4L	16.0 fl oz/a	B						
Amsol AMS	3.0 lb ai/a	B						
13 ACURON	80.0 fl oz/a	A	0.0	98.0	100.0	100.0	0.0	93.0
ROUNDUP POWERMAX	32.0 fl oz/a	B						
ATRAZINE 4L	16.0 fl oz/a	B						
Amsol AMS	3.0 lb ai/a	B						
14 ACURON	80.0 fl oz/a	A	0.0	100.0	100.0	100.0	0.0	93.0
LIBERTY 280 SL	32.0 fl oz/a	B						
STATUS HERBICIDE	2.5 oz wt/a	B						
ATRAZINE 4L	16.0 fl oz/a	B						
Amsol AMS	3.0 lb ai/a	B						
LSD P=.05				3.79				5.17
Standard Deviation	0.0		2.65	0.00	0.00	0.00	0.00	3.61
CV	0.0		2.93	0.0	0.0	0.0	0.0	4.13
Replicate F	0.000		2.396	0.000	0.000	0.000	0.000	1.980
Replicate Prob(F)	1.0000		0.0828	1.0000	1.0000	1.0000	1.0000	0.1329
Treatment F	0.000		387.322	0.000	0.000	0.000	0.000	194.795
Treatment Prob(F)	1.0000		0.0001	1.0000	1.0000	1.0000	1.0000	0.0001

Excluded replicate 1 in column 26

Could not calculate LSD (% mean diff) for columns 1,3,7,9,10,11,13,14,16,18,21,23 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed		W Weed		
Pest Code	AMARE	DIGSA	IPOLA		AMBTR		
Pest Scientific Name	Amaranthus ret>	Digitaria sang>	Ipomoea lacuno>		Ambrosia trifi>		
Pest Name	Redroot pigweed	large crabgrass	pitted morning>		Giant ragweed		
Crop Type, Code	C -	C -	C -	C	C -		
BBCH Scale				ZEAMX			
Crop Scientific Name				BCOR			
Crop Name				Zea mays			
Rating Date	6-5-2019	6-5-2019	6-5-2019	6-20-2019	6-20-2019		
Part Rated	PLANT P	PLANT P	PLANT P	PLANT C	PLANT P		
Rating Type	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO		
Rating Unit	%	%	%	%	%		
Sample Size							
Number of Subsamples	1	1	1	1	1		
Data Entry Date	9-12-2019	9-12-2019	9-12-2019	9-12-2019	9-12-2019		
Days After First/Last Applic.	49 13	49 13	49 13	64 28	64 28		
Plant-Eval Interval	49 DP-1	49 DP-1	49 DP-1	64 DP-1	64 DP-1		
Days After Emergence	40 DE-1	40 DE-1	40 DE-1	55 DE-1	55 DE-1		
ARM Action Codes							
Number of Decimals							
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code	13	14	15	16	17
1 CHECK			0.0	0.0	0.0	0.0	0.0
2 VERDICT	10.0 fl oz/a	A	100.0	100.0	95.0	0.0	97.5
ATRAZINE 4L	16.0 fl oz/a	A					
LIBERTY 280 SL	32.0 fl oz/a	B					
ATRAZINE 4L	16.0 fl oz/a	B					
Amsol AMS	3.0 lb ai/a	B					
3 VERDICT	10.0 fl oz/a	A	100.0	100.0	96.8	0.0	97.5
ATRAZINE 4L	16.0 fl oz/a	A					
LIBERTY 280 SL	32.0 fl oz/a	B					
STATUS HERBICIDE	2.5 oz wt/a	B					
ATRAZINE 4L	16.0 fl oz/a	B					
Amsol AMS	3.0 lb ai/a	B					
4 VERDICT	10.0 fl oz/a	A	100.0	100.0	90.0	0.0	94.3
ATRAZINE 4L	16.0 fl oz/a	A					
LIBERTY 280 SL	32.0 fl oz/a	B					
ARMEZON	1.0 fl oz/a	B					
ATRAZINE 4L	16.0 fl oz/a	B					
Amsol AMS	3.0 lb ai/a	B					
5 VERDICT	10.0 fl oz/a	A	100.0	100.0	94.8	0.0	93.0
ATRAZINE 4L	16.0 fl oz/a	A					
LIBERTY 280 SL	32.0 fl oz/a	B					
ARMEZON PRO	16.0 fl oz/a	B					
ATRAZINE 4L	16.0 fl oz/a	B					
Amsol AMS	3.0 lb ai/a	B					
6 VERDICT	10.0 fl oz/a	A	100.0	100.0	88.8	0.0	97.5
ATRAZINE 4L	16.0 fl oz/a	A					
LIBERTY 280 SL	32.0 fl oz/a	B					
ZIDUA SC	4.0 fl oz/a	B					
ATRAZINE 4L	16.0 fl oz/a	B					
Amsol AMS	3.0 lb ai/a	B					
7 VERDICT	10.0 fl oz/a	A	100.0	100.0	91.3	0.0	93.0
ATRAZINE 4L	16.0 fl oz/a	A					
LIBERTY 280 SL	22.0 fl oz/a	B					
STATUS HERBICIDE	5.0 oz wt/a	B					
ATRAZINE 4L	16.0 fl oz/a	B					
Amsol AMS	3.0 lb ai/a	B					
8 VERDICT	10.0 fl oz/a	A	100.0	100.0	96.0	0.0	98.0
ATRAZINE 4L	16.0 fl oz/a	A					
ROUNDUP POWERMAX	32.0 fl oz/a	B					
ATRAZINE 4L	16.0 fl oz/a	B					
Amsol AMS	3.0 lb ai/a	B					

Excluded replicate 1 in column 26

Could not calculate LSD (% mean diff) for columns 1,3,7,9,10,11,13,14,16,18,21,23 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	AMARE	DIGSA	IPOLA		AMBTR		
Pest Scientific Name	Amaranthus ret>	Digitaria sang>	Ipomoea lacuno>		Ambrosia trifi>		
Pest Name	Redroot pigweed	large crabgrass	pitted morning>		Giant ragweed		
Crop Type, Code	C -	C -	C -	C	C -		
BBCH Scale				ZEAMX			
Crop Scientific Name				BCOR			
Crop Name				Zea mays			
Rating Date	6-5-2019	6-5-2019	6-5-2019	Corn	6-20-2019		
Part Rated	PLANT P	PLANT P	PLANT P	PLANT C	PLANT P		
Rating Type	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO		
Rating Unit	%	%	%	%	%		
Sample Size							
Number of Subsamples	1	1	1	1	1		
Data Entry Date	9-12-2019	9-12-2019	9-12-2019	9-12-2019	9-12-2019		
Days After First/Last Applic.	49 13	49 13	49 13	64 28	64 28		
Plant-Eval Interval	49 DP-1	49 DP-1	49 DP-1	64 DP-1	64 DP-1		
Days After Emergence	40 DE-1	40 DE-1	40 DE-1	55 DE-1	55 DE-1		
ARM Action Codes							
Number of Decimals							
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code	13	14	15	16	17
9 VERDICT	10.0 fl oz/a	A	100.0	100.0	95.5	0.0	95.5
ATRAZINE 4L	16.0 fl oz/a	A					
ROUNDUP POWERMAX	32.0 fl oz/a	B					
STATUS HERBICIDE	2.5 oz wt/a	B					
ATRAZINE 4L	16.0 fl oz/a	B					
Amsol AMS	3.0 lb ai/a	B					
10 VERDICT	10.0 fl oz/a	A	100.0	100.0	92.5	0.0	97.5
ATRAZINE 4L	16.0 fl oz/a	A					
ROUNDUP POWERMAX	32.0 fl oz/a	B					
ARMEZON	1.0 fl oz/a	B					
ATRAZINE 4L	16.0 fl oz/a	B					
Amsol AMS	3.0 lb ai/a	B					
11 RESICORE	80.0 fl oz/a	A	100.0	100.0	94.3	0.0	99.3
ATRAZINE 4L	16.0 fl oz/a	A					
DURANGO DMA	32.0 fl oz/a	B					
ATRAZINE 4L	16.0 fl oz/a	B					
Amsol AMS	3.0 lb ai/a	B					
12 RESICORE	80.0 fl oz/a	A	100.0	100.0	92.5	0.0	96.8
ATRAZINE 4L	16.0 fl oz/a	A					
LIBERTY 280 SL	32.0 fl oz/a	B					
STATUS HERBICIDE	2.5 oz wt/a	B					
ATRAZINE 4L	16.0 fl oz/a	B					
Amsol AMS	3.0 lb ai/a	B					
13 ACURON	80.0 fl oz/a	A	100.0	100.0	90.5	0.0	100.0
ROUNDUP POWERMAX	32.0 fl oz/a	B					
ATRAZINE 4L	16.0 fl oz/a	B					
Amsol AMS	3.0 lb ai/a	B					
14 ACURON	80.0 fl oz/a	A	100.0	100.0	91.3	0.0	97.3
LIBERTY 280 SL	32.0 fl oz/a	B					
STATUS HERBICIDE	2.5 oz wt/a	B					
ATRAZINE 4L	16.0 fl oz/a	B					
Amsol AMS	3.0 lb ai/a	B					
LSD P=.05			.	.	5.86	.	4.01
Standard Deviation	0.00	0.00			4.10	0.00	2.80
CV	0.0	0.0			4.75	0.0	3.12
Replicate F	0.000	0.000			0.139	0.000	6.533
Replicate Prob(F)	1.0000	1.0000			0.9362	1.0000	0.0011
Treatment F	0.000	0.000			148.450	0.000	342.521
Treatment Prob(F)	1.0000	1.0000			0.0001	1.0000	0.0001

Excluded replicate 1 in column 26

Could not calculate LSD (% mean diff) for columns 1,3,7,9,10,11,13,14,16,18,21,23 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed		W Weed		
Pest Code	AMARE	DIGSA	IPOLA		AMBTR		
Pest Scientific Name	Amaranthus ret>	Digitaria sang>	Ipomoea lacuno>		Ambrosia trifi>		
Pest Name	Redroot pigweed	large crabgrass	pitted morning>		Giant ragweed		
Crop Type, Code	C -	C -	C -	C	C -		
BBCH Scale				ZEAMX			
Crop Scientific Name				BCOR			
Crop Name				Zea mays			
Rating Date	6-20-2019	6-20-2019	6-20-2019	Corn	7-5-2019		
Part Rated	PLANT P	PLANT P	PLANT P	PLANT C	PLANT P		
Rating Type	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO		
Rating Unit	%	%	%	%	%		
Sample Size							
Number of Subsamples	1	1	1	1	1		
Data Entry Date	9-12-2019	9-12-2019	9-12-2019	9-12-2019	9-12-2019		
Days After First/Last Applic.	64 28	64 28	64 28	79 43	79 43		
Plant-Eval Interval	64 DP-1	64 DP-1	64 DP-1	79 DP-1	79 DP-1		
Days After Emergence	55 DE-1	55 DE-1	55 DE-1	70 DE-1	70 DE-1		
ARM Action Codes							
Number of Decimals							
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code	18	19	20	21	22
1 CHECK			0.0	0.0	0.0	0.0	0.0
2 VERDICT	10.0 fl oz/a	A	100.0	96.3	100.0	0.0	97.5
ATRAZINE 4L	16.0 fl oz/a	A					
LIBERTY 280 SL	32.0 fl oz/a	B					
ATRAZINE 4L	16.0 fl oz/a	B					
Amsol AMS	3.0 lb ai/a	B					
3 VERDICT	10.0 fl oz/a	A	100.0	100.0	96.0	0.0	97.5
ATRAZINE 4L	16.0 fl oz/a	A					
LIBERTY 280 SL	32.0 fl oz/a	B					
STATUS HERBICIDE	2.5 oz wt/a	B					
ATRAZINE 4L	16.0 fl oz/a	B					
Amsol AMS	3.0 lb ai/a	B					
4 VERDICT	10.0 fl oz/a	A	100.0	97.5	96.8	0.0	95.5
ATRAZINE 4L	16.0 fl oz/a	A					
LIBERTY 280 SL	32.0 fl oz/a	B					
ARMEZON	1.0 fl oz/a	B					
ATRAZINE 4L	16.0 fl oz/a	B					
Amsol AMS	3.0 lb ai/a	B					
5 VERDICT	10.0 fl oz/a	A	100.0	97.5	96.0	0.0	91.8
ATRAZINE 4L	16.0 fl oz/a	A					
LIBERTY 280 SL	32.0 fl oz/a	B					
ARMEZON PRO	16.0 fl oz/a	B					
ATRAZINE 4L	16.0 fl oz/a	B					
Amsol AMS	3.0 lb ai/a	B					
6 VERDICT	10.0 fl oz/a	A	100.0	97.5	96.0	0.0	97.5
ATRAZINE 4L	16.0 fl oz/a	A					
LIBERTY 280 SL	32.0 fl oz/a	B					
ZIDUA SC	4.0 fl oz/a	B					
ATRAZINE 4L	16.0 fl oz/a	B					
Amsol AMS	3.0 lb ai/a	B					
7 VERDICT	10.0 fl oz/a	A	100.0	96.3	99.3	0.0	94.3
ATRAZINE 4L	16.0 fl oz/a	A					
LIBERTY 280 SL	22.0 fl oz/a	B					
STATUS HERBICIDE	5.0 oz wt/a	B					
ATRAZINE 4L	16.0 fl oz/a	B					
Amsol AMS	3.0 lb ai/a	B					
8 VERDICT	10.0 fl oz/a	A	100.0	100.0	98.8	0.0	98.0
ATRAZINE 4L	16.0 fl oz/a	A					
ROUNDUP POWERMAX	32.0 fl oz/a	B					
ATRAZINE 4L	16.0 fl oz/a	B					
Amsol AMS	3.0 lb ai/a	B					

Excluded replicate 1 in column 26

Could not calculate LSD (% mean diff) for columns 1,3,7,9,10,11,13,14,16,18,21,23 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed	W Weed
Pest Code	AMARE	DIGSA	IPOLA	AMBTR
Pest Scientific Name	Amaranthus ret>	Digitaria sang>	Ipomoea lacuno>	Ambrosia trifi>
Pest Name	Redroot pigweed	large crabgrass	pitted morning>	Giant ragweed
Crop Type, Code	C -	C -	C -	C -
BBCH Scale				
Crop Scientific Name				ZeamX BCOR
Crop Name				Zea mays Corn
Rating Date	6-20-2019	6-20-2019	6-20-2019	7-5-2019
Part Rated	PLANT P	PLANT P	PLANT P	PLANT C
Rating Type	CONTRO	CONTRO	CONTRO	PHYGEN
Rating Unit	%	%	%	%
Sample Size				
Number of Subsamples	1	1	1	1
Data Entry Date	9-12-2019	9-12-2019	9-12-2019	9-12-2019
Days After First/Last Applic.	64 28	64 28	64 28	79 43
Plant-Eval Interval	64 DP-1	64 DP-1	64 DP-1	79 DP-1
Days After Emergence	55 DE-1	55 DE-1	55 DE-1	70 DE-1
ARM Action Codes				
Number of Decimals				
Trt Treatment	Rate	Appl		
No. Name	Rate Unit	Code	18	19
9 VERDICT	10.0 fl oz/a	A	100.0	100.0
ATRAZINE 4L	16.0 fl oz/a	A		
ROUNDUP POWERMAX	32.0 fl oz/a	B		
STATUS HERBICIDE	2.5 oz wt/a	B		
ATRAZINE 4L	16.0 fl oz/a	B		
Amsol AMS	3.0 lb ai/a	B		
10 VERDICT	10.0 fl oz/a	A	100.0	100.0
ATRAZINE 4L	16.0 fl oz/a	A		
ROUNDUP POWERMAX	32.0 fl oz/a	B		
ARMEZON	1.0 fl oz/a	B		
ATRAZINE 4L	16.0 fl oz/a	B		
Amsol AMS	3.0 lb ai/a	B		
11 RESICORE	80.0 fl oz/a	A	100.0	99.3
ATRAZINE 4L	16.0 fl oz/a	A		
DURANGO DMA	32.0 fl oz/a	B		
ATRAZINE 4L	16.0 fl oz/a	B		
Amsol AMS	3.0 lb ai/a	B		
12 RESICORE	80.0 fl oz/a	A	100.0	98.8
ATRAZINE 4L	16.0 fl oz/a	A		
LIBERTY 280 SL	32.0 fl oz/a	B		
STATUS HERBICIDE	2.5 oz wt/a	B		
ATRAZINE 4L	16.0 fl oz/a	B		
Amsol AMS	3.0 lb ai/a	B		
13 ACURON	80.0 fl oz/a	A	100.0	100.0
ROUNDUP POWERMAX	32.0 fl oz/a	B		
ATRAZINE 4L	16.0 fl oz/a	B		
Amsol AMS	3.0 lb ai/a	B		
14 ACURON	80.0 fl oz/a	A	100.0	100.0
LIBERTY 280 SL	32.0 fl oz/a	B		
STATUS HERBICIDE	2.5 oz wt/a	B		
ATRAZINE 4L	16.0 fl oz/a	B		
Amsol AMS	3.0 lb ai/a	B		
LSD P=.05	.		3.89	4.74
Standard Deviation	0.00		2.72	3.32
CV	0.0		2.97	3.69
Replicate F	0.000		4.505	2.781
Replicate Prob(F)	1.0000		0.0083	0.0537
Treatment F	0.000		377.780	244.892
Treatment Prob(F)	1.0000		0.0001	0.0001

Excluded replicate 1 in column 26

Could not calculate LSD (% mean diff) for columns 1,3,7,9,10,11,13,14,16,18,21,23 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed		
Pest Code	AMARE	DIGSA	IPOLA		
Pest Scientific Name	Amaranthus ret>	Digitaria sang>	Ipomoea lacuno>		
Pest Name	Redroot pigweed	large crabgrass	pitted morning>		
Crop Type, Code	C -	C -	C -	C ZEAMX	C ZEAMX
BBCH Scale				BCOR	BCOR
Crop Scientific Name				Zea mays	Zea mays
Crop Name				Corn	Corn
Rating Date	7-5-2019	7-5-2019	7-5-2019	9-12-2019	9-12-2019
Part Rated	PLANT P	PLANT P	PLANT P	PLANT C	PLANT C
Rating Type	CONTRO	CONTRO	CONTRO	PLOT LENGTH	WEIGHT
Rating Unit	%	%	%	FT	LB
Sample Size					1 PLOT
Number of Subsamples	1	1	1	1	1
Data Entry Date	9-12-2019	9-12-2019	9-12-2019	10-14-2019	10-14-2019
Days After First/Last Applic.	79 43	79 43	79 43	148 112	148 112
Plant-Eval Interval	79 DP-1	79 DP-1	79 DP-1	148 DP-1	148 DP-1
Days After Emergence	70 DE-1	70 DE-1	70 DE-1	139 DE-1	139 DE-1
ARM Action Codes				ER1	EC
Number of Decimals					
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	23	24	25
1 CHECK			0.0	0.0	0.0
2 VERDICT	10.0 fl oz/a A		100.0	96.3	98.8
ATRAZINE 4L	16.0 fl oz/a A				
LIBERTY 280 SL	32.0 fl oz/a B				
ATRAZINE 4L	16.0 fl oz/a B				
Amsol AMS	3.0 lb ai/a B				
3 VERDICT	10.0 fl oz/a A		100.0	98.8	96.0
ATRAZINE 4L	16.0 fl oz/a A				
LIBERTY 280 SL	32.0 fl oz/a B				
STATUS HERBICIDE	2.5 oz wt/a B				
ATRAZINE 4L	16.0 fl oz/a B				
Amsol AMS	3.0 lb ai/a B				
4 VERDICT	10.0 fl oz/a A		100.0	97.5	96.3
ATRAZINE 4L	16.0 fl oz/a A				
LIBERTY 280 SL	32.0 fl oz/a B				
ARMEZON	1.0 fl oz/a B				
ATRAZINE 4L	16.0 fl oz/a B				
Amsol AMS	3.0 lb ai/a B				
5 VERDICT	10.0 fl oz/a A		100.0	96.8	96.0
ATRAZINE 4L	16.0 fl oz/a A				
LIBERTY 280 SL	32.0 fl oz/a B				
ARMEZON PRO	16.0 fl oz/a B				
ATRAZINE 4L	16.0 fl oz/a B				
Amsol AMS	3.0 lb ai/a B				
6 VERDICT	10.0 fl oz/a A		100.0	97.5	96.0
ATRAZINE 4L	16.0 fl oz/a A				
LIBERTY 280 SL	32.0 fl oz/a B				
ZIDUA SC	4.0 fl oz/a B				
ATRAZINE 4L	16.0 fl oz/a B				
Amsol AMS	3.0 lb ai/a B				
7 VERDICT	10.0 fl oz/a A		100.0	96.3	99.3
ATRAZINE 4L	16.0 fl oz/a A				
LIBERTY 280 SL	22.0 fl oz/a B				
STATUS HERBICIDE	5.0 oz wt/a B				
ATRAZINE 4L	16.0 fl oz/a B				
Amsol AMS	3.0 lb ai/a B				
8 VERDICT	10.0 fl oz/a A		100.0	100.0	99.3
ATRAZINE 4L	16.0 fl oz/a A				
ROUNDUP POWERMAX	32.0 fl oz/a B				
ATRAZINE 4L	16.0 fl oz/a B				
Amsol AMS	3.0 lb ai/a B				
				26	27
				23.593	14.250
				23.687	30.588
				23.620	29.860
				23.627	31.373
				23.400	29.823
				23.160	30.805
				23.683	31.225
				23.663	29.790

Excluded replicate 1 in column 26

Could not calculate LSD (% mean diff) for columns 1,3,7,9,10,11,13,14,16,18,21,23 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed		
Pest Code	AMARE	DIGSA	IPOLA		
Pest Scientific Name	Amaranthus ret>	Digitaria sang>	Ipomoea lacuno>		
Pest Name	Redroot pigweed	large crabgrass	pitted morning>		
Crop Type, Code	C -	C -	C -	C ZEAMX	C ZEAMX
BBCH Scale				BCOR	BCOR
Crop Scientific Name				Zea mays	Zea mays
Crop Name				Corn	Corn
Rating Date	7-5-2019	7-5-2019	7-5-2019	9-12-2019	9-12-2019
Part Rated	PLANT P	PLANT P	PLANT P	PLANT C	PLANT C
Rating Type	CONTRO	CONTRO	CONTRO	PLOT LENGTH	WEIGHT
Rating Unit	%	%	%	FT	LB
Sample Size					1 PLOT
Number of Subsamples	1	1	1	1	1
Data Entry Date	9-12-2019	9-12-2019	9-12-2019	10-14-2019	10-14-2019
Days After First/Last Applic.	79 43	79 43	79 43	148 112	148 112
Plant-Eval Interval	79 DP-1	79 DP-1	79 DP-1	148 DP-1	148 DP-1
Days After Emergence	70 DE-1	70 DE-1	70 DE-1	139 DE-1	139 DE-1
ARM Action Codes				ER1	EC
Number of Decimals					
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	23	24	25
9 VERDICT	10.0 fl oz/a	A	100.0	100.0	98.0
ATRAZINE 4L	16.0 fl oz/a	A			
ROUNDUP POWERMAX	32.0 fl oz/a	B			
STATUS HERBICIDE	2.5 oz wt/a	B			
ATRAZINE 4L	16.0 fl oz/a	B			
Amsol AMS	3.0 lb ai/a	B			
10 VERDICT	10.0 fl oz/a	A	100.0	100.0	96.3
ATRAZINE 4L	16.0 fl oz/a	A			
ROUNDUP POWERMAX	32.0 fl oz/a	B			
ARMEZON	1.0 fl oz/a	B			
ATRAZINE 4L	16.0 fl oz/a	B			
Amsol AMS	3.0 lb ai/a	B			
11 RESICORE	80.0 fl oz/a	A	100.0	99.3	97.5
ATRAZINE 4L	16.0 fl oz/a	A			
DURANGO DMA	32.0 fl oz/a	B			
ATRAZINE 4L	16.0 fl oz/a	B			
Amsol AMS	3.0 lb ai/a	B			
12 RESICORE	80.0 fl oz/a	A	100.0	98.8	97.5
ATRAZINE 4L	16.0 fl oz/a	A			
LIBERTY 280 SL	32.0 fl oz/a	B			
STATUS HERBICIDE	2.5 oz wt/a	B			
ATRAZINE 4L	16.0 fl oz/a	B			
Amsol AMS	3.0 lb ai/a	B			
13 ACURON	80.0 fl oz/a	A	100.0	100.0	95.0
ROUNDUP POWERMAX	32.0 fl oz/a	B			
ATRAZINE 4L	16.0 fl oz/a	B			
Amsol AMS	3.0 lb ai/a	B			
14 ACURON	80.0 fl oz/a	A	100.0	100.0	93.8
LIBERTY 280 SL	32.0 fl oz/a	B			
STATUS HERBICIDE	2.5 oz wt/a	B			
ATRAZINE 4L	16.0 fl oz/a	B			
Amsol AMS	3.0 lb ai/a	B			
LSD P=.05				3.86	4.86
Standard Deviation	0.00		2.70	3.40	0.7767
CV	0.0		2.95	3.78	0.4628
Replicate F	0.000		5.200	2.735	1.97
Replicate Prob(F)	1.0000		0.0041	0.0566	0.206
Treatment F	0.000		381.251	233.390	0.8151
Treatment Prob(F)	1.0000		0.0001	0.0001	0.367
					0.602
					0.8256

Excluded replicate 1 in column 26
 Could not calculate LSD (% mean diff) for columns 1,3,7,9,10,11,13,14,16,18,21,23 because error mean square = 0.

University of Kentucky

Pest Type			
Pest Code			
Pest Scientific Name			
Pest Name			
Crop Type, Code	C ZEAMX	C ZEAMX	
BBCH Scale	BCOR	BCOR	
Crop Scientific Name	Zea mays	Zea mays	
Crop Name	Corn	Corn	
Rating Date	9-12-2019	9-12-2019	
Part Rated	PLANT C	PLANT C	
Rating Type	MOISTCON	YIELD	
Rating Unit	%	BU	
Sample Size		1	A
Number of Subsamples	1	1	
Data Entry Date	10-14-2019	10-14-2019	
Days After First/Last Applic.	148 112	148 112	
Plant-Eval Interval	148 DP-1	148 DP-1	
Days After Emergence	139 DE-1	139 DE-1	
ARM Action Codes		EC TY1	
Number of Decimals		1	
Trt Treatment	Rate	Appl	
No. Name	Rate Unit	Code	
			28 29
1 CHECK			14.78 85.3
2 VERDICT	10.0 fl oz/a	A	17.75 182.6
ATRAZINE 4L	16.0 fl oz/a	A	
LIBERTY 280 SL	32.0 fl oz/a	B	
ATRAZINE 4L	16.0 fl oz/a	B	
Amsol AMS	3.0 lb ai/a	B	
3 VERDICT	10.0 fl oz/a	A	16.30 179.3
ATRAZINE 4L	16.0 fl oz/a	A	
LIBERTY 280 SL	32.0 fl oz/a	B	
STATUS HERBICIDE	2.5 oz wt/a	B	
ATRAZINE 4L	16.0 fl oz/a	B	
Amsol AMS	3.0 lb ai/a	B	
4 VERDICT	10.0 fl oz/a	A	16.80 187.8
ATRAZINE 4L	16.0 fl oz/a	A	
LIBERTY 280 SL	32.0 fl oz/a	B	
ARMEZON	1.0 fl oz/a	B	
ATRAZINE 4L	16.0 fl oz/a	B	
Amsol AMS	3.0 lb ai/a	B	
5 VERDICT	10.0 fl oz/a	A	16.80 179.3
ATRAZINE 4L	16.0 fl oz/a	A	
LIBERTY 280 SL	32.0 fl oz/a	B	
ARMEZON PRO	16.0 fl oz/a	B	
ATRAZINE 4L	16.0 fl oz/a	B	
Amsol AMS	3.0 lb ai/a	B	
6 VERDICT	10.0 fl oz/a	A	16.00 187.0
ATRAZINE 4L	16.0 fl oz/a	A	
LIBERTY 280 SL	32.0 fl oz/a	B	
ZIDUA SC	4.0 fl oz/a	B	
ATRAZINE 4L	16.0 fl oz/a	B	
Amsol AMS	3.0 lb ai/a	B	
7 VERDICT	10.0 fl oz/a	A	16.58 183.9
ATRAZINE 4L	16.0 fl oz/a	A	
LIBERTY 280 SL	22.0 fl oz/a	B	
STATUS HERBICIDE	5.0 oz wt/a	B	
ATRAZINE 4L	16.0 fl oz/a	B	
Amsol AMS	3.0 lb ai/a	B	
8 VERDICT	10.0 fl oz/a	A	16.55 181.5
ATRAZINE 4L	16.0 fl oz/a	A	
ROUNDUP POWERMAX	32.0 fl oz/a	B	
ATRAZINE 4L	16.0 fl oz/a	B	
Amsol AMS	3.0 lb ai/a	B	

Excluded replicate 1 in column 26

Could not calculate LSD (% mean diff) for columns 1,3,7,9,10,11,13,14,16,18,21,23 because error mean square = 0.

University of Kentucky

Pest Type			
Pest Code			
Pest Scientific Name			
Pest Name			
Crop Type, Code	C ZEAMX	C ZEAMX	
BBCH Scale	BCOR	BCOR	
Crop Scientific Name	Zea mays	Zea mays	
Crop Name	Corn	Corn	
Rating Date	9-12-2019	9-12-2019	
Part Rated	PLANT C	PLANT C	
Rating Type	MOISTCON	YIELD	
Rating Unit	%	BU	
Sample Size		1 A	
Number of Subsamples	1	1	
Data Entry Date	10-14-2019	10-14-2019	
Days After First/Last Applic.	148 112	148 112	
Plant-Eval Interval	148 DP-1	148 DP-1	
Days After Emergence	139 DE-1	139 DE-1	
ARM Action Codes		EC TY1	
Number of Decimals		1	
Trt Treatment	Rate	Appl	
No. Name	Rate Unit	Code	
			28 29
9 VERDICT	10.0 fl oz/a	A	16.28 196.2
ATRAZINE 4L	16.0 fl oz/a	A	
ROUNDUP POWERMAX	32.0 fl oz/a	B	
STATUS HERBICIDE	2.5 oz wt/a	B	
ATRAZINE 4L	16.0 fl oz/a	B	
Amsol AMS	3.0 lb ai/a	B	
10 VERDICT	10.0 fl oz/a	A	16.25 181.0
ATRAZINE 4L	16.0 fl oz/a	A	
ROUNDUP POWERMAX	32.0 fl oz/a	B	
ARMEZON	1.0 fl oz/a	B	
ATRAZINE 4L	16.0 fl oz/a	B	
Amsol AMS	3.0 lb ai/a	B	
11 RESICORE	80.0 fl oz/a	A	15.78 186.8
ATRAZINE 4L	16.0 fl oz/a	A	
DURANGO DMA	32.0 fl oz/a	B	
ATRAZINE 4L	16.0 fl oz/a	B	
Amsol AMS	3.0 lb ai/a	B	
12 RESICORE	80.0 fl oz/a	A	16.53 183.8
ATRAZINE 4L	16.0 fl oz/a	A	
LIBERTY 280 SL	32.0 fl oz/a	B	
STATUS HERBICIDE	2.5 oz wt/a	B	
ATRAZINE 4L	16.0 fl oz/a	B	
Amsol AMS	3.0 lb ai/a	B	
13 ACURON	80.0 fl oz/a	A	16.20 187.6
ROUNDUP POWERMAX	32.0 fl oz/a	B	
ATRAZINE 4L	16.0 fl oz/a	B	
Amsol AMS	3.0 lb ai/a	B	
14 ACURON	80.0 fl oz/a	A	16.48 197.2
LIBERTY 280 SL	32.0 fl oz/a	B	
STATUS HERBICIDE	2.5 oz wt/a	B	
ATRAZINE 4L	16.0 fl oz/a	B	
Amsol AMS	3.0 lb ai/a	B	
LSD P=.05			1.488 16.98
Standard Deviation			1.040 11.84
CV			6.36 6.38
Replicate F			1.162 2.072
Replicate Prob(F)			0.3366 0.1212
Treatment F			1.556 0.932
Treatment Prob(F)			0.1412 0.5271

Excluded replicate 1 in column 26

Could not calculate LSD (% mean diff) for columns 1,3,7,9,10,11,13,14,16,18,21,23 because error mean square = 0.

University of Kentucky

LIBERTY/ LIBERTYLINK CORN SYSTEM / EFFICACY/TOLERANCE

Trial ID: 19-38 COR-REC Location: UKREC - 108C3 Trial Year: 2019
 Protocol ID: MKD-H-2019-US-C41-A-01.0 Investigator: Travis Legleiter
 Project ID: Study Director: Darren Unland
 Sponsor Contact: Greg Stapleton

Pest Type

W, Weed = Weed or volunteer crop

Pest Code

AMBTR, Ambrosia trifida, Giant ragweed = US
 AMARE, Amaranthus retroflexus, Redroot pigweed = US
 DIGSA, Digitaria sanguinalis, large crabgrass = US
 IPOLA, Ipomoea lacunosa, pitted morning glory = US

Crop Type, Code

C = EPPO species (Bayer) codes

Part Rated

PLANT = plant
 C = Crop is Part Rated
 P = Pest is Part Rated

Rating Type

PHYGEN = phytotoxicity - general / injury
 CONTRO = control / burndown or knockdown
 WEIGHT = weight
 YIELD = yield

Rating Unit

% = percent
 FT = foot
 LB = pound
 BU = bushel

PLOT = total plot

A = acre

Plant-Eval Interval

14 DP-1 = 1 ZEAMX 4-17-2019
 28 DP-1 = 1 ZEAMX 4-17-2019
 44 DP-1 = 1 ZEAMX 4-17-2019
 49 DP-1 = 1 ZEAMX 4-17-2019
 64 DP-1 = 1 ZEAMX 4-17-2019
 79 DP-1 = 1 ZEAMX 4-17-2019
 148 DP-1 = 1 ZEAMX 4-17-2019

ARM Action Codes

EC = Do not analyze untreated check, while still reporting treatment mean on AOV Means Table
 ET10 = Excluded treatment 10
 ER1 = Excluded replicate 1
 TY1 = $(726/(5*[26]))*[27]*(100-[28])/84.5$

University of Kentucky

EVALUATION OF IMPACTZ AND IMPACT FOR PERFORMANCE AND CORN SAFETY CONV TILL

Trial ID: 19-39 Location: LEXINGTON, KY Trial Year: 2019
 Protocol ID: AMVAC-CORN-19C04H020 Investigator: Sara Carter
 Project ID: Study Director: SARA CARTER
 Sponsor Contact: SCOTT AKIN

General Trial Information

Study Director: Sara Carter **Title:** Research Specialist
Investigator: Sara Carter **Title:** RESEARCH SPECIALIST

Discipline: H herbicide
Trial Status: F one-year/final

ARM Trial Created On: 5-1-2019
Initiation Date: 5-1-2019
Completion Date: 9-5-2019

Trial Location

City: LEXINGTON **Country:** USA United States
State/Prov.: KENTUCKY
Postal Code: 40511

Conducted Under GLP: No
Conducted Under GEP: No

Contacts

Study Director: Sara Carter **Title:** Research Specialist
Organization: University of Kentucky
Address: 2951 Agronomy Road, Unit 12
City+State/Prov.: Lexington, KY **Mobile No.:** 859-559-6710
Postal Code: 40511 **E-mail:** skcart0@uky..edu

Investigator: Sara Carter **Title:** RESEARCH SPECIALIST
Organization: UNIVERSITY OF KENTUCKY
Address: 105 PLANT SCIENCE BUILDING **Phone No.:** 859-259-1914
City+State/Prov.: LEXINGTON, KY **Mobile No.:** 859-559-6710
Postal Code: 40546-0312 **E-mail:** sara.carter@uky.edu

Crop Description

Crop 1: C ZEAMX Zea mays Corn
Variety: BECKS 6127A3
Attributes: LL GT
Planting Date: 5-1-2019 **Planting Rate:** 32000 S/A
Depth: 1.5 IN
Rows per Plot: 6 **Planting Method:** PLANTD planted
Row Spacing: 30 IN **Planting Equipment:** FE field equipment
Seed Bed: SMOOTH smooth
Soil Temperature: 61 F **Soil Moisture:** GOOD good
Emergence Date: 5-8-2019

Pest Description

Pest 1 Type: W **Code:** SETFA Setaria faberi
Common Name: Giant foxtail
Crop: 1 ZEAMX

Pest 2 Type: W **Code:** AMBTR Ambrosia trifida
Common Name: Giant ragweed
Crop: 1 ZEAMX

Pest 3 Type: W **Code:** IPOSS Ipomoea sp.
Common Name: Morning glory
Crop: 1 ZEAMX

Site and Design

Treated Plot Width: 10 FT **Site Type:** FIELD field
Treated Plot Length: 44 FT
Treated Plot Area: 440 FT2 **Treatments:** 6 **Tillage Type:** CONTIL conventional-till
Replications: 3 **Study Design:** RACOB Randomized Complete Block (RCB)

Soil Description

Description Name: MAURY
% Sand: 6 **% OM:** 2.6 **Texture:** SIL silt loam
% Silt: 62 **pH:** 6.4 **Soil Name:** MAURY SILT LOAM
% Clay: 32 **CEC:** 18 **Fert. Level:** E excellent
Soil Drainage: E excellent

University of Kentucky

Moisture and Weather Conditions
Overall Moisture Conditions: WEWEDR wet-wet-dry
Closest Weather Station: SPINDLETOP **Distance:** 1.5 MI

Application Description

	A	B	C
Application Date	5-1-2019	5-23-2019	6-3-2019
Application Method	SPRAY	SPRAY	SPRAY
Application Timing	PRE	V2	V4
Application Placement	BROSOI	BROFOL	BROFOL
Applied By	SARA	SARA	
Air Temperature Start, Stop	79 F	88 F	74 F
% Relative Humidity Start, Stop	57	65	55
Wind Velocity+Dir. Start	3 MPH WNW	4 MPH N	6 MPH SW
Soil Temperature	61 F	69 F	70 F
Soil Moisture	GOOD	GOOD	GOOD
Soil Surface Condition	DRY	DRY	DRY
% Cloud Cover	60	90	30

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale	ZEAMX BCOR	ZEAMX BCOR	ZEAMX BCOR
Days after Emergence	-7	15	26
Stage Majority, Percent		V2	V4
Height Average		4 IN	7 IN

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale	SETFA W	SETFA W	SETFA W
Height Average		2 IN	4 IN
Pest 2 Code, Type, Scale	AMBTR W	AMBTR W	AMBTR W
Height Average		3 IN	6 IN
Pest 3 Code, Type, Scale	IPOSS W	IPOSS W	IPOSS W
Height Average		1.5 IN	2.5 IN

Application Equipment

	A	B	C
Appl. Equipment	BACKPACK	BACKPACK	BACKPACK
Equipment Type	BELSPR	BELSPR	BELSPR
Operation Pressure	30 PSI	30 PSI	30 PSI
Nozzle Type	FLAT FAN	FLAT FAN	FLAT FAN
Nozzle Size	8002 DG	8002 DG	8002 DG
Nozzle Spacing	20 IN	20 IN	20 IN
Boom Length	10 FT	10 FT	10 FT
Boom Height	30 IN	30 IN	30 IN
Ground Speed	4 MPH	4 MPH	4 MPH
Carrier	WATER	WATER	WATER
Application Amount	15 GPA	15 GPA	15 GPA
Mix Size	2.5 liters	2.5 liters	2.5 liters
Propellant	CO2	CO2	CO2

Context	Date	By	Notes
STATUS	5-1-2019	Sara Carter	Automatically added by ARM: Trial Status updated to 'S' during trial creation.

SE Definitions

	1.
Crop Type, Code	C

University of Kentucky

EVALUATION OF IMPACTZ AND IMPACT FOR PERFORMANCE AND CORN SAFETY CONV TILL

Trial ID: 19-39 Location: LEXINGTON, KY Trial Year: 2019
 Protocol ID: AMVAC-CORN-19C04H020 Investigator: Sara Carter
 Project ID: Study Director: SARA CARTER
 Sponsor Contact: SCOTT AKIN

Pest Type			W Weed SETFA	W Weed AMBTR	W Weed IPOSS			
Pest Code			Setaria faberi	Ambrosia trifi>	Ipomoea sp.			
Pest Scientific Name			Giant foxtail	Giant ragweed	Morning glory			
Pest Name			C -	C -	C -			
Crop Type, Code	C ZEAMX	C ZEAMX				C ZEAMX		
BBCH Scale	BCOR	BCOR				BCOR		
Crop Scientific Name	Zea mays	Zea mays				Zea mays		
Crop Name	Corn	Corn				Corn		
Rating Date	5-8-2019	5-15-2019	5-15-2019	5-15-2019	5-15-2019	5-29-2019		
Rating Type	PHYGEN	PHYGEN	CONTRO	CONTRO	CONTRO	PHYGEN		
Rating Unit	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1		
Days After First/Last Applic.	7 7	14 14	14 14	14 14	14 14	28 6		
Plant-Eval Interval	7 DP-1	14 DP-1	14 DP-1	14 DP-1	14 DP-1	28 DP-1		
Days After Emergence	0 DE-1	7 DE-1	7 DE-1	7 DE-1	7 DE-1	21 DE-1		
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	1	2	3	4	5	6
1 HARNESS XTRA	3.2 pt/a	A	0.0	0.0	99.0	99.0	99.0	0.0
IMPACT Z	10.7 fl oz/a	C						
MSO	1 % v/v	C						
N-PAK AMS LIQUID	2.5 % v/v	C						
2 HARNESS XTRA	3.2 pt/a	A	0.0	0.0	99.0	99.0	99.0	0.0
IMPACT Z	8 fl oz/a	C						
LIBERTY 280	22 fl oz/a	C						
MSO	1 % v/v	C						
N-PAK AMS LIQUID	2.5 % v/v	C						
3 HARNESS XTRA	3.2 pt/a	A	0.0	0.0	99.0	99.0	99.0	0.0
SHIELD EX	1.35 fl oz/a	C						
ATRAZINE	0.67 pt/a	C						
MSO	1 % v/v	C						
N-PAK AMS LIQUID	2.5 % v/v	C						
4 HARNESS	1.75 pt/a	B	0.0	0.0	99.0	99.0	99.0	0.0
IMPACT	1 fl oz/a	B						
ATRAZINE	1 pt/a	B						
MSO	1 % v/v	B						
N-PAK AMS LIQUID	2.5 % v/v	B						
5 HARNESS	1.75 pt/a	B	0.0	0.0	99.0	99.0	99.0	0.0
IMPACT	0.75 fl oz/a	B						
ROUNDUP POWERMAX	32 fl oz/a	B						
ATRAZINE	1 pt/a	B						
MSO	1 % v/v	B						
N-PAK AMS LIQUID	2.5 % v/v	B						
6 UNTREATED			0.0	0.0	0.0	0.0	0.0	0.0
LSD P=.05			0.00	0.00	0.00	0.00	0.00	0.00
Standard Deviation			0.0	0.0	0.0	0.0	0.0	0.0
CV								
Replicate F			0.000	0.000	0.000	0.000	0.000	0.000
Replicate Prob(F)			1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Treatment F			0.000	0.000	0.000	0.000	0.000	0.000
Treatment Prob(F)			1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed		W Weed	W Weed		
Pest Code	SETFA	AMBTR	IPOSS		SETFA	AMBTR		
Pest Scientific Name	Setaria faberi	Ambrosia trifi>	Ipomoea sp.		Setaria faberi	Ambrosia trifi>		
Pest Name	Giant foxtail	Giant ragweed	Morning glory		Giant foxtail	Giant ragweed		
Crop Type, Code	C -	C -	C -	C ZEAMX	C -	C -		
BBCH Scale				BCOR				
Crop Scientific Name				Zea mays				
Crop Name				Corn				
Rating Date	5-29-2019	5-29-2019	5-29-2019	6-12-2019	6-12-2019	6-12-2019		
Rating Type	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1		
Days After First/Last Applic.	28 6	28 6	28 6	42 9	42 9	42 9		
Plant-Eval Interval	28 DP-1	28 DP-1	28 DP-1	42 DP-1	42 DP-1	42 DP-1		
Days After Emergence	21 DE-1	21 DE-1	21 DE-1	35 DE-1	35 DE-1	35 DE-1		
Trt Treatment	Rate	Rate	Rate	Rate	Rate	Rate		
No. Name	Unit	Unit	Unit	Unit	Unit	Unit		
Code								
	7	8	9	10	11	12		
1 HARNESS XTRA	3.2 pt/a	A	99.0	99.0	99.0	0.0	99.0	99.0
IMPACT Z	10.7 fl oz/a	C						
MSO	1 % v/v	C						
N-PAK AMS LIQUID	2.5 % v/v	C						
2 HARNESS XTRA	3.2 pt/a	A	99.0	99.0	99.0	0.0	99.0	99.0
IMPACT Z	8 fl oz/a	C						
LIBERTY 280	22 fl oz/a	C						
MSO	1 % v/v	C						
N-PAK AMS LIQUID	2.5 % v/v	C						
3 HARNESS XTRA	3.2 pt/a	A	99.0	99.0	99.0	0.0	99.0	99.0
SHIELD EX	1.35 fl oz/a	C						
ATRAZINE	0.67 pt/a	C						
MSO	1 % v/v	C						
N-PAK AMS LIQUID	2.5 % v/v	C						
4 HARNESS	1.75 pt/a	B	0.0	0.0	0.0	0.0	99.0	99.0
IMPACT	1 fl oz/a	B						
ATRAZINE	1 pt/a	B						
MSO	1 % v/v	B						
N-PAK AMS LIQUID	2.5 % v/v	B						
5 HARNESS	1.75 pt/a	B	0.0	0.0	0.0	0.0	99.0	99.0
IMPACT	0.75 fl oz/a	B						
ROUNDUP POWERMAX	32 fl oz/a	B						
ATRAZINE	1 pt/a	B						
MSO	1 % v/v	B						
N-PAK AMS LIQUID	2.5 % v/v	B						
6 UNTREATED			0.0	0.0	0.0	0.0	0.0	0.0
LSD P=.05			0.00	0.00	0.00	0.00	0.00	0.00
Standard Deviation			0.0	0.0	0.0	0.0	0.0	0.0
CV								
Replicate F			0.000	0.000	0.000	0.000	0.000	0.000
Replicate Prob(F)			1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Treatment F			0.000	0.000	0.000	0.000	0.000	0.000
Treatment Prob(F)			1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17 because error mean square = 0.

University of Kentucky

Pest Type	W Weed		W Weed	W Weed	W Weed
Pest Code	IPOSS		SETFA	AMBTR	IPOSS
Pest Scientific Name	Ipomoea sp.		Setaria faberi	Ambrosia trifi>	Ipomoea sp.
Pest Name	Morning glory		Giant foxtail	Giant ragweed	Morning glory
Crop Type, Code	C -	C ZEAMX	C -	C -	C -
BBCH Scale		BCOR			
Crop Scientific Name		Zea mays			
Crop Name		Corn			
Rating Date	6-12-2019	6-26-2019	6-26-2019	6-26-2019	6-26-2019
Rating Type	CONTRO	PHYGEN	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Days After First/Last Applic.	42 9	56 23	56 23	56 23	56 23
Plant-Eval Interval	42 DP-1	56 DP-1	56 DP-1	56 DP-1	56 DP-1
Days After Emergence	35 DE-1	49 DE-1	49 DE-1	49 DE-1	49 DE-1
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	13	14	15
1 HARNESS XTRA	3.2 pt/a	A	99.0	0.0	99.0
IMPACT Z	10.7 fl oz/a	C			
MSO	1 % v/v	C			
N-PAK AMS LIQUID	2.5 % v/v	C			
2 HARNESS XTRA	3.2 pt/a	A	99.0	0.0	99.0
IMPACT Z	8 fl oz/a	C			
LIBERTY 280	22 fl oz/a	C			
MSO	1 % v/v	C			
N-PAK AMS LIQUID	2.5 % v/v	C			
3 HARNESS XTRA	3.2 pt/a	A	99.0	0.0	99.0
SHIELD EX	1.35 fl oz/a	C			
ATRAZINE	0.67 pt/a	C			
MSO	1 % v/v	C			
N-PAK AMS LIQUID	2.5 % v/v	C			
4 HARNESS	1.75 pt/a	B	99.0	0.0	99.0
IMPACT	1 fl oz/a	B			
ATRAZINE	1 pt/a	B			
MSO	1 % v/v	B			
N-PAK AMS LIQUID	2.5 % v/v	B			
5 HARNESS	1.75 pt/a	B	99.0	0.0	99.0
IMPACT	0.75 fl oz/a	B			
ROUNDUP POWERMAX	32 fl oz/a	B			
ATRAZINE	1 pt/a	B			
MSO	1 % v/v	B			
N-PAK AMS LIQUID	2.5 % v/v	B			
6 UNTREATED			0.0	0.0	0.0
LSD P=.05					
Standard Deviation	0.00	0.00	0.00	0.00	0.00
CV	0.0	0.0	0.0	0.0	0.0
Replicate F	0.000	0.000	0.000	0.000	0.000
Replicate Prob(F)	1.0000	1.0000	1.0000	1.0000	1.0000
Treatment F	0.000	0.000	0.000	0.000	0.000
Treatment Prob(F)	1.0000	1.0000	1.0000	1.0000	1.0000

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17 because error mean square = 0.

University of Kentucky

EVALUATION OF IMPACTZ AND IMPACT FOR PERFORMANCE AND CORN SAFETY CONV TILL	
Trial ID: 19-39	Location: LEXINGTON, KY Trial Year: 2019
Protocol ID: AMVAC-CORN-19C04H020	Investigator: Sara Carter
Project ID:	Study Director: SARA CARTER
Sponsor Contact: SCOTT AKIN	

Pest Type
W, Weed = Weed or volunteer crop

Pest Code
SETFA, Setaria faberi, Giant foxtail = US
AMBTR, Ambrosia trifida, Giant ragweed = US
IPOSS, Ipomoea sp., Morning glory = US

Crop Type, Code
C = EPPO species (Bayer) codes
ZEAMX, BCOR, Zea mays, Corn = US

Rating Type
PHYGEN = phytotoxicity - general / injury
CONTRO = control / burndown or knockdown

Rating Unit
% = percent

Plant-Eval Interval
7 DP-1 = 1 ZEAMX 5-1-2019
14 DP-1 = 1 ZEAMX 5-1-2019
28 DP-1 = 1 ZEAMX 5-1-2019
42 DP-1 = 1 ZEAMX 5-1-2019
56 DP-1 = 1 ZEAMX 5-1-2019

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VALENT PRE AND POST IN LIBERTY SOYBEAN AGAINST VOLUNTEER CORN/GRASSES/ LOW RAGWEED PRESSURE CONVENTIONAL TILLAGE

Trial ID: 19-42 Location: LEXINGTON, KY Trial Year: 2019
 Protocol ID: 64.01 Investigator: Sara Carter
 Project ID: Study Director: SARA CARTER
 Sponsor Contact: JOHN CRANMER

General Trial Information

Study Director: Sara Carter **Title:** Research Specialist
Investigator: Sara Carter

Discipline: H herbicide
Trial Status: F one-year/final
ARM Trial Created On: 5-14-2019
Initiation Date: 5-14-2019 **Planned Completion Date:** 10-1-2019
Completion Date: 10-3-2019

Trial Location

City: Lexington **Country:** USA United States
State/Prov.: Kentucky
Postal Code: 40511

Conducted Under GLP: No
Conducted Under GEP: No

Contacts

Study Director: Sara Carter **Title:** Research Specialist
Organization: University of Kentucky
Address: 105 Plant Science Building
City+State/Prov: Lexington, KY
Postal Code: 40546-0312 **E-mail:** sara.carter@uky.edu

Investigator: Sara Carter

Crop Description

Crop 1: C GLXMA Glycine max Soybean
Variety: Pioneer 37T09L
Attributes: Liberty Link
Planting Date: 5-14-2019 **Planting Rate:** 150000 S/A
Depth: 1.25 IN
Rows per Plot: 6 **Planting Method:** PLANTD planted
Row Spacing: 30 IN **Planting Equipment:** FE field equipment
Seed Bed: SMOOTH smooth
Soil Temperature: 61 F **Soil Moisture:** GOOD good
Emergence Date: 5-19-2019
Harvest Date: 10-3-2019 **Harvest Equipment:** Hege
Harvested Width: 5 FT
Harvested Length: 35 FT
% Standard Moisture: 13.0

Pest Description

Pest 1 Type: W **Code:** ZEAMX Zea mays
Common Name: Corn **Artificial Population:** X
Establishment Date: 5-14-2019
Establishment Rate: 20 Seeds/A
Pest 2 Type: W **Code:** SETFA Setaria faberi
Common Name: Giant foxtail
Crop: 1 GLXMA
Pest 3 Type: W **Code:** AMBTR Ambrosia trifida
Common Name: Giant ragweed

Site and Design

Treated Plot Width: 10 FT **Site Type:** FIELD field
Treated Plot Length: 40 FT
Treated Plot Area: 400 FT² **Treatments:** 9 **Tillage Type:** CONTIL conventional-till
Replications: 3 **Study Design:** RACOB Randomized Complete Block (RCB)

Soil Description

Description Name: MAURY SILT LOAM
% Sand: 6 **% OM:** 2.6 **Texture:** SIL silt loam
% Silt: 32 **pH:** 6.4 **Soil Name:** Maury
% Clay: 62 **CEC:** 18

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Moisture and Weather Conditions
Overall Moisture Conditions: WET wet
Closest Weather Station: Spindletop **Distance:** 2.25 mi

Application Description

	A	B	C
Application Date	5-14-2019	6-4-2019	6-26-2019
Appl. Start Time	4:00 PM	4:00 PM	1:00 PM
Appl. Stop Time	4:25 PM	4:30 PM	1:15 PM
Interval to Prev. Appl.		21 DAYS	22 DAYS
Application Method	SPRAY	SPRAY	SPRAY
Application Timing	PRE	EP	LP
Application Placement	BROSOI	BROFOL	BROFOL
Applied By	SARA	SARA	SARA
Air Temperature Start, Stop	65 F	76 F	93 F
% Relative Humidity Start, Stop	60	50	57
Wind Velocity+Dir. Start	4 MPH SW	1 MPH S	1 MPH SE
Soil Temperature	61 F	69 F	75 F
Soil Moisture	GOOD	GOOD	WET
Soil Surface Condition	SMOOTH	SMOOTH	SMOOTH
% Cloud Cover	30	0	5
Next Moisture Occurred On	5-16-2019	6-5-2019	7-3-2019

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Days after Emergence	-5	16	38
Height Average		5 IN	9 IN

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale	ZEAMX W	ZEAMX W	ZEAMX W
Height Average		3 IN	7 IN
Pest 2 Code, Type, Scale	SETFA W	SETFA W	SETFA W
Height Average		2 IN	3 IN
Pest 3 Code, Type, Scale	AMBTR W	AMBTR W	AMBTR W
Height Average		3 IN	6 IN

Application Equipment

	A	B	C
Appl. Equipment	BELTSPRAYER	BELTSPRAYER	BELTSPRAYER
Equipment Type	SPRBEL	SPRBEL	SPRBEL
Operation Pressure	30 PSI	30 PSI	30 PSI
Nozzle Type	FLAFDG	FLAFDG	FLAFDG
Nozzle Size	8002	8002	8002
Nozzle Spacing	30 IN	30 IN	30 IN
Boom ID	6-TIP	6-TIP	6-TIP
Boom Length	10 FT	10 FT	10 FT
Boom Height	20 IN	24 IN	24 IN
Ground Speed	4 MPH	4 MPH	4 MPH
Carrier	WATER	WATER	WATER
Application Amount	15 GAL/AC	15 GAL/AC	15 GAL/AC
Mix Size	2.5 L	2.5 L	2.5 L
Propellant	COMCO2	COMCO2	COMCO2
Tank Mix (Y/N)	N no	Y yes	Y yes

Context	Date	By	Notes
STATUS	5-14-2019	Sara Carter	Automatically added by ARM: Trial Status updated to 'S' during trial creation.

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VALENT PRE AND POST IN LIBERTY SOYBEAN AGAINST VOLUNTEER CORN/GRASSES/ LOW RAGWEED PRESSURE
CONVENTIONAL TILLAGE
 Trial ID: 19-42 Location: LEXINGTON, KY Trial Year: 2019
 Protocol ID: 64.01 Investigator: Sara Carter
 Project ID: Study Director: SARA CARTER
 Sponsor Contact: JOHN CRANMER

Pest Type			W Weed ZEAMX Zea mays Corn C -	W Weed SETFA Setaria faberi Giant foxtail C -	W Weed AMBTR Ambrosia trifida Giant ragweed C -		W Weed ZEAMX Zea mays Corn C -			
Pest Code										
Pest Scientific Name										
Pest Name										
Crop Type, Code	C GLXMA	C GLXMA				C GLXMA				
BBCH Scale	BSOY	BSOY				BSOY				
Crop Scientific Name	Glycine max	Glycine max				Glycine max				
Crop Name	Soybean	Soybean				Soybean				
Rating Date	5-28-2019	6-4-2019	6-4-2019	6-4-2019	6-4-2019	6-25-2019	6-25-2019			
Rating Type	DAMAGE	DAMAGE	CONTRO	CONTRO	CONTRO	DAMAGE	CONTRO			
Rating Unit	%	%	%	%	%	%	%			
Number of Subsamples	1	1	1	1	1	1	1			
Rating Timing	2 WEEK	3 WEEK	3 WEEK	3 WEEK	3 WEEK	6 WEEK	6 WEEK			
Days After First/Last Applic.	14 14	21 21	21 21	21 21	21 21	42 21	42 21			
Plant-Eval Interval	14 DP-1	21 DP-1	21 DP-1	21 DP-1	21 DP-1	42 DP-1	42 DP-1			
Days After Emergence	9 DE-1	16 DE-1	16 DE-1	16 DE-1	16 DE-1	37 DE-1	37 DE-1			
ARM Action Codes										
Number of Decimals										
Trt No.	Treatment Name	Rate	Appl Code	1	2	3	4	5	6	7
1	UNTREATED CHECK			0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	SCOUT AMS SCOUT SELECT MAX INDUCE AMS	32 fl oz/a 3 lb/a 32 fl oz/a 9 fl oz/a 0.25 % v/v 3 lb/a	B B C C C C	0.0	0.0	0.0	0.0	0.0	0.0	80.0
3	SCOUT V-10440 AMS SCOUT SELECT MAX INDUCE AMS	32 fl oz/a 6 fl oz/a 3 lb/a 32 fl oz/a 9 fl oz/a 0.25 % v/v 3 lb/a	B B B C C C C	0.0	0.0	0.0	0.0	0.0	0.0	95.0
4	FIERCE EZ SCOUT SELECT MAX INDUCE AMS	6 fl oz/a 32 fl oz/a 9 fl oz/a 0.25 % v/v 3 lb/a	A B B B B	0.0	0.0	20.0	83.3	81.7	0.0	95.0
5	FIERCE MTZ SCOUT SELECT MAX INDUCE AMS	16 fl oz/a 32 fl oz/a 9 fl oz/a 0.25 % v/v 3 lb/a	A B B B B	0.0	0.0	25.0	83.3	81.7	0.0	95.0
6	FIERCE EZ SCOUT V-10440 SELECT MAX INDUCE AMS	6 fl oz/a 32 fl oz/a 6 fl oz/a 9 fl oz/a 0.25 % v/v 3 lb/a	A B B B B B	0.0	0.0	20.0	83.3	83.3	0.0	95.0
7	FIERCE MTZ SCOUT V-10440 SELECT MAX INDUCE AMS	16 fl oz/a 32 fl oz/a 6 fl oz/a 9 fl oz/a 0.25 % v/v 3 lb/a	A B B B B B	0.0	0.0	25.0	81.7	81.7	0.0	95.0
8	AUTHORITY MTZ SCOUT ANTHEM MAXX SELECT MAX INDUCE AMS	11 oz wt/a 32 fl oz/a 2.5 fl oz/a 9 fl oz/a 0.25 % v/v 3 lb/a	A B B B B B	0.0	0.0	25.0	83.3	85.0	0.0	95.0

Could not calculate LSD (% mean diff) for columns 1,2,3,6,7,8,9,10,11 because error mean square = 0.

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Pest Type			W Weed	W Weed	W Weed		W Weed
Pest Code			ZEAMX	SETFA	AMBTR		ZEAMX
Pest Scientific Name			Zea mays	Setaria faberi	Ambrosia trifi>		Zea mays
Pest Name			Corn	Giant foxtail	Giant ragweed		Corn
Crop Type, Code	C GLXMA	C GLXMA	C -	C -	C -	C GLXMA	C -
BBCH Scale	BSOY	BSOY				BSOY	
Crop Scientific Name	Glycine max	Glycine max				Glycine max	
Crop Name	Soybean	Soybean				Soybean	
Rating Date	5-28-2019	6-4-2019	6-4-2019	6-4-2019	6-4-2019	6-25-2019	6-25-2019
Rating Type	DAMAGE	DAMAGE	CONTRO	CONTRO	CONTRO	DAMAGE	CONTRO
Rating Unit	%	%	%	%	%	%	%
Number of Subsamples	1	1	1	1	1	1	1
Rating Timing	2 WEEK	3 WEEK	3 WEEK	3 WEEK	3 WEEK	6 WEEK	6 WEEK
Days After First/Last Applic.	14 14	21 21	21 21	21 21	21 21	42 21	42 21
Plant-Eval Interval	14 DP-1	21 DP-1	21 DP-1	21 DP-1	21 DP-1	42 DP-1	42 DP-1
Days After Emergence	9 DE-1	16 DE-1	16 DE-1	16 DE-1	16 DE-1	37 DE-1	37 DE-1
ARM Action Codes							
Number of Decimals							
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code	1	2	3	4	5
9 ZIDUA PRO	4.5 fl oz/a	A	0.0	0.0	30.0	90.0	85.0
SCOUT	32 fl oz/a	B					0.0
V-10440	6 fl oz/a	B					
SELECT MAX	9 fl oz/a	B					
INDUCE	0.25 % v/v	B					
AMS	3 lb/a	B					95.0
LSD P=.05						3.53	4.52
Standard Deviation	0.00	0.00	0.00	0.00	2.04	2.61	0.00
CV	0.0	0.0	0.0	0.0	3.64	4.72	0.0
Replicate F	0.000	0.000	0.000	2.000	0.542	0.000	0.000
Replicate Prob(F)	1.0000	1.0000	1.0000	0.1678	0.5917	1.0000	1.0000
Treatment F	0.000	0.000	0.000	1279.000	758.373	0.000	0.000
Treatment Prob(F)	1.0000	1.0000	1.0000	0.0001	0.0001	1.0000	1.0000

Could not calculate LSD (% mean diff) for columns 1,2,3,6,7,8,9,10,11 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed		W Weed	W Weed	W Weed		
Pest Code	SETFA	AMBTR		ZEAMX	SETFA	AMBTR		
Pest Scientific Name	Setaria faberi	Ambrosia trifi>		Zea mays	Setaria faberi	Ambrosia trifi>		
Pest Name	Giant foxtail	Giant ragweed		Corn	Giant foxtail	Giant ragweed		
Crop Type, Code	C -	C -	C GLXMA	C -	C -	C -		
BBCH Scale			BSOY					
Crop Scientific Name			Glycine max					
Crop Name			Soybean					
Rating Date	6-25-2019	6-25-2019	7-9-2019	7-9-2019	7-9-2019	7-9-2019		
Rating Type	CONTRO	CONTRO	DAMAGE	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1		
Rating Timing	6 WEEK	6 WEEK	8 WEEK	8 WEEK	8 WEEK	8 WEEK		
Days After First/Last Applic.	42 21	42 21	56 13	56 13	56 13	56 13		
Plant-Eval Interval	42 DP-1	42 DP-1	56 DP-1	56 DP-1	56 DP-1	56 DP-1		
Days After Emergence	37 DE-1	37 DE-1	51 DE-1	51 DE-1	51 DE-1	51 DE-1		
ARM Action Codes								
Number of Decimals								
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	8	9	10	11	12	13
1 UNTREATED CHECK			0.0	0.0	0.0	0.0	0.0	0.0
2 SCOUT	32 fl oz/a	B	99.0	99.0	0.0	100.0	100.0	93.3
AMS	3 lb/a	B						
SCOUT	32 fl oz/a	C						
SELECT MAX	9 fl oz/a	C						
INDUCE	0.25 % v/v	C						
AMS	3 lb/a	C						
3 SCOUT	32 fl oz/a	B	99.0	99.0	0.0	100.0	100.0	96.7
V-10440	6 fl oz/a	B						
AMS	3 lb/a	B						
SCOUT	32 fl oz/a	C						
SELECT MAX	9 fl oz/a	C						
INDUCE	0.25 % v/v	C						
AMS	3 lb/a	C						
4 FIERCE EZ	6 fl oz/a	A	99.0	99.0	0.0	100.0	99.7	83.3
SCOUT	32 fl oz/a	B						
SELECT MAX	9 fl oz/a	B						
INDUCE	0.25 % v/v	B						
AMS	3 lb/a	B						
5 FIERCE MTZ	16 fl oz/a	A	99.0	99.0	0.0	100.0	100.0	86.7
SCOUT	32 fl oz/a	B						
SELECT MAX	9 fl oz/a	B						
INDUCE	0.25 % v/v	B						
AMS	3 lb/a	B						
6 FIERCE EZ	6 fl oz/a	A	99.0	99.0	0.0	100.0	100.0	83.3
SCOUT	32 fl oz/a	B						
V-10440	6 fl oz/a	B						
SELECT MAX	9 fl oz/a	B						
INDUCE	0.25 % v/v	B						
AMS	3 lb/a	B						
7 FIERCE MTZ	16 fl oz/a	A	99.0	99.0	0.0	100.0	100.0	86.7
SCOUT	32 fl oz/a	B						
V-10440	6 fl oz/a	B						
SELECT MAX	9 fl oz/a	B						
INDUCE	0.25 % v/v	B						
AMS	3 lb/a	B						
8 AUTHORITY MTZ	11 oz wt/a	A	99.0	99.0	0.0	100.0	99.7	90.0
SCOUT	32 fl oz/a	B						
ANTHEM MAXX	2.5 fl oz/a	B						
SELECT MAX	9 fl oz/a	B						
INDUCE	0.25 % v/v	B						
AMS	3 lb/a	B						

Could not calculate LSD (% mean diff) for columns 1,2,3,6,7,8,9,10,11 because error mean square = 0.

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Pest Type	W Weed	W Weed		W Weed	W Weed	W Weed		
Pest Code	SETFA	AMBTR		ZEAMX	SETFA	AMBTR		
Pest Scientific Name	Setaria faberi	Ambrosia trifi->		Zea mays	Setaria faberi	Ambrosia trifi->		
Pest Name	Giant foxtail	Giant ragweed		Corn	Giant foxtail	Giant ragweed		
Crop Type, Code	C -	C -	C GLXMA	C -	C -	C -		
BBCH Scale			BSOY					
Crop Scientific Name			Glycine max					
Crop Name			Soybean					
Rating Date	6-25-2019	6-25-2019	7-9-2019	7-9-2019	7-9-2019	7-9-2019		
Rating Type	CONTRO	CONTRO	DAMAGE	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1		
Rating Timing	6 WEEK	6 WEEK	8 WEEK	8 WEEK	8 WEEK	8 WEEK		
Days After First/Last Applic.	42 21	42 21	56 13	56 13	56 13	56 13		
Plant-Eval Interval	42 DP-1	42 DP-1	56 DP-1	56 DP-1	56 DP-1	56 DP-1		
Days After Emergence	37 DE-1	37 DE-1	51 DE-1	51 DE-1	51 DE-1	51 DE-1		
ARM Action Codes								
Number of Decimals								
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	8	9	10	11	12	13
9 ZIDUA PRO	4.5 fl oz/a	A	99.0	99.0	0.0	100.0	99.7	90.0
SCOUT	32 fl oz/a	B						
V-10440	6 fl oz/a	B						
SELECT MAX	9 fl oz/a	B						
INDUCE	0.25 % v/v	B						
AMS	3 lb/a	B						
LSD P=.05							0.50	13.53
Standard Deviation	0.00	0.00	0.00	0.00	0.00	0.00	0.29	7.82
CV	0.0	0.0	0.0	0.0	0.0	0.0	0.33	9.91
Replicate F	0.000	0.000	0.000	0.000	0.000	0.000	4.000	0.182
Replicate Prob(F)	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0390	0.8355
Treatment F	0.000	0.000	0.000	0.000	0.000	0.000	39901.004	43.909
Treatment Prob(F)	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0001	0.0001

Could not calculate LSD (% mean diff) for columns 1,2,3,6,7,8,9,10,11 because error mean square = 0.

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Pest Type			
Pest Code			
Pest Scientific Name			
Pest Name			
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA
BBCH Scale	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean
Rating Date	10-3-2019	10-3-2019	10-3-2019
Rating Type	YIELD	MOICON	YIELD
Rating Unit	lb/plot	%	bu/ac
Number of Subsamples	1	1	1
Rating Timing			
Days After First/Last Applic.	142 99	142 99	142 99
Plant-Eval Interval	142 DP-1	142 DP-1	142 DP-1
Days After Emergence	137 DE-1	137 DE-1	137 DE-1
ARM Action Codes			TY1
Number of Decimals			1
Trt Treatment	Rate	Appl	
No. Name	Rate Unit	Code	
			15 16 17
1 UNTREATED CHECK			0.560 0.00 2.7
2 SCOUT	32 fl oz/a B		7.053 5.90 31.7
AMS	3 lb/a B		
SCOUT	32 fl oz/a C		
SELECT MAX	9 fl oz/a C		
INDUCE	0.25 % v/v C		
AMS	3 lb/a C		
3 SCOUT	32 fl oz/a B		7.027 5.90 31.5
V-10440	6 fl oz/a B		
AMS	3 lb/a B		
SCOUT	32 fl oz/a C		
SELECT MAX	9 fl oz/a C		
INDUCE	0.25 % v/v C		
AMS	3 lb/a C		
4 FIERCE EZ	6 fl oz/a A		5.587 5.63 25.1
SCOUT	32 fl oz/a B		
SELECT MAX	9 fl oz/a B		
INDUCE	0.25 % v/v B		
AMS	3 lb/a B		
5 FIERCE MTZ	16 fl oz/a A		5.190 6.17 23.2
SCOUT	32 fl oz/a B		
SELECT MAX	9 fl oz/a B		
INDUCE	0.25 % v/v B		
AMS	3 lb/a B		
6 FIERCE EZ	6 fl oz/a A		5.007 5.63 22.5
SCOUT	32 fl oz/a B		
V-10440	6 fl oz/a B		
SELECT MAX	9 fl oz/a B		
INDUCE	0.25 % v/v B		
AMS	3 lb/a B		
7 FIERCE MTZ	16 fl oz/a A		5.907 6.00 26.5
SCOUT	32 fl oz/a B		
V-10440	6 fl oz/a B		
SELECT MAX	9 fl oz/a B		
INDUCE	0.25 % v/v B		
AMS	3 lb/a B		
8 AUTHORITY MTZ	11 oz wt/a A		4.113 6.07 18.4
SCOUT	32 fl oz/a B		
ANTHEM MAXX	2.5 fl oz/a B		
SELECT MAX	9 fl oz/a B		
INDUCE	0.25 % v/v B		
AMS	3 lb/a B		

Could not calculate LSD (% mean diff) for columns 1,2,3,6,7,8,9,10,11 because error mean square = 0.

University of Kentucky

Pest Type			
Pest Code			
Pest Scientific Name			
Pest Name			
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA
BBCH Scale	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean
Rating Date	10-3-2019	10-3-2019	10-3-2019
Rating Type	YIELD	MOICON	YIELD
Rating Unit	lb/plot	%	bu/ac
Number of Subsamples	1	1	1
Rating Timing			
Days After First/Last Applic.	142 99	142 99	142 99
Plant-Eval Interval	142 DP-1	142 DP-1	142 DP-1
Days After Emergence	137 DE-1	137 DE-1	137 DE-1
ARM Action Codes			TY1
Number of Decimals			1
Trt Treatment	Rate	Appl	
No. Name	Rate Unit	Code	
			15
			16
			17
9 ZIDUA PRO	4.5 fl oz/a	A	5.190
SCOUT	32 fl oz/a	B	5.57
V-10440	6 fl oz/a	B	23.4
SELECT MAX	9 fl oz/a	B	
INDUCE	0.25 % v/v	B	
AMS	3 lb/a	B	
LSD P=.05			1.4116
Standard Deviation			0.8156
CV			16.08
			0.493
			0.285
			5.47
			6.35
			3.67
			16.09
Replicate F			1.323
Replicate Prob(F)			0.2940
Treatment F			16.924
Treatment Prob(F)			0.0001
			6.983
			0.0066
			142.489
			0.0001
			1.381
			0.2798
			16.696
			0.0001

University of Kentucky

VALENT PRE AND POST IN LIBERTY SOYBEAN AGAINST VOLUNTEER CORN/GRASSES/ LOW RAGWEED PRESSURE
CONVENTIONAL TILLAGE
 Trial ID: 19-42 Location: LEXINGTON, KY Trial Year: 2019
 Protocol ID: 64.01 Investigator: Sara Carter
 Project ID: Study Director: SARA CARTER
 Sponsor Contact: JOHN CRANMER

Pest Type
 W, Weed = Weed or volunteer crop

Pest Code
 ZEAMX, Zea mays, Corn = US
 SETFA, Setaria faberi, Giant foxtail = US
 AMBTR, Ambrosia trifida, Giant ragweed = US

Crop Type Code
 C = EPPO species (Bayer) codes
 GLXMA, BSOY, Glycine max, Soybean = US

Rating Type
 DAMAGE = damage
 CONTRO = control / burndown or knockdown
 YIELD = yield
 MOICON = moisture content

Rating Unit
 % = percent
 lb/plot = pounds per plot
 bu/ac = bushels per acre

Plant-Eval Interval
 14 DP-1 = 1 GLXMA 5-14-2019
 21 DP-1 = 1 GLXMA 5-14-2019
 42 DP-1 = 1 GLXMA 5-14-2019
 56 DP-1 = 1 GLXMA 5-14-2019
 142 DP-1 = 1 GLXMA 5-14-2019

ARM Action Codes
 TY1 = 4.148571*[C15]*(100-[C16])/87

University of Kentucky

Corn Variety X Fungicide

Trial ID: 19-44 Location: LEXINGTON, KY Trial Year: 2019
 Protocol ID: CornVar Investigator: Sara Carter
 Project ID: Study Director: Sara Carter
 Sponsor Contact: Glen Murphy/Matt Llvesay

General Trial Information

Study Director: Sara Carter **Title:** Research Specialist
Investigator: Sara Carter

Discipline: F fungicide
Trial Status: F one-year/final
ARM Trial Created On: 5-21-2019
Initiation Date: 5-17-2019 **Planned Completion Date:** 10-1-2019
Completion Date: 9-30-2019

Trial Location

City: Lexington **Country:** USA United States
State/Prov.: Kentucky
Postal Code: 40511

Conducted Under GLP: No
Conducted Under GEP: No

Contacts

Study Director: Sara Carter **Title:** Research Specialist
Organization: University of Kentucky
Address: 105 Plant Science Building
City+State/Prov: Lexington, KY
Postal Code: 40546-0312 **E-mail:** sara.carter@uky.edu

Investigator: Sara Carter

Crop Description

Crop 1: C ZEAMX Zea mays Corn
Variety: SEE TRT LIST
Planting Date: 5-17-2019 **Planting Rate:** 32000 S/A
Depth: 1.5 IN
Rows per Plot: 6 **Planting Method:** PLANTD planted
Row Spacing: 30 IN **Planting Equipment:** FE field equipment
Seed Bed: MEDIUM medium
Soil Temperature: 64 F **Soil Moisture:** GOOD good
Emergence Date: 5-22-2019
Harvest Date: 10-1-2019 **Harvest Equipment:** KINCAID
Harvested Width: 5 FT
Harvested Length: 150 FT
% Standard Moisture: 15.5

Site and Design

Treated Plot Width: 15 FT **Site Type:** FIELD field
Treated Plot Length: 150 FT
Treated Plot Area: 2250 FT² **Treatments:** 28 **Tillage Type:** NOTILL no-till
Replications: 1 **Study Design:** RACOB� Randomized Complete Block (RCB)

Soil Description

Description Name: MAURY SILT LOAM
% Sand: 6 **% OM:** 2.6 **Texture:** SIL silt loam
% Silt: 32 **pH:** 6.4 **Soil Name:** Maury
% Clay: 62 **CEC:** 18

Moisture and Weather Conditions

Overall Moisture Conditions: WEWEDR wet-wet-dry
Closest Weather Station: SPINDLETOP **Distance:** 2.5 MI

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Application Description		
	A	B
Application Date	5-17-2019	6-29-2019
Application Method	SPRAY	SPRAY
Application Timing	PRE	V7
Application Placement	BROFOL	BROFOL
Applied By	SARA	SARA
Air Temperature Start, Stop	75 F	88 F
% Relative Humidity Start, Stop	65	70
Wind Velocity+Dir. Start	4 MPH SSE	6 MPH SW
Soil Temperature	64 F	75 F
Soil Moisture	GOOD	WET
Soil Surface Condition	MEDIUM	MEDIUM
% Cloud Cover	30	60
Next Moisture Occurred On	5-20-2019	7-3-2019

Crop Stage At Each Application		
	A	B
Crop 1 Code, BBCH Scale	ZEAMX BCOR	ZEAMX BCOR
Days after Emergence	-5	38
Stage Majority, Percent		V7 95
Height Average		22 IN

Application Equipment		
	A	B
Appl. Equipment	ATV	ATV
Equipment Type	ALTEVE	ALTEVE
Operation Pressure	30 PSI	30 PSI
Nozzle Type	FLAFDG	FLAFDG
Nozzle Size	8002	8002
Nozzle Spacing	30 IN	30 IN
Boom ID	6-TIP	6-TIP
Boom Length	10 FT	10 FT
Boom Height	24 IN	24 IN
Ground Speed	4 MPH	4 MPH
Carrier	WATER	WATER
Application Amount	15 GAL/AC	15 GAL/AC
Mix Overage	0 mL	0 mL
Mix Size	2.5 L	2.5 L
Propellant	COMCO2	COMCO2
Tank Mix (Y/N)	Y yes	Y yes

Context	Date	By	Notes
STATUS	5-21-2019	Sara Carter	Automatically added by ARM: Trial Status updated to 'S' during trial creation.
APPLIC	5-17-2019	Sara Carter	ADDED GLYPHOSATE FOR BURNDOWN

SE Definitions	
	1.
Crop Type, Code	C

University of Kentucky

Corn Variety X Fungicide

Trial ID: 19-44 Location: LEXINGTON, KY
 Protocol ID: CornVar Investigator: Sara Carter
 Project ID: Study Director: Sara Carter
 Sponsor Contact: Glen Murphy/Matt LIVESAY

Trial Year: 2019

				C ZEAMX	C ZEAMX	C ZEAMX
				BCOR	BCOR	BCOR
				Zea mays	Zea mays	Zea mays
				Corn	Corn	Corn
				10-1-2019	10-1-2019	10-1-2019
				YIELD	MOICON	YIELD
				lb/plot	%	BU
				1	1	1
				137 94	137 94	137 94
				137 DP-1	137 DP-1	137 DP-1
				132 DE-1	132 DE-1	132 DE-1
						TY1
						1
Trt No.	Treatment Name	Rate	Appl Code	1	2	3
		Rate Unit				
1	BALANCE FLEXX	5 oz/a	A	126.40	12.50	135.7
	LAUDIS	3 oz/a	B			
	ROUNDUP POWERMAX	32 fl oz/a	B			
	MSO	3 qt/100 gal	B			
	AMS	9 lb/100 gal	B			
	DKC 60-88					
2	BALANCE FLEXX	5 oz/a	A	175.20	12.50	188.2
	LAUDIS	3 oz/a	B			
	ROUNDUP POWERMAX	32 fl oz/a	B			
	MSO	3 qt/100 gal	B			
	AMS	9 lb/100 gal	B			
	DELARO	5 oz/a	B			
	DKC 60-88					
3	BALANCE FLEXX	5 oz/a	A	157.70	12.60	169.2
	LAUDIS	3 oz/a	B			
	ROUNDUP POWERMAX	32 fl oz/a	B			
	MSO	3 qt/100 gal	B			
	AMS	9 lb/100 gal	B			
	DKC 61-40					
4	BALANCE FLEXX	5 oz/a	A	171.40	12.20	184.7
	LAUDIS	3 oz/a	B			
	ROUNDUP POWERMAX	32 fl oz/a	B			
	MSO	3 qt/100 gal	B			
	AMS	9 lb/100 gal	B			
	DELARO	5 oz/a	B			
	DKC 61-40					
5	BALANCE FLEXX	5 oz/a	A	146.30	12.00	158.0
	LAUDIS	3 oz/a	B			
	ROUNDUP POWERMAX	32 fl oz/a	B			
	MSO	3 qt/100 gal	B			
	AMS	9 lb/100 gal	B			
	P1197					
6	BALANCE FLEXX	5 oz/a	A	142.20	11.70	154.1
	LAUDIS	3 oz/a	B			
	ROUNDUP POWERMAX	32 fl oz/a	B			
	MSO	3 qt/100 gal	B			
	AMS	9 lb/100 gal	B			
	DELARO	5 oz/a	B			
	P1197					
7	BALANCE FLEXX	5 oz/a	A	144.80	12.50	155.5
	LAUDIS	3 oz/a	B			
	ROUNDUP POWERMAX	32 fl oz/a	B			
	MSO	3 qt/100 gal	B			
	AMS	9 lb/100 gal	B			
	DKC 62-53					
8	BALANCE FLEXX	5 oz/a	A	149.00	12.60	159.8
	LAUDIS	3 oz/a	B			
	ROUNDUP POWERMAX	32 fl oz/a	B			
	MSO	3 qt/100 gal	B			
	AMS	9 lb/100 gal	B			
	DELARO	5 oz/a	B			
	DKC 6253					

Could not calculate LSD (% mean diff) for columns 1,2,3 because error mean square = 0.

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Crop Type, Code			C ZEAMX	C ZEAMX	C ZEAMX	
BBCH Scale			BCOR	BCOR	BCOR	
Crop Scientific Name			Zea mays	Zea mays	Zea mays	
Crop Name			Corn	Corn	Corn	
Rating Date			10-1-2019	10-1-2019	10-1-2019	
Rating Type			YIELD	MOICON	YIELD	
Rating Unit			lb/plot	%	BU	
Number of Subsamples			1	1	1	
Days After First/Last Applic.			137 94	137 94	137 94	
Plant-Eval Interval			137 DP-1	137 DP-1	137 DP-1	
Days After Emergence			132 DE-1	132 DE-1	132 DE-1	
ARM Action Codes					TY1	
Number of Decimals					1	
Trt No.	Treatment Name	Rate Rate Unit	Appl Code	1	2	3
9	BALANCE FLEXX LAUDIS ROUNDUP POWERMAX MSO AMS DKC 63-57	5 oz/a 3 oz/a 32 fl oz/a 3 qt/100 gal 9 lb/100 gal	A B B B B B	159.30	12.60	170.9
10	BALANCE FLEXX LAUDIS ROUNDUP POWERMAX MSO AMS DELARO DKC 63-57	5 oz/a 3 oz/a 32 fl oz/a 3 qt/100 gal 9 lb/100 gal 5 oz/a	A B B B B B B	176.70	12.50	189.8
11	BALANCE FLEXX LAUDIS ROUNDUP POWERMAX MSO AMS DKC 63-90	5 oz/a 3 oz/a 32 fl oz/a 3 qt/100 gal 9 lb/100 gal	A B B B B B	157.20	12.40	169.0
12	BALANCE FLEXX LAUDIS ROUNDUP POWERMAX MSO AMS DELARO DKC 63-90	5 oz/a 3 oz/a 32 fl oz/a 3 qt/100 gal 9 lb/100 gal 5 oz/a	A B B B B B B	155.10	12.30	167.0
13	BALANCE FLEXX LAUDIS ROUNDUP POWERMAX MSO AMS DKC 64-25	5 oz/a 3 oz/a 32 fl oz/a 3 qt/100 gal 9 lb/100 gal	A B B B B B	145.80	13.30	155.2
14	BALANCE FLEXX LAUDIS ROUNDUP POWERMAX MSO AMS DELARO DKC 64-25	5 oz/a 3 oz/a 32 fl oz/a 3 qt/100 gal 9 lb/100 gal 5 oz/a	A B B B B B B	169.80	13.00	181.3
15	BALANCE FLEXX LAUDIS ROUNDUP POWERMAX MSO AMS DKC 64-35	5 oz/a 3 oz/a 32 fl oz/a 3 qt/100 gal 9 lb/100 gal	A B B B B B	156.20	12.80	167.2
16	BALANCE FLEXX LAUDIS ROUNDUP POWERMAX MSO AMS DELARO DKC 64-35	5 oz/a 3 oz/a 32 fl oz/a 3 qt/100 gal 9 lb/100 gal 5 oz/a	A B B B B B B	159.90	12.60	171.5

Could not calculate LSD (% mean diff) for columns 1,2,3 because error mean square = 0.

University of Kentucky

Crop Type, Code			C ZEAMX	C ZEAMX	C ZEAMX	
BBCH Scale			BCOR	BCOR	BCOR	
Crop Scientific Name			Zea mays	Zea mays	Zea mays	
Crop Name			Corn	Corn	Corn	
Rating Date			10-1-2019	10-1-2019	10-1-2019	
Rating Type			YIELD	MOICON	YIELD	
Rating Unit			lb/plot	%	BU	
Number of Subsamples			1	1	1	
Days After First/Last Applic.			137 94	137 94	137 94	
Plant-Eval Interval			137 DP-1	137 DP-1	137 DP-1	
Days After Emergence			132 DE-1	132 DE-1	132 DE-1	
ARM Action Codes					TY1	
Number of Decimals					1	
Trt No.	Treatment Name	Rate Rate Unit	Appl Code	1	2	3
17	BALANCE FLEXX LAUDIS ROUNDUP POWERMAX MSO AMS DKC 65-95	5 oz/a 3 oz/a 32 fl oz/a 3 qt/100 gal 9 lb/100 gal	A B B B B B	165.00	13.50	175.2
18	BALANCE FLEXX LAUDIS ROUNDUP POWERMAX MSO AMS DELARO DKC 65-95	5 oz/a 3 oz/a 32 fl oz/a 3 qt/100 gal 9 lb/100 gal 5 oz/a	A B B B B B B	171.40	13.00	183.0
19	BALANCE FLEXX LAUDIS ROUNDUP POWERMAX MSO AMS P1464	5 oz/a 3 oz/a 32 fl oz/a 3 qt/100 gal 9 lb/100 gal	A B B B B B	153.50	12.80	164.3
20	BALANCE FLEXX LAUDIS ROUNDUP POWERMAX MSO AMS DELARO P1464	5 oz/a 3 oz/a 32 fl oz/a 3 qt/100 gal 9 lb/100 gal 5 oz/a	A B B B B B B	151.70	12.40	163.1
21	BALANCE FLEXX LAUDIS ROUNDUP POWERMAX MSO AMS DKC 66-18	5 oz/a 3 oz/a 32 fl oz/a 3 qt/100 gal 9 lb/100 gal	A B B B B B	185.10	13.20	197.2
22	BALANCE FLEXX LAUDIS ROUNDUP POWERMAX MSO AMS DELARO DKC 66-18	5 oz/a 3 oz/a 32 fl oz/a 3 qt/100 gal 9 lb/100 gal 5 oz/a	A B B B B B B	200.10	13.00	213.7
23	BALANCE FLEXX LAUDIS ROUNDUP POWERMAX MSO AMS DKC 67-44	5 oz/a 3 oz/a 32 fl oz/a 3 qt/100 gal 9 lb/100 gal	A B B B B B	188.50	13.80	199.4
24	BALANCE FLEXX LAUDIS ROUNDUP POWERMAX MSO AMS DELARO DKC 67-44	5 oz/a 3 oz/a 32 fl oz/a 3 qt/100 gal 9 lb/100 gal 5 oz/a	A B B B B B B	163.90	13.10	174.8

Could not calculate LSD (% mean diff) for columns 1,2,3 because error mean square = 0.

University of Kentucky

Crop Type, Code	C	ZEAMX	C	ZEAMX	C	ZEAMX
BBCH Scale		BCOR		BCOR		BCOR
Crop Scientific Name		Zea mays		Zea mays		Zea mays
Crop Name		Corn		Corn		Corn
Rating Date		10-1-2019		10-1-2019		10-1-2019
Rating Type		YIELD		MOICON		YIELD
Rating Unit		lb/plot		%		BU
Number of Subsamples		1		1		1
Days After First/Last Applic.		137 94		137 94		137 94
Plant-Eval Interval		137 DP-1		137 DP-1		137 DP-1
Days After Emergence		132 DE-1		132 DE-1		132 DE-1
ARM Action Codes						TY1
Number of Decimals						1
Trt Treatment	Rate	Appl				
No. Name	Rate Unit	Code	1	2	3	
25 BALANCE FLEXX	5 oz/a	A	135.80	18.00	136.7	
LAUDIS	3 oz/a	B				
ROUNDUP POWERMAX	32 fl oz/a	B				
MSO	3 qt/100 gal	B				
AMS	9 lb/100 gal	B				
DKC 68-69						
26 BALANCE FLEXX	5 oz/a	A	165.10	18.00	166.2	
LAUDIS	3 oz/a	B				
ROUNDUP POWERMAX	32 fl oz/a	B				
MSO	3 qt/100 gal	B				
AMS	9 lb/100 gal	B				
DELARO	5 oz/a	B				
DKC 68-69						
27 BALANCE FLEXX	5 oz/a	A	148.10	14.80	154.9	
LAUDIS	3 oz/a	B				
ROUNDUP POWERMAX	32 fl oz/a	B				
MSO	3 qt/100 gal	B				
AMS	9 lb/100 gal	B				
DKC 70-27						
28 BALANCE FLEXX	5 oz/a	A	137.20	13.30	146.0	
LAUDIS	3 oz/a	B				
ROUNDUP POWERMAX	32 fl oz/a	B				
MSO	3 qt/100 gal	B				
AMS	9 lb/100 gal	B				
DELARO	5 oz/a	B				
DKC 70-27						
LSD P=.05			.	.	.	
Standard Deviation			.	.	.	
CV			.	.	.	

Crop Type, Code
 C = EPPO species (Bayer) codes
 ZEAMX, BCOR, Zea mays, Corn = US
Rating Type
 YIELD = yield
 MOICON = moisture content
Rating Unit
 lb/plot = pounds per plot
 % = percent
 BU = bushel
Plant-Eval Interval
 137 DP-1 = 1 ZEAMX 5-17-2019
ARM Action Codes
 TY1 = 1.037143*[1]*(100-[2])/84.5

Could not calculate LSD (% mean diff) for columns 1,2,3 because error mean square = 0.

University of Kentucky

Multi-SOA preemergence herbicides in soybean

Trial ID: 19-45_SOY-REC Location: UKREC 201-F Trial Year: 2019
 Protocol ID: 10.soy.00-19 Investigator: Travis Legleiter
 Project ID: Study Director:
 Sponsor Contact: Tim Sickman

General Trial Information

Investigator: Travis Legleiter **Title:** Assistant Extension Professor

Trial Status: E established
ARM Trial Created On: 4-23-2019

Trial Location

City: Princeton
State/Prov.: Kentucky
Postal Code: 42445

Conducted Under GLP: No
Conducted Under GEP: No

Investigator: Travis Legleiter **Title:** Assistant Extension Professor
Organization: University of Kentucky
Address: 1205 Hopkinsville Street **Phone No.:** 859-562-1323
City+State/Prov: Princeton, KY
Postal Code: 42445 **E-mail:** Travis.Legleiter@uky.edu

Crop Description

Crop 1: C GLXMA Glycine max Soybean **BBCH Scale:** BSOY
Entry Date: 8-14-2019
Variety: ag42X6
Planting Date: 4-30-2019 **Planting Rate:** 140000 S/A
Depth: 1 IN
Row Spacing: 15 IN **Planting Method:** PLANTD planted
Planting Equipment: VP vacuum planter
Soil Moisture: VERDRY very dry
Harvested Width: 5 FT
% Standard Moisture: 13.5

Pest Description

Pest 1 Type: W **Code:** SIDSP *Sida spinosa*
Common Name: Prickly sida **Entry Date:** 8-14-2019

Pest 2 Type: W **Code:** AMBEL *Ambrosia artemisiifolia*
Common Name: Common ragweed **Entry Date:** 8-14-2019

Pest 3 Type: W **Code:** IPOLA *Ipomoea lacunosa*
Common Name: pitted morning glory **Entry Date:** 8-14-2019

Pest 4 Type: W **Code:** TAROF *Taraxacum officinale*
Common Name: Blowball **Entry Date:** 8-14-2019

Pest 5 Type: W **Code:** CYPES *Cyperus esculentus*
Common Name: Yellow nutsedge **Entry Date:** 8-14-2019

Pest 6 Type: W **Code:** ELEIN *Eleusine indica*
Common Name: Goosegrass **Entry Date:** 8-14-2019

Pest 7 Type: W **Code:** AMACH *Amaranthus hybridus*
Common Name: Green pigweed **Entry Date:** 8-14-2019

Pest 8 Type: W **Code:** IPOHE *Ipomoea hederacea*
Common Name: ivy-leaf morning glory **Entry Date:** 8-14-2019

Site and Design

Treated Plot Width: 10 FT
Treated Plot Length: 30 FT
Treated Plot Area: 300 FT² **Treatments:** 16
Replications: 4 **Study Design:** FACTOR Factorial

Maintenance

No.	Date	Type	Maintenance Product Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit
1.	4-12-2019	HERB	Roundup PowerMax	4.5	LBAE/GAL	SL	32	fl oz/a

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Soil Description

% Sand: 4 **% OM:** 3 **Texture:** SIL silt loam
% Silt: 77 **Soil Name:** Crider Silt Loam
% Clay: 19

Application Description

	A	B
Application Date	5-3-2019	6-12-2019
Appl. Start Time	10:45 AM	7:37 AM
Appl. Stop Time	11:30 AM	7:54 AM
Interval to Prev. Appl.		40 DAYS
Application Method	BROADC	BROADC
Application Timing	PRE	POST
Application Placement	soil	foliar
Applied By	jpg	JG
Appl. Entry Date	8-14-2019	8-14-2019
Air Temperature Start, Stop	75 F	65.3 F
% Relative Humidity Start, Stop	61.1	68.2
Wind Velocity+Dir. Start	1.3 MPH NE	0.7 MPH SW
Wind Velocity+Dir. Max	2.7 MPH NE	1 MPH SW
Soil Temperature	60 F	61 F
Soil Moisture	VERWET	DRY
% Cloud Cover	100	15

Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale	GLXMA BSOY	GLXMA BSOY
Stage Scale Used		VR
Stage Majority, Percent		V5
Stage Minimum, Percent		V5
Stage Maximum, Percent		V6
Height Average		12 in
Height Minimum, Maximum		7 14.5

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Pest Stage At Each Application		
	A	B
Pest 1 Code, Type, Scale	SIDSP W	SIDSP W
Height Average		2.375 IN
Height Minimum, Maximum		0.75 4.0
Density Average		2 FT2
Density Min, Max		1 3
Pest 2 Code, Type, Scale	AMBEL W	AMBEL W
Height Average		7.75 In
Height Minimum, Maximum		0 15.5
Density Average		0.5 FT2
Density Min, Max		0 1
Pest 3 Code, Type, Scale	IPOLA W	IPOLA W
Height Average		1.416 in
Height Minimum, Maximum		1.5 2.75
Density Average		0.5 FT2
Density Min, Max		0 1
Pest 4 Code, Type, Scale	TAROF W	TAROF W
Height Average		4.125 in
Height Minimum, Maximum		1.75 6.5
Density Average		1 FT2
Density Min, Max		0 2
Pest 5 Code, Type, Scale	CYPES W	CYPES W
Height Average		8.25 IN
Height Minimum, Maximum		6 10.5
Density Average		2.5 FT2
Density Min, Max		0 5
Pest 6 Code, Type, Scale	ELEIN W	ELEIN W
Height Average		6 IN
Height Minimum, Maximum		3.5 8.5
Density Average		0.5 FT2
Density Min, Max		0 1
Pest 7 Code, Type, Scale	AMACH W	AMACH W
Height Average		1 In
Height Minimum, Maximum		0 2
Density Average		1.5 FT2
Density Min, Max		1 2
Pest 8 Code, Type, Scale	IPOHE W	IPOHE W
Height Average		4.875 in
Height Minimum, Maximum		4.25 5.5
Density Average		1 FT2
Density Min, Max		1 1

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Application Equipment				
	A		B	
Equipment Type	SPRBAC		SPRBAC	
Operation Pressure	31	PSI	49	PSI
Nozzle Type	FLAFXR		TTI	
Nozzle Size	02		15	
Nozzle Spacing	20 IN		20 IN	
Boom Length	6.7 FT		6.7 FT	
Boom Height	18 IN		18 IN	
Ground Speed	3.0 MPH		3.0 MPH	
Carrier	WATER		WATER	
Application Amount	15	GAL/AC	15	GAL/AC
Mix Overage	436 mL		436 mL	
Mix Size	2 L		2 L	
Propellant	COMCO2		COMCO2	

Context	Date	By	Notes
STATUS	4-23-2019	Travis Legleiter	Automatically added by ARM: Trial Status updated to 'S' during trial creation.
STATUS	8-14-2019	Zachary Perry	Automatically added by ARM: Trial Status updated to 'E' when Planting Date entered.

SE Definitions	
	1.
Crop Type, Code	C

University of Kentucky

Multi-SOA preemergence herbicides in soybean

Trial ID: 19-45_SOY-REC Location: UKREC 201-F Trial Year: 2019
 Protocol ID: 10.soy.00-19 Investigator: Travis Legleiter
 Project ID: Study Director:
 Sponsor Contact: Tim Sickman

Pest Type		W Weed AMBTR	W Weed AMBEL	W Weed ELEIN			
Pest Code		Ambrosia trifi>	Ambrosia artem>	Eleusine indica			
Pest Scientific Name		Giant ragweed	Common ragweed	Goosegrass			
Pest Name		C -	C -	C -			
Crop Type, Code	C GLXMA						
BBCH Scale	BSOY						
Crop Scientific Name	Glycine max						
Crop Name	Soybean						
Rating Date	5-17-2019	5-17-2019	5-17-2019	5-30-2019			
Part Rated	PLANT C	PLANT P	PLANT P	PLANT P			
Rating Type	PHYGEN	CONTRO	CONTRO	CONTRO			
Rating Unit	%	%	%	%			
Sample Size							
Number of Subsamples	1	1	1	1			
Data Entry Date	9-12-2019	9-12-2019	9-12-2019	9-12-2019			
Days After First/Last Applic.	14 14	14 14	14 14	27 27			
Plant-Eval Interval	17 DP-1	17 DP-1	17 DP-1	30 DP-1			
ARM Action Codes							
Number of Decimals							
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code	1	2			
			3	4			
			5				
1 UNT Untreated		B A	0.0	0.0	0.0	0.0	0.0
2 UNT LPI 6634-5 (Tribal)	3 pt/a	B A	0.0	100.0	98.8	0.0	94.8
3 UNT Broadaxe XC	25 fl oz/a	B A	0.0	100.0	98.8	0.0	96.0
4 UNT Authroity MTZ	14 oz/a	B A	0.0	100.0	100.0	0.0	83.8
5 UNT Fierce MTZ	1.25 pt/a	B A	0.0	98.8	100.0	0.0	96.0
6 UNT Trivence (9 oz/a) Valor sx metribuzin (75 DF) Classic		B A A A A	0.0	98.8	100.0	0.0	95.3
7 UNT Intimidator	2.8 pt/a	B A	0.0	100.0	98.8	0.0	97.3
8 UNT Prefix	2.25 pt/a	B A	0.0	100.0	100.0	0.0	96.0
9 XTENDIMAX WITH VAPORGRIP Roundup PowerMax OnTarget Untreated	22 fl oz/a 32 fl oz/a 0.5 % v/v A	B B B A	0.0	0.0	0.0	0.0	0.0
10 XTENDIMAX WITH VAPORGRIP Roundup PowerMax OnTarget LPI 6634-5 (Tribal)	22 fl oz/a 32 fl oz/a 0.5 % v/v 3 pt/a	B B B A	0.0	100.0	98.8	0.0	91.8
11 XTENDIMAX WITH VAPORGRIP Roundup PowerMax OnTarget Broadaxe XC	22 fl oz/a 32 fl oz/a 0.5 % v/v 25 fl oz/a	B B B A	0.0	100.0	98.8	0.0	92.5
12 XTENDIMAX WITH VAPORGRIP Roundup PowerMax OnTarget Authroity MTZ	22 fl oz/a 32 fl oz/a 0.5 % v/v 14 oz/a	B B B A	0.0	97.5	97.5	0.0	91.8
13 XTENDIMAX WITH VAPORGRIP Roundup PowerMax OnTarget Fierce MTZ	22 fl oz/a 32 fl oz/a 0.5 % v/v 1.25 pt/a	B B B A	0.0	100.0	98.8	0.0	93.8

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 Excluded replicate 3 in column 16
 Could not calculate LSD (% mean diff) for columns 1,4 because error mean square = 0.

University of Kentucky

Pest Type		W Weed AMBTR	W Weed AMBEL		W Weed ELEIN
Pest Code		Ambrosia trifi>	Ambrosia artem>		Eleusine indica
Pest Scientific Name		Giant ragweed	Common ragweed		Goosegrass
Pest Name		C -	C -		C -
Crop Type, Code	C GLXMA			C GLXMA	
BBCH Scale	BSOY			BSOY	
Crop Scientific Name	Glycine max			Glycine max	
Crop Name	Soybean			Soybean	
Rating Date	5-17-2019	5-17-2019	5-17-2019	5-30-2019	5-30-2019
Part Rated	PLANT C	PLANT P	PLANT P	PLANT C	PLANT P
Rating Type	PHYGEN	CONTRO	CONTRO	PHYGEN	CONTRO
Rating Unit	%	%	%	%	%
Sample Size					
Number of Subsamples	1	1	1	1	1
Data Entry Date	9-12-2019	9-12-2019	9-12-2019	9-12-2019	9-12-2019
Days After First/Last Applic.	14 14	14 14	14 14	27 27	27 27
Plant-Eval Interval	17 DP-1	17 DP-1	17 DP-1	30 DP-1	30 DP-1
ARM Action Codes					
Number of Decimals					
Trt Treatment	Rate	Appl			
No. Name	Rate Unit	Code	1	2	3
14 XTENDIMAX WITH VAPORGRIP	22 fl oz/a B		0.0	100.0	100.0
Roundup PowerMax	32 fl oz/a B				
OnTarget	0.5 % v/v B				
Trivence (9 oz/a)	A				
Valor sx	2.2 oz/a A				
metribuzin (75 DF)	5.33 oz/a A				
Classic	1.4 oz/a A				
15 XTENDIMAX WITH VAPORGRIP	22 fl oz/a B		0.0	100.0	100.0
Roundup PowerMax	32 fl oz/a B				
OnTarget	0.5 % v/v B				
Intimidator	2.8 pt/a A				
16 XTENDIMAX WITH VAPORGRIP	22 fl oz/a B		0.0	98.8	100.0
Roundup PowerMax	32 fl oz/a B				
OnTarget	0.5 % v/v B				
Prefix	2.25 pt/a A				
LSD P=.05					
Standard Deviation	0.00	1.70	2.83	0.00	6.90
CV	0.0	1.20	1.99	0.0	4.84
		1.37	2.29	0.0	5.91
Replicate F	0.000	3.909	0.789	0.000	0.633
Replicate Prob(F)	1.0000	0.0145	0.5061	1.0000	0.5978
Treatment F	0.000	3230.673	1162.737	0.000	175.937
Treatment Prob(F)	1.0000	0.0001	0.0001	1.0000	0.0001

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 Excluded replicate 3 in column 16
 Could not calculate LSD (% mean diff) for columns 1,4 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed		
Pest Code	AMBTR	AMBEL	AMARE	ELEIN	AMBTR		
Pest Scientific Name	Ambrosia trifi>	Ambrosia artem>	Amaranthus ret>	Eleusine indica	Ambrosia trifi>		
Pest Name	Giant ragweed	Common ragweed	Redroot pigweed	Goosegrass	Giant ragweed		
Crop Type, Code	C -	C -	C -	C -	C -		
BBCH Scale							
Crop Scientific Name							
Crop Name							
Rating Date	5-30-2019	5-30-2019	5-30-2019	6-14-2019	6-14-2019		
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%		
Sample Size							
Number of Subsamples	1	1	1	1	1		
Data Entry Date	9-12-2019	9-12-2019	9-12-2019	9-12-2019	9-12-2019		
Days After First/Last Applic.	27 27	27 27	27 27	42 2	42 2		
Plant-Eval Interval	30 DP-1	30 DP-1	30 DP-1	45 DP-1	45 DP-1		
ARM Action Codes	AA	AA					
Number of Decimals							
Trt Treatment	Rate	Appl	6	7	8	9	10
No. Name	Rate Unit	Code					
1 UNT Untreated		B A	0.0	0.0	0.0	0.0	0.0
2 UNT LPI 6634-5 (Tribal)	3 pt/a	B A	97.5	88.8	100.0	82.5	47.5
3 UNT Broadaxe XC	25 fl oz/a	B A	95.5	78.8	99.3	78.8	52.5
4 UNT Authroity MTZ	14 oz/a	B A	93.4	95.4	100.0	36.8	41.8
5 UNT Fierce MTZ	1.25 pt/a	B A	95.4	99.7	100.0	81.3	30.0
6 UNT Trivence (9 oz/a) Valor sx metribuzin (75 DF) Classic		B A A A A	98.7	99.8	100.0	77.5	88.0
7 UNT Intimidator	2.8 pt/a	B A	99.7	96.8	98.8	88.0	91.3
8 UNT Prefix	2.25 pt/a	B A	97.6	99.7	100.0	90.0	60.0
9 XTENDIMAX WITH VAPORGRIP Roundup PowerMax OnTarget Untreated	22 fl oz/a 32 fl oz/a 0.5 % v/v	B B B A	0.0	0.0	0.0	0.0	0.0
10 XTENDIMAX WITH VAPORGRIP Roundup PowerMax OnTarget LPI 6634-5 (Tribal)	22 fl oz/a 32 fl oz/a 0.5 % v/v 3 pt/a	B B B A	91.5	94.9	98.8	84.3	67.5
11 XTENDIMAX WITH VAPORGRIP Roundup PowerMax OnTarget Broadaxe XC	22 fl oz/a 32 fl oz/a 0.5 % v/v 25 fl oz/a	B B B A	95.9	83.2	99.3	78.8	86.3
12 XTENDIMAX WITH VAPORGRIP Roundup PowerMax OnTarget Authroity MTZ	22 fl oz/a 32 fl oz/a 0.5 % v/v 14 oz/a	B B B A	85.0	76.6	100.0	65.0	60.0
13 XTENDIMAX WITH VAPORGRIP Roundup PowerMax OnTarget Fierce MTZ	22 fl oz/a 32 fl oz/a 0.5 % v/v 1.25 pt/a	B B B A	87.4	98.1	100.0	82.5	72.5

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 Excluded replicate 3 in column 16
 Could not calculate LSD (% mean diff) for columns 1,4 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	
Pest Code	AMBTR	AMBEL	AMARE	ELEIN	AMBTR	
Pest Scientific Name	Ambrosia trifi>	Ambrosia artem>	Amaranthus ret>	Eleusine indica	Ambrosia trifi>	
Pest Name	Giant ragweed	Common ragweed	Redroot pigweed	Goosegrass	Giant ragweed	
Crop Type, Code	C -	C -	C -	C -	C -	
BBCH Scale						
Crop Scientific Name						
Crop Name						
Rating Date	5-30-2019	5-30-2019	5-30-2019	6-14-2019	6-14-2019	
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	PLANT P	
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO	
Rating Unit	%	%	%	%	%	
Sample Size						
Number of Subsamples	1	1	1	1	1	
Data Entry Date	9-12-2019	9-12-2019	9-12-2019	9-12-2019	9-12-2019	
Days After First/Last Applic.	27 27	27 27	27 27	42 2	42 2	
Plant-Eval Interval	30 DP-1	30 DP-1	30 DP-1	45 DP-1	45 DP-1	
ARM Action Codes	AA	AA				
Number of Decimals						
Trt Treatment						
No. Name	6	7	8	9	10	
Rate						
Rate Unit						
Appl Code						
14 XTENDIMAX WITH VAPORGRIP	22 fl oz/a B	95.9	99.4	100.0	76.3	78.8
Roundup PowerMax	32 fl oz/a B					
OnTarget	0.5 % v/v B					
Trivence (9 oz/a)	A					
Valor sx	2.2 oz/a A					
metribuzin (75 DF)	5.33 oz/a A					
Classic	1.4 oz/a A					
15 XTENDIMAX WITH VAPORGRIP	22 fl oz/a B	99.8	99.2	99.3	76.8	83.8
Roundup PowerMax	32 fl oz/a B					
OnTarget	0.5 % v/v B					
Intimidator	2.8 pt/a A					
16 XTENDIMAX WITH VAPORGRIP	22 fl oz/a B	99.4	99.4	99.3	82.5	83.8
Roundup PowerMax	32 fl oz/a B					
OnTarget	0.5 % v/v B					
Prefix	2.25 pt/a A					
LSD P=.05	6.87 - 12.06	6.70 - 15.59	1.68	27.26	31.99	
Standard Deviation	9.07t	8.93t	1.18	19.14	22.46	
CV	13.17t	13.08t	1.36	28.34	38.09	
Replicate F	0.425	1.692	0.372	1.193	2.731	
Replicate Prob(F)	0.7359	0.1822	0.7733	0.3232	0.0548	
Treatment F	36.722	39.501	3311.092	9.205	6.749	
Treatment Prob(F)	0.0001	0.0001	0.0001	0.0001	0.0001	

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Excluded replicate 3 in column 16

Could not calculate LSD (% mean diff) for columns 1,4 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed	W Weed
Pest Code	AMBEL	AMARE	SORHA	ELEIN
Pest Scientific Name	Ambrosia artem>	Amaranthus ret>	Sorghum halepe>	Eleusine indica
Pest Name	Common ragweed	Redroot pigweed	Johnson grass	Goosegrass
Crop Type, Code	C -	C -	C -	C -
BBCH Scale				
Crop Scientific Name				
Crop Name				
Rating Date	6-14-2019	6-14-2019	6-14-2019	7-5-2019
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%
Sample Size				
Number of Subsamples	1	1	1	1
Data Entry Date	9-12-2019	9-12-2019	9-12-2019	9-12-2019
Days After First/Last Applic.	42 2	42 2	42 2	63 23
Plant-Eval Interval	45 DP-1	45 DP-1	45 DP-1	66 DP-1
ARM Action Codes	ET2			ET6
Number of Decimals				
Trt Treatment	Rate	Appl		
No. Name	Rate Unit	Code	11	12
1 UNT		B	0.0	0.0
Untreated		A		
2 UNT		B	36.3	96.3
LPI 6634-5 (Tribal)	3 pt/a	A		60.0
3 UNT		B	47.5	95.5
Broadaxe XC	25 fl oz/a	A		71.3
4 UNT		B	47.5	94.8
Authroity MTZ	14 oz/a	A		70.0
5 UNT		B	76.8	95.3
Fierce MTZ	1.25 pt/a	A		55.0
6 UNT		B	95.5	96.8
Trivence (9 oz/a)		A		96.8
Valor sx	2.2 oz/a	A		
metribuzin (75 DF)	5.33 oz/a	A		
Classic	1.4 oz/a	A		
7 UNT		B	88.8	93.0
Intimidator	2.8 pt/a	A		95.5
8 UNT		B	83.8	91.3
Prefix	2.25 pt/a	A		80.0
9 XTENDIMAX WITH VAPORGRIP	22 fl oz/a	B	0.0	0.0
Roundup PowerMax	32 fl oz/a	B		
OnTarget	0.5 % v/v	B		
Untreated		A		0.0
10 XTENDIMAX WITH VAPORGRIP	22 fl oz/a	B	76.3	95.0
Roundup PowerMax	32 fl oz/a	B		
OnTarget	0.5 % v/v	B		
LPI 6634-5 (Tribal)	3 pt/a	A		66.3
11 XTENDIMAX WITH VAPORGRIP	22 fl oz/a	B	71.3	96.3
Roundup PowerMax	32 fl oz/a	B		
OnTarget	0.5 % v/v	B		
Broadaxe XC	25 fl oz/a	A		82.5
12 XTENDIMAX WITH VAPORGRIP	22 fl oz/a	B	50.0	95.0
Roundup PowerMax	32 fl oz/a	B		
OnTarget	0.5 % v/v	B		
Authroity MTZ	14 oz/a	A		82.5
13 XTENDIMAX WITH VAPORGRIP	22 fl oz/a	B	75.0	96.0
Roundup PowerMax	32 fl oz/a	B		
OnTarget	0.5 % v/v	B		
Fierce MTZ	1.25 pt/a	A		81.3

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Excluded replicate 3 in column 16

Could not calculate LSD (% mean diff) for columns 1,4 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed	W Weed
Pest Code	AMBEL	AMARE	SORHA	ELEIN
Pest Scientific Name	Ambrosia artem>	Amaranthus ret>	Sorghum halepe>	Eleusine indica
Pest Name	Common ragweed	Redroot pigweed	Johnson grass	Goosegrass
Crop Type, Code	C -	C -	C -	C -
BBCH Scale				
Crop Scientific Name				
Crop Name				
Rating Date	6-14-2019	6-14-2019	6-14-2019	7-5-2019
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%
Sample Size				
Number of Subsamples	1	1	1	1
Data Entry Date	9-12-2019	9-12-2019	9-12-2019	9-12-2019
Days After First/Last Applic.	42 2	42 2	42 2	63 23
Plant-Eval Interval	45 DP-1	45 DP-1	45 DP-1	66 DP-1
ARM Action Codes	ET2			ET6
Number of Decimals				
Trt Treatment				
No. Name	11	12	13	14
Rate				
Unit				
Appl Code				
14 XTENDIMAX WITH VAPORGRIP	22 fl oz/a B	93.0	95.0	96.3
Roundup PowerMax	32 fl oz/a B			100.0
OnTarget	0.5 % v/v B			
Trivence (9 oz/a)	A			
Valor sx	2.2 oz/a A			
metribuzin (75 DF)	5.33 oz/a A			
Classic	1.4 oz/a A			
15 XTENDIMAX WITH VAPORGRIP	22 fl oz/a B	88.0	94.3	94.3
Roundup PowerMax	32 fl oz/a B			100.0
OnTarget	0.5 % v/v B			
Intimidator	2.8 pt/a A			
16 XTENDIMAX WITH VAPORGRIP	22 fl oz/a B	90.5	91.8	85.0
Roundup PowerMax	32 fl oz/a B			100.0
OnTarget	0.5 % v/v B			
Prefix	2.25 pt/a A			
LSD P=.05	24.23	4.97	31.66	13.19
Standard Deviation	16.98	3.49	22.23	9.25
CV	25.89	4.21	31.86	10.94
Replicate F	7.101	10.138	5.589	1.111
Replicate Prob(F)	0.0006	0.0001	0.0024	0.3552
Treatment F	13.379	344.316	7.311	32.850
Treatment Prob(F)	0.0001	0.0001	0.0001	0.0001

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 Excluded replicate 3 in column 16
 Could not calculate LSD (% mean diff) for columns 1,4 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed	W Weed			
Pest Code	AMBTR	AMBEL	AMARE	SORHA			
Pest Scientific Name	Ambrosia trifi>	Ambrosia artem>	Amaranthus ret>	Sorghum halepe>			
Pest Name	Giant ragweed	Common ragweed	Redroot pigweed	Johnson grass			
Crop Type, Code	C -	C -	C -	C -	C GLXMA		
BBCH Scale					BSOY		
Crop Scientific Name					Glycine max		
Crop Name					Soybean		
Rating Date	7-5-2019	7-5-2019	7-5-2019	7-5-2019	10-14-2019		
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	plant c		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	plot length		
Rating Unit	%	%	%	%	ft		
Sample Size							
Number of Subsamples	1	1	1	1	1		
Data Entry Date	9-12-2019	9-12-2019	9-12-2019	9-12-2019	10-21-2019		
Days After First/Last Applic.	63 23	63 23	63 23	63 23	164 124		
Plant-Eval Interval	66 DP-1	66 DP-1	66 DP-1	66 DP-1	167 DP-1		
ARM Action Codes	AS	ER3		AL			
Number of Decimals							
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code	15	16	17	18	19
1 UNT Untreated		B A	0.0	0.0	0.0	0.0	20.013
2 UNT LPI 6634-5 (Tribal)	3 pt/a	B A	21.5	26.7	88.0	18.1	20.050
3 UNT Broadaxe XC	25 fl oz/a	B A	11.0	33.3	87.5	23.8	21.325
4 UNT Authroity MTZ	14 oz/a	B A	7.2	70.0	83.8	1.7	21.425
5 UNT Fierce MTZ	1.25 pt/a	B A	16.1	88.3	88.8	25.9	21.838
6 UNT Trivence (9 oz/a) Valor sx metribuzin (75 DF) Classic		B A A A A	41.0	70.0	95.0	87.1	22.350
7 UNT Intimidator	2.8 pt/a	B A	71.8	78.3	91.3	79.7	24.813
8 UNT Prefix	2.25 pt/a	B A	14.4	88.3	83.8	7.0	24.150
9 XTENDIMAX WITH VAPORGRIP Roundup PowerMax OnTarget Untreated	22 fl oz/a 32 fl oz/a 0.5 % v/v	B B B A	100.0	100.0	100.0	100.0	25.300
10 XTENDIMAX WITH VAPORGRIP Roundup PowerMax OnTarget LPI 6634-5 (Tribal)	22 fl oz/a 32 fl oz/a 0.5 % v/v 3 pt/a	B B B A	100.0	100.0	100.0	100.0	24.925
11 XTENDIMAX WITH VAPORGRIP Roundup PowerMax OnTarget Broadaxe XC	22 fl oz/a 32 fl oz/a 0.5 % v/v 25 fl oz/a	B B B A	100.0	100.0	100.0	100.0	25.088
12 XTENDIMAX WITH VAPORGRIP Roundup PowerMax OnTarget Authroity MTZ	22 fl oz/a 32 fl oz/a 0.5 % v/v 14 oz/a	B B B A	100.0	100.0	100.0	100.0	25.200
13 XTENDIMAX WITH VAPORGRIP Roundup PowerMax OnTarget Fierce MTZ	22 fl oz/a 32 fl oz/a 0.5 % v/v 1.25 pt/a	B B B A	100.0	100.0	100.0	100.0	25.150

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 Excluded replicate 3 in column 16
 Could not calculate LSD (% mean diff) for columns 1,4 because error mean square = 0.

University of Kentucky

Pest Type	W Weed	W Weed	W Weed	W Weed			
Pest Code	AMBTR	AMBEL	AMARE	SORHA			
Pest Scientific Name	Ambrosia trifi>	Ambrosia artem>	Amaranthus ret>	Sorghum halepe>			
Pest Name	Giant ragweed	Common ragweed	Redroot pigweed	Johnson grass			
Crop Type, Code	C -	C -	C -	C -	C GLXMA		
BBCH Scale					BSOY		
Crop Scientific Name					Glycine max		
Crop Name					Soybean		
Rating Date	7-5-2019	7-5-2019	7-5-2019	7-5-2019	10-14-2019		
Part Rated	PLANT P	PLANT P	PLANT P	PLANT P	plant c		
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	plot length		
Rating Unit	%	%	%	%	ft		
Sample Size							
Number of Subsamples	1	1	1	1	1		
Data Entry Date	9-12-2019	9-12-2019	9-12-2019	9-12-2019	10-21-2019		
Days After First/Last Applic.	63 23	63 23	63 23	63 23	164 124		
Plant-Eval Interval	66 DP-1	66 DP-1	66 DP-1	66 DP-1	167 DP-1		
ARM Action Codes	AS	ER3		AL			
Number of Decimals							
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code	15	16	17		
14 XTENDIMAX WITH VAPORGRIP	22 fl oz/a B		100.0	100.0	100.0	100.0	25.275
Roundup PowerMax	32 fl oz/a B						
OnTarget	0.5 % v/v B						
Trivence (9 oz/a)	A						
Valor sx	2.2 oz/a A						
metribuzin (75 DF)	5.33 oz/a A						
Classic	1.4 oz/a A						
15 XTENDIMAX WITH VAPORGRIP	22 fl oz/a B		100.0	100.0	100.0	100.0	25.350
Roundup PowerMax	32 fl oz/a B						
OnTarget	0.5 % v/v B						
Intimidator	2.8 pt/a A						
16 XTENDIMAX WITH VAPORGRIP	22 fl oz/a B		100.0	100.0	100.0	100.0	25.200
Roundup PowerMax	32 fl oz/a B						
OnTarget	0.5 % v/v B						
Prefix	2.25 pt/a A						
LSD P=.05			32.15 - 58.43	27.98	6.36	12.36 - 83.05	3.2067
Standard Deviation			2.48t	16.78	4.46	0.53t	2.2516
CV			34.68t	21.4	5.04	33.28t	9.54
Replicate F			0.537	0.239	3.531	0.656	1.058
Replicate Prob(F)			0.6594	0.7892	0.0221	0.5837	0.3764
Treatment F			7.324	10.599	120.234	5.872	3.265
Treatment Prob(F)			0.0001	0.0001	0.0001	0.0001	0.0011

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 Excluded replicate 3 in column 16
 Could not calculate LSD (% mean diff) for columns 1,4 because error mean square = 0.

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Trt No.	Treatment Name	Rate	Unit	Appl Code	20	21	22	23
1	UNT Untreated			B A	4.046	14.13	54.20	29.0
2	UNT LPI 6634-5 (Tribal)	3 pt/a		B A	4.100	14.28	54.40	30.2
3	UNT Broadaxe XC	25 fl oz/a		B A	4.321	14.08	53.58	29.8
4	UNT Authroity MTZ	14 oz/a		B A	4.024	14.20	55.05	28.2
5	UNT Fierce MTZ	1.25 pt/a		B A	4.369	13.95	51.18	29.2
6	UNT Trivence (9 oz/a) Valor sx metribuzin (75 DF) Classic	2.2 oz/a 5.33 oz/a 1.4 oz/a		B A A A	6.247	14.05	53.55	41.3
7	UNT Intimidator	2.8 pt/a		B A	7.314	13.88	53.80	43.3
8	UNT Prefix	2.25 pt/a		B A	4.665	14.08	54.70	27.9
9	XTENDIMAX WITH VAPORGRIP Roundup PowerMax OnTarget Untreated	22 fl oz/a 32 fl oz/a 0.5 % v/v		B B B A	12.847	14.43	52.00	73.3
10	XTENDIMAX WITH VAPORGRIP Roundup PowerMax OnTarget LPI 6634-5 (Tribal)	22 fl oz/a 32 fl oz/a 0.5 % v/v 3 pt/a		B B B A	11.964	14.20	52.00	69.3
11	XTENDIMAX WITH VAPORGRIP Roundup PowerMax OnTarget Broadaxe XC	22 fl oz/a 32 fl oz/a 0.5 % v/v 25 fl oz/a		B B B A	11.882	14.20	51.80	68.2
12	XTENDIMAX WITH VAPORGRIP Roundup PowerMax OnTarget Authroity MTZ	22 fl oz/a 32 fl oz/a 0.5 % v/v 14 oz/a		B B B A	11.668	14.35	51.90	66.6
13	XTENDIMAX WITH VAPORGRIP Roundup PowerMax OnTarget Fierce MTZ	22 fl oz/a 32 fl oz/a 0.5 % v/v 1.25 pt/a		B B B A	10.704	14.00	52.08	61.6

t=Mean descriptions are reported in transformed data units, and are not de-transformed.
 Excluded replicate 3 in column 16
 Could not calculate LSD (% mean diff) for columns 1,4 because error mean square = 0.

University of Kentucky

Pest Type				
Pest Code				
Pest Scientific Name				
Pest Name				
Crop Type, Code	C GLXMA	C GLXMA	C GLXMA	C GLXMA
BBCH Scale	BSOY	BSOY	BSOY	BSOY
Crop Scientific Name	Glycine max	Glycine max	Glycine max	Glycine max
Crop Name	Soybean	Soybean	Soybean	Soybean
Rating Date	10-14-2019	10-14-2019	10-14-2019	10-14-2019
Part Rated	plant c	plant c	plant c	plant c
Rating Type	weight	moisture	test weight	YIELD
Rating Unit	lb	%	lb	BU
Sample Size	1 PLOT			1 A
Number of Subsamples	1	1	1	1
Data Entry Date	10-21-2019	10-21-2019	10-21-2019	10-21-2019
Days After First/Last Applic.	164 124	164 124	164 124	164 124
Plant-Eval Interval	167 DP-1	167 DP-1	167 DP-1	167 DP-1
ARM Action Codes	AS	ET7	ET5	ET6 TY1
Number of Decimals				1
Trt Treatment				
No. Name	Rate Unit	Rate Unit	Rate Unit	Rate Unit
		20	21	22
14 XTENDIMAX WITH VAPORGRIP	22 fl oz/a B	11.277	14.13	52.28
Roundup PowerMax	32 fl oz/a B			64.4
OnTarget	0.5 % v/v B			
Trivence (9 oz/a)	A			
Valor sx	2.2 oz/a A			
metribuzin (75 DF)	5.33 oz/a A			
Classic	1.4 oz/a A			
15 XTENDIMAX WITH VAPORGRIP	22 fl oz/a B	12.339	14.00	52.20
Roundup PowerMax	32 fl oz/a B			70.4
OnTarget	0.5 % v/v B			
Intimidator	2.8 pt/a A			
16 XTENDIMAX WITH VAPORGRIP	22 fl oz/a B	11.938	14.18	52.58
Roundup PowerMax	32 fl oz/a B			68.4
OnTarget	0.5 % v/v B			
Prefix	2.25 pt/a A			
LSD P=.05		2.8220 - 3.9222	0.434	1.521
Standard Deviation		0.4096t	0.304	1.066
CV		14.08t	2.15	2.01
Replicate F		1.730	0.888	0.977
Replicate Prob(F)		0.1743	0.4553	0.4128
Treatment F		9.957	0.764	4.663
Treatment Prob(F)		0.0001	0.6996	0.0001

t=Mean descriptions are reported in transformed data units, and are not de-transformed.
 Excluded replicate 3 in column 16
 Could not calculate LSD (% mean diff) for columns 1,4 because error mean square = 0.

University of Kentucky

Multi-SOA preemergence herbicides in soybean

Trial ID: 19-45_SOY-REC Location: UKREC 201-F Trial Year: 2019
 Protocol ID: 10.soy.00-19 Investigator: Travis Legleiter
 Project ID: Study Director:
 Sponsor Contact: Tim Sickman

Pest Type

W, Weed = Weed or volunteer crop

Pest Code

AMBTR, Ambrosia trifida, Giant ragweed = US
 AMBEL, Ambrosia artemisiifolia, Common ragweed = US
 ELEIN, Eleusine indica, Goosegrass = US
 AMARE, Amaranthus retroflexus, Redroot pigweed = US
 SORHA, Sorghum halepense, Johnson grass = US

Crop Type Code

C = EPPO species (Bayer) codes

Part Rated

PLANT = plant
 C = Crop is Part Rated
 P = Pest is Part Rated

Rating Type

PHYGEN = phytotoxicity - general / injury
 CONTRO = control / burndown or knockdown
 YIELD = yield

Rating Unit

% = percent
 ft = foot
 lb = pound
 BU = bushel

PLOT = total plot

A = acre

Plant-Eval Interval

17 DP-1 = 1 GLXMA 4-30-2019
 30 DP-1 = 1 GLXMA 4-30-2019
 45 DP-1 = 1 GLXMA 4-30-2019
 66 DP-1 = 1 GLXMA 4-30-2019
 167 DP-1 = 1 GLXMA 4-30-2019

ARM Action Codes

AA = Automatic arcsine square root % transformation
 ET2 = Excluded treatment 2
 ET6 = Excluded treatment 6
 AS = Automatic square root transformation of X+0.5
 ER3 = Excluded replicate 3
 AL = Automatic log transformation of X+1
 ET7 = Excluded treatment 7
 ET5 = Excluded treatment 5
 TY1 = $(726/(5*[19]))*[20]*(100-[21])/86.5$

University of Kentucky

Enlist Soybean Demo - UK Weed Science 2019

Trial ID: 19-46 SOY-REC Location: UKREC 201-C Trial Year: 2019
 Protocol ID: Enlist 2019 Investigator: Travis Legleiter
 Project ID: Study Director:
 Sponsor Contact:

General Trial Information

Investigator: Travis Legleiter **Title:** Assistant Extension Professor

Trial Status: E established
ARM Trial Created On: 4-23-2019

Conducted Under GLP: No
Conducted Under GEP: No

Investigator: Travis Legleiter **Title:** Assistant Extension Professor
Organization: University of Kentucky
Address: 1205 Hopkinsville Street **Phone No.:** 859-562-1323
City+State/Prov: Princeton, KY
Postal Code: 42445 **E-mail:** Travis.Legleiter@uky.edu

Crop Description

Crop 1: C GLXMA Glycine max Soybean **BBCH Scale:** BSOY
Entry Date: 8-14-2019
Variety: pioneer 5045017-02
Planting Date: 4-30-2019 **Planting Rate:** 140000 S/A
Depth: 1 IN
Row Spacing: 15 IN **Planting Method:** PLANTD planted
Planting Equipment: VP vacuum planter
Soil Moisture: DAMP damp
Harvested Width: 5 FT
% Standard Moisture: 15.5

Pest Description

Pest 1 Type: W **Code:** HPPVU Hippuris vulgaris
Common Name: Common mare's-tail **Entry Date:** 8-14-2019
Pest 2 Type: W **Code:** ELEIN Eleusine indica
Common Name: Goosegrass **Entry Date:** 8-14-2019
Pest 3 Type: W **Code:** OXAST Oxalis stricta
Common Name: European wood sorrel **Entry Date:** 8-14-2019
Pest 4 Type: W **Code:** SORHA Sorghum halepense
Common Name: Johnson grass **Entry Date:** 8-14-2019

Site and Design

Treated Plot Width: 10 FT
Treated Plot Length: 30 FT
Treated Plot Area: 300 FT² **Treatments:** 8
Replications: 4 **Study Design:** RACOB� Randomized Complete Block (RCB)

Maintenance

No.	Date	Type	Maintenance Product Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit
1.	4-12-2019	HERB	Roundup PowerMax	4.5	LBAE/GAL	SL	32	fl oz/a

Soil Description

% Sand: 4 **% OM:** 3 **Texture:** SIL silt loam
% Silt: 77 **Soil Name:** Crider Silt Loam
% Clay: 19

University of Kentucky

Application Description			
	A	B	C
Application Date	5-3-2019	5-31-2019	6-12-2019
Appl. Start Time	11:45 AM	7:25 AM	8:51 AM
Appl. Stop Time	12:30 PM	7:35 AM	9:05 AM
Interval to Prev. Appl.		28 DAYS	12 DAYS
Application Method	BROADC	BROADC	BROADC
Application Timing	PRE	EPOST	POST
Application Placement	SOIL	FOLIAR	FOLIAR
Applied By	JG	JG	
Appl. Entry Date	8-14-2019	8-14-2019	8-14-2019
Air Temperature Start, Stop	74.9 F	72 F	79.4 F
% Relative Humidity Start, Stop	62.7	97.9	
Wind Velocity+Dir. Start	2.2 MPH NE	0.7 MPH SW	
Wind Velocity+Dir. Max	6.1 MPH NE	2 MPH SW	
Soil Temperature	62 F	61 F	
Soil Moisture	VERWET	WET	
% Cloud Cover	100	75	

Crop Stage At Each Application			
	A	B	C
Crop 1 Code, BBCH Scale	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Stage Scale Used		VR	VR
Stage Majority, Percent		V2	v5
Stage Minimum, Percent		V2	v5
Stage Maximum, Percent		V3	v6
Height Average		7.625 in	15.25 IN
Height Minimum, Maximum		6.25 9	13.5 17.00

Pest Stage At Each Application			
	A	B	C
Pest 1 Code, Type, Scale	HPPVU W	HPPVU W	HPPVU W
Height Average	3.125 in		
Height Minimum, Maximum	2.25 4		
Density Average	2 FT2		
Density Min, Max	1 3		
Pest 2 Code, Type, Scale	ELEIN W	ELEIN W	ELEIN W
Height Average	0.5 in	2.25 in	
Height Minimum, Maximum	0.25 0.75	1.25 3.25	
Density Average	3.5 FT2	1 FT2	
Density Min, Max	0 7	1 1	
Pest 3 Code, Type, Scale	OXAST W	OXAST W	OXAST W
Height Average		0.625 in	
Height Minimum, Maximum		0.25 1.0	
Density Average		2.5 FT2	
Density Min, Max		1 4	
Pest 4 Code, Type, Scale	SORHA W	SORHA W	SORHA W
Height Average		9.5 in	20.625 IN
Height Minimum, Maximum		5.5 13.5	8.25 33.00
Density Average		13.5 FT2	35 FT2
Density Min, Max		13 14	31 39

University of Kentucky

Application Equipment			
	A	B	C
Equipment Type	SPRBAC	SPRBAC	
Operation Pressure	34 PSI	31 PSI	
Nozzle Type	AIXR1102	FLAFXR	
Nozzle Spacing	20 IN	20 IN	
Boom Length	10 FT	6.7 FT	
Boom Height	18 IN	18 IN	
Ground Speed	3 MPH	3 MPH	
Carrier	WATER	WATER	
Application Amount	15 GAL/AC	15 GAL/AC	
Mix Overage	436 mL	436 mL	
Mix Size	2 L	2 L	
Propellant	comco2	comco2	

Context	Date	By	Notes
STATUS	4-23-2019	Travis Legleiter	Automatically added by ARM: Trial Status updated to 'S' during trial creation.
STATUS	8-14-2019	Zachary Perry	Automatically added by ARM: Trial Status updated to 'E' when Planting Date entered.

SE Definitions	
	1.
Crop Type, Code	C

University of Kentucky

Enlist Soybean Demo - UK Weed Science 2019

Trial ID: 19-46_SOY-REC Location: UKREC 201-C Trial Year: 2019
 Protocol ID: Enlist 2019 Investigator: Travis Legleiter
 Project ID: Study Director:
 Sponsor Contact:

Pest Type		W Weed SORHA	W Weed ERICA	W Weed AMARE			
Pest Code							
Pest Scientific Name		Sorghum halepe>	Erigeron canad>	Amaranthus ret>			
Pest Name		Johnson grass	Canada horsewe>	Redroot pigweed			
Crop Type, Code	C GLXMA	C -	C -	C -	C GLXMA		
BBCH Scale	BSOY				BSOY		
Crop Scientific Name	Glycine max				Glycine max		
Crop Name	Soybean				Soybean		
Rating Date	5-30-2019	5-30-2019	5-30-2019	5-30-2019	6-12-2019		
Part Rated	PLANT C	PLANT P	PLANT P	PLANT P	PLANT C		
Rating Type	PHYGEN	CONTRO	CONTRO	CONTRO	PHYGEN		
Rating Unit	%	%	%	%	%		
Sample Size							
Number of Subsamples	1	1	1	1	1		
Data Entry Date	9-17-2019	9-17-2019	9-17-2019	9-17-2019	9-17-2019		
Days After First/Last Applic.	27 27	27 27	27 27	27 27	40 12		
Plant-Eval Interval	30 DP-1	30 DP-1	30 DP-1	30 DP-1	43 DP-1		
ARM Action Codes		ET3		ET2			
Number of Decimals							
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code	1	2	3	4	5
1 Enlist Duo	4.75 pt/a	A	0.0	0.0	100.0	98.8	0.0
Amsol AMS	2.5 % v/v	A					
Durango DMA	32 fl oz/a	B					
Amsol AMS	2.5 % v/v	B					
2 Enlist Duo	4.75 pt/a	A	0.0	0.0	98.8	96.3	0.0
Amsol AMS	2.5 % v/v	A					
Liberty	32 fl oz/a	B					
Amsol AMS	2.5 % v/v	B					
3 Enlist Duo	4.75 pt/a	A	0.0	25.0	100.0	99.3	0.0
Amsol AMS	2.5 % v/v	A					
Durango DMA	32 fl oz/a	B					
Liberty	32 fl oz/a	B					
Amsol AMS	2.5 % v/v	B					
4 Enlist Duo	4.75 pt/a	A	0.0	81.3	100.0	100.0	0.0
Sonic	6.45 oz/a	A					
Amsol AMS	2.5 % v/v	A					
Durango DMA	32 fl oz/a	C					
Amsol AMS	2.5 % v/v	C					
5 Enlist Duo	4.75 pt/a	A	0.0	77.5	100.0	100.0	0.0
Sonic	6.45 oz/a	A					
Amsol AMS	2.5 % v/v	A					
Liberty	32 fl oz/a	C					
Amsol AMS	2.5 % v/v	C					
6 Enlist Duo	4.75 pt/a	A	0.0	72.5	100.0	100.0	0.0
Sonic	6.45 oz/a	A					
Amsol AMS	2.5 % v/v	A					
Durango DMA	32 fl oz/a	C					
Liberty	32 fl oz/a	C					
Amsol AMS	2.5 % v/v	C					
7 Roundup PowerMax	28 fl oz/a	A	0.0	72.5	100.0	100.0	0.0
Sonic	6.45 oz/a	A					
Amsol AMS	2.5 % v/v	A					
Enlist Duo	4.75 pt/a	C					
Amsol AMS	2.5 % v/v	C					
8 Untreated			0.0	0.0	0.0	0.0	0.0
LSD P=.05			.	10.94	1.30	1.51	.
Standard Deviation			0.00	7.37	0.88	1.02	0.00
CV			0.0	16.98	1.01	1.19	0.0
Replicate F			0.000	2.254	1.000	2.207	0.000
Replicate Prob(F)			1.0000	0.1169	0.4123	0.1225	1.0000
Treatment F			0.000	122.112	6378.143	5481.460	0.000
Treatment Prob(F)			1.0000	0.0001	0.0001	0.0001	1.0000

t=Mean descriptions are reported in transformed data units, and are not de-transformed.
 Excluded replicate 1 in column 13; 1 in 16
 Could not calculate LSD (% mean diff) for columns 1,5,8,9,11,12 because error mean square = 0.

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Pest Type	W Weed	W Weed	W Weed		W Weed		
Pest Code	SORHA	ERICA	AMARE		SORHA		
Pest Scientific Name	Sorghum halepe>	Erigeron canad>	Amaranthus ret>		Sorghum halepe>		
Pest Name	Johnson grass	Canada horsewe>	Redroot pigweed		Johnson grass		
Crop Type, Code	C -	C -	C -	C GLXMA	C -		
BBCH Scale				BSOY			
Crop Scientific Name				Glycine max			
Crop Name				Soybean			
Rating Date	6-12-2019	6-12-2019	6-12-2019	7-5-2019	7-5-2019		
Part Rated	PLANT P	PLANT P	PLANT P	PLANT C	PLANT P		
Rating Type	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO		
Rating Unit	%	%	%	%	%		
Sample Size							
Number of Subsamples	1	1	1	1	1		
Data Entry Date	9-17-2019	9-17-2019	9-17-2019	9-17-2019	9-17-2019		
Days After First/Last Applic.	40 12	40 12	40 12	63 23	63 23		
Plant-Eval Interval	43 DP-1	43 DP-1	43 DP-1	66 DP-1	66 DP-1		
ARM Action Codes	ET7				AL		
Number of Decimals							
Trt Treatment	Rate	Appl					
No. Name	Rate Unit	Code	6	7	8	9	10
1 Enlist Duo	4.75 pt/a	A	95.5	98.8	100.0	0.0	44.1
Amsol AMS	2.5 % v/v	A					
Durango DMA	32 fl oz/a	B					
Amsol AMS	2.5 % v/v	B					
2 Enlist Duo	4.75 pt/a	A	93.8	100.0	100.0	0.0	39.9
Amsol AMS	2.5 % v/v	A					
Liberty	32 fl oz/a	B					
Amsol AMS	2.5 % v/v	B					
3 Enlist Duo	4.75 pt/a	A	96.0	100.0	100.0	0.0	54.4
Amsol AMS	2.5 % v/v	A					
Durango DMA	32 fl oz/a	B					
Liberty	32 fl oz/a	B					
Amsol AMS	2.5 % v/v	B					
4 Enlist Duo	4.75 pt/a	A	47.5	100.0	100.0	0.0	100.0
Sonic	6.45 oz/a	A					
Amsol AMS	2.5 % v/v	A					
Durango DMA	32 fl oz/a	C					
Amsol AMS	2.5 % v/v	C					
5 Enlist Duo	4.75 pt/a	A	50.0	100.0	100.0	0.0	100.0
Sonic	6.45 oz/a	A					
Amsol AMS	2.5 % v/v	A					
Liberty	32 fl oz/a	C					
Amsol AMS	2.5 % v/v	C					
6 Enlist Duo	4.75 pt/a	A	52.5	100.0	100.0	0.0	100.0
Sonic	6.45 oz/a	A					
Amsol AMS	2.5 % v/v	A					
Durango DMA	32 fl oz/a	C					
Liberty	32 fl oz/a	C					
Amsol AMS	2.5 % v/v	C					
7 Roundup PowerMax	28 fl oz/a	A	33.8	100.0	100.0	0.0	100.0
Sonic	6.45 oz/a	A					
Amsol AMS	2.5 % v/v	A					
Enlist Duo	4.75 pt/a	C					
Amsol AMS	2.5 % v/v	C					
8 Untreated			0.0	0.0	0.0	0.0	0.0
LSD P=.05			7.97	1.30	.	.	28.33 - 41.36
Standard Deviation			5.36	0.88	0.00	0.00	0.16t
CV			8.63	1.01	0.0	0.0	9.56t
Replicate F			0.670	1.000	0.000	0.000	2.127
Replicate Prob(F)			0.5815	0.4123	1.0000	1.0000	0.1272
Treatment F			175.497	6378.143	0.000	0.000	76.275
Treatment Prob(F)			0.0001	0.0001	1.0000	1.0000	0.0001

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 Excluded replicate 1 in column 13; 1 in 16
 Could not calculate LSD (% mean diff) for columns 1,5,8,9,11,12 because error mean square = 0.

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Trt No.	Treatment Name	Rate	Appl Unit	Code	11	12	13	14	15	16
	1 Enlist Duo	4.75 pt/a	A		100.0	100.0	25.50	10.564	16.05	57.4
	Amsol AMS	2.5 % v/v	A							
	Durango DMA	32 fl oz/a	B							
	Amsol AMS	2.5 % v/v	B							
	2 Enlist Duo	4.75 pt/a	A		100.0	100.0	25.67	7.865	16.48	43.0
	Amsol AMS	2.5 % v/v	A							
	Liberty	32 fl oz/a	B							
	Amsol AMS	2.5 % v/v	B							
	3 Enlist Duo	4.75 pt/a	A		100.0	100.0	25.53	9.443	16.33	52.3
	Amsol AMS	2.5 % v/v	A							
	Durango DMA	32 fl oz/a	B							
	Liberty	32 fl oz/a	B							
	Amsol AMS	2.5 % v/v	B							
	4 Enlist Duo	4.75 pt/a	A		100.0	100.0	25.93	13.335	15.93	76.1
	Sonic	6.45 oz/a	A							
	Amsol AMS	2.5 % v/v	A							
	Durango DMA	32 fl oz/a	C							
	Amsol AMS	2.5 % v/v	C							
	5 Enlist Duo	4.75 pt/a	A		100.0	100.0	25.80	12.583	15.95	74.0
	Sonic	6.45 oz/a	A							
	Amsol AMS	2.5 % v/v	A							
	Liberty	32 fl oz/a	C							
	Amsol AMS	2.5 % v/v	C							
	6 Enlist Duo	4.75 pt/a	A		100.0	100.0	25.70	13.009	15.85	73.6
	Sonic	6.45 oz/a	A							
	Amsol AMS	2.5 % v/v	A							
	Durango DMA	32 fl oz/a	C							
	Liberty	32 fl oz/a	C							
	Amsol AMS	2.5 % v/v	C							
	7 Roundup PowerMax	28 fl oz/a	A		100.0	100.0	25.83	13.131	15.83	75.2
	Sonic	6.45 oz/a	A							
	Amsol AMS	2.5 % v/v	A							
	Enlist Duo	4.75 pt/a	C							
	Amsol AMS	2.5 % v/v	C							
	8 Untreated				0.0	0.0	26.03	2.026	16.38	10.8
	LSD P=.05				.	.	0.776	1.5627 - 3.0756	0.584	20.90
	Standard Deviation				0.00	0.00	0.443	1.8611t	0.397	11.93
	CV				0.0	0.0	1.72	10.2t	2.47	20.65
	Replicate F				0.000	0.000	1.651	0.940	1.078	0.918
	Replicate Prob(F)				1.0000	1.0000	0.2272	0.4391	0.3797	0.4222
	Treatment F				0.000	0.000	0.529	23.027	1.666	10.848
	Treatment Prob(F)				1.0000	1.0000	0.7985	0.0001	0.1719	0.0001

t=Mean descriptions are reported in transformed data units, and are not de-transformed.
 Excluded replicate 1 in column 13; 1 in 16
 Could not calculate LSD (% mean diff) for columns 1,5,8,9,11,12 because error mean square = 0.

University of Kentucky

Enlist Soybean Demo - UK Weed Science 2019

Trial ID: 19-46_SOY-REC	Location: UKREC 201-C	Trial Year: 2019
Protocol ID: Enlist 2019	Investigator: Travis Legleiter	
Project ID:	Study Director:	
	Sponsor Contact:	

Pest Type

W, Weed = Weed or volunteer crop

Pest Code

SORHA, Sorghum halepense, Johnson grass = US

ERICA, Erigeron canadensis, Canada horseweed = US

AMARE, Amaranthus retroflexus, Redroot pigweed = US

Crop Type, Code

C = EPPO species (Bayer) codes

GLXMA, BSOY, Glycine max, Soybean = US

Part Rated

PLANT = plant

C = Crop is Part Rated

P = Pest is Part Rated

Rating Type

PHYGEN = phytotoxicity - general / injury

CONTRO = control / burndown or knockdown

YIELD = yield

Rating Unit

% = percent

ft = foot

lb = pound

BU = bushel

PLOT = total plot

A = acre

Plant-Eval Interval

30 DP-1 = 1 GLXMA 4-30-2019

43 DP-1 = 1 GLXMA 4-30-2019

66 DP-1 = 1 GLXMA 4-30-2019

188 DP-1 = 1 GLXMA 4-30-2019

ARM Action Codes

ET3 = Excluded treatment 3

ET2 = Excluded treatment 2

ET7 = Excluded treatment 7

AL = Automatic log transformation of X+1

ER1 = Excluded replicate 1

AA = Automatic arcsine square root % transformation

TY1 = $(726/(5*[13]))*[14]*(100-[15])/84.5$

University of Kentucky

Enlist Soybean Demo - UK Weed Science 2019

Trial ID: Enlist 2019 Location: Trial Year: 2019
 Protocol ID: Enlist 2019 Investigator: Sara Carter
 Project ID: Study Director:
 Sponsor Contact:

General Trial Information

Study Director: TRAVIS LEGLEITER **Title:** EXTENSION SPECIALIST
Investigator: Sara Carter **Title:** Research Specialist

Discipline: H herbicide
Trial Status: F one-year/final

ARM Trial Created On: 5-17-2019
Initiation Date: 5-16-2019 **Planned Completion Date:** 8-1-2019

Trial Location

City: Lexington **Country:** USA United States
State/Prov.: Kentucky
Postal Code: 40511

Conducted Under GLP: No
Conducted Under GEP: No

Contacts

Study Director: TRAVIS LEGLEITER **Title:** EXTENSION SPECIALIST
Organization: UNIVERSITY OF KENTUCKY
Address: 348 UNIVERSITY DRIVE, PO BOX 469 **Phone No.:** 859-562-1323
City+State/Prov.: PRINCETON, KY
Postal Code: 42445 **E-mail:** TRAVIS.LEGLEITER@UKY.EDU
Country: USA United States

Investigator: Sara Carter **Title:** Research Specialist
Organization: UNIVERSITY OF KENTUCKY
Address: 105 PLANT SCIENCE BUILDING **Phone No.:** 859-259-1914
City+State/Prov.: LEXINGTON, KY **Mobile No.:** 859-559-6710
Postal Code: 40546-0312 **E-mail:** sara.carter@uky.edu

Crop Description

Crop 1: C GLXMA Glycine max Soybean
Variety: MY419E
Attributes: ENLIST
Planting Date: 5-16-2019 **Planting Rate:** 120000 S/A
Depth: 1.5 IN
Rows per Plot: 6 **Planting Method:** PLANTD planted
Row Spacing: 30 IN **Planting Equipment:** FE field equipment
Seed Bed: MEDIUM medium
Soil Temperature: 60 F **Soil Moisture:** WET wet
Emergence Date: 5-21-2019

Pest Description

Pest 1 Type: W **Code:** SETFA Setaria faberi
Common Name: Giant foxtail
Crop: 1 GLXMA

Pest 2 Type: W **Code:** AMBTR Ambrosia trifida
Common Name: Giant ragweed
Crop: 1 GLXMA

Pest 3 Type: W **Code:** IPOSS Ipomoea sp.
Common Name: Morning glory
Crop: 1 GLXMA

Site and Design

Treated Plot Width: 10 FT **Site Type:** FIELD field
Treated Plot Length: 30 FT
Treated Plot Area: 300 FT2 **Treatments:** 8 **Tillage Type:** NOTILL no-till
Replications: 4 **Study Design:** RACOB L Randomized Complete Block (RCB)

Soil Description

Description Name: MAURY SILT LOAM
% Sand: 6 **% OM:** 2.6 **Texture:** SIL silt loam
% Silt: 32 **pH:** 6.4 **Soil Name:** Maury
% Clay: 62 **CEC:** 18

Moisture and Weather Conditions

Overall Moisture Conditions: WEWEDR wet-wet-dry
Closest Weather Station: SPINDLETOP **Distance:** 1 MI

University of Kentucky

Application Description

	A	B	C
Application Date	5-17-2019	6-26-2019	7-8-2019
Appl. Start Time	6:00 PM		
Application Method	SPRAY	SPRAY	SPRAY
Application Timing	PRE	EP	POST
Application Placement	BROFOL	BROFOL	BROFOL
Applied By	SARA	SARA	SARA
Air Temperature Start, Stop	86 F	91 F	88 F
% Relative Humidity Start, Stop	57	64	72
Wind Velocity+Dir. Start	2 MPH S	3 MPH NW	3 MPH SW
Soil Temperature	63 F	72 F	77 F
Soil Moisture	WET	WET	GOOD
Soil Surface Condition	MEDIUM	MEDIUM	MEDIUM
% Cloud Cover	40	5	10
Next Moisture Occurred On	5-20-2019	7-3-2019	7-14-2019

Crop Stage At Each Application

	A	B	C
Crop 1 Code, BBCH Scale	GLXMA BSOY	GLXMA BSOY	GLXMA BSOY
Days after Emergence	-4	36	48
Average Diameter		6 IN	8 IN

Pest Stage At Each Application

	A	B	C
Pest 1 Code, Type, Scale	SETFA W	SETFA W	SETFA W
Height Average	1 IN	3 IN	6 IN
Pest 2 Code, Type, Scale	AMBTR W	AMBTR W	AMBTR W
Height Average	2 IN	6 IN	8 IN
Pest 3 Code, Type, Scale	IPOSS W	IPOSS W	IPOSS W
Height Average	1 IN	2 IN	4 IN

Application Equipment

	A	B	C
Appl. Equipment	BELTSPRAYER	BELTSPRAYER	BELTSPRAYER
Equipment Type	SPRBEL	SPRBEL	SPRBEL
Operation Pressure	40 PSI	40 PSI	40 PSI
Nozzle Type	TEEJAI	TEEJAI	TEEJAI
Nozzle Size	11002	11002	11002
Nozzle Spacing	30 IN	30 IN	30 IN
Boom ID	6-TIP	6-TIP	6-TIP
Boom Length	10 FT	10 FT	10 FT
Boom Height	24 IN	24 IN	24 IN
Ground Speed	4 MPH	4 MPH	4 MPH
Carrier	WATER	WATER	WATER
Application Amount	15 GAL/AC	15 GAL/AC	15 GAL/AC
Mix Size	2.5 L	2.5 L	2.5 L
Propellant	COMCO2	COMCO2	COMCO2
Tank Mix (Y/N)	Y yes	Y yes	Y yes

Context	Date	By	Notes
STATUS	5-17-2019	Sara Carter	Automatically added by ARM: Trial Status updated to 'S' during trial creation.

SE Definitions

	1.
Crop Type, Code	C

University of Kentucky

Enlist Soybean Demo - UK Weed Science 2019

Trial ID: Enlist 2019	Location: Trial Year: 2019
Protocol ID: Enlist 2019	Investigator: Sara Carter
Project ID:	Study Director:
	Sponsor Contact:

Pest Type		W Weed	W Weed	W Weed	W Weed	W Weed			
Pest Code		SETFA	AMBTR	IPOSS		SETFA			
Pest Scientific Name		Setaria faberi	Ambrosia trifi>	Ipomoea sp.		Setaria faberi			
Pest Name		Giant foxtail	Giant ragweed	Morning glory		Giant foxtail			
Crop Type, Code	C GLXMA	C -	C -	C -	C GLXMA	C -			
BBCH Scale	BSOY				BSOY				
Crop Scientific Name	Glycine max				Glycine max				
Crop Name	Soybean				Soybean				
Rating Date	6-7-2019	6-7-2019	6-7-2019	6-7-2019	6-26-2019	6-26-2019			
Rating Type	PHYGEN	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO			
Rating Unit	%	%	%	%	%	%			
Number of Subsamples	1	1	1	1	1	1			
Days After First/Last Applic.	21 21	21 21	21 21	21 21	40 40	40 40			
Plant-Eval Interval	22 DP-1	22 DP-1	22 DP-1	22 DP-1	41 DP-1	41 DP-1			
Days After Emergence	17 DE-1	17 DE-1	17 DE-1	17 DE-1	36 DE-1	36 DE-1			
Trt No.	Treatment Name	Rate	Appl Code	1	2	3	4	5	6
1	Enlist Duo	4.75 pt/a	A	0.0	99.0	99.0	99.0	0.0	86.3
	Amsol AMS	2.5 % v/v	A						
	Durango DMA	32 fl oz/a	B						
	Amsol AMS	2.5 % v/v	B						
2	Enlist Duo	4.75 pt/a	A	0.0	99.0	99.0	99.0	0.0	92.0
	Amsol AMS	2.5 % v/v	A						
	Liberty	32 fl oz/a	B						
	Amsol AMS	2.5 % v/v	B						
3	Enlist Duo	4.75 pt/a	A	0.0	99.0	99.0	99.0	0.0	89.3
	Amsol AMS	2.5 % v/v	A						
	Durango DMA	32 fl oz/a	B						
	Liberty	32 fl oz/a	B						
	Amsol AMS	2.5 % v/v	B						
4	Enlist Duo	4.75 pt/a	A	0.0	99.0	99.0	99.0	0.0	93.0
	Sonic	6.45 oz/a	A						
	Amsol AMS	2.5 % v/v	A						
	Durango DMA	32 fl oz/a	C						
	Amsol AMS	2.5 % v/v	C						
5	Enlist Duo	4.75 pt/a	A	0.0	99.0	99.0	99.0	0.0	93.0
	Sonic	6.45 oz/a	A						
	Amsol AMS	2.5 % v/v	A						
	Liberty	32 fl oz/a	C						
	Amsol AMS	2.5 % v/v	C						
6	Enlist Duo	4.75 pt/a	A	0.0	99.0	99.0	99.0	0.0	93.0
	Sonic	6.45 oz/a	A						
	Amsol AMS	2.5 % v/v	A						
	Durango DMA	32 fl oz/a	C						
	Liberty	32 fl oz/a	C						
	Amsol AMS	2.5 % v/v	C						
7	Roundup PowerMax	28 fl oz/a	A	0.0	99.0	99.0	99.0	0.0	92.3
	Sonic	6.45 oz/a	A						
	Amsol AMS	2.5 % v/v	A						
	Enlist Duo	4.75 pt/a	C						
	Amsol AMS	2.5 % v/v	C						
8	Untreated			0.0	0.0	0.0	0.0	0.0	0.0
LSD P=.05				0.00	0.00	0.00	0.00	0.00	4.51
Standard Deviation				0.0	0.0	0.0	0.0	0.0	3.07
CV									3.84
Replicate F				0.000	0.000	0.000	0.000	0.000	0.455
Replicate Prob(F)				1.0000	1.0000	1.0000	1.0000	1.0000	0.7162
Treatment F				0.000	0.000	0.000	0.000	0.000	445.305
Treatment Prob(F)				1.0000	1.0000	1.0000	1.0000	1.0000	0.0001

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,9,13,14,15,16 because error mean square = 0.

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Pest Type	W Weed	W Weed		W Weed	W Weed	W Weed		
Pest Code	AMBTR	IPOSS		SETFA	AMBTR	IPOSS		
Pest Scientific Name	Ambrosia trifi>	Ipomoea sp.		Setaria faberi	Ambrosia trifi>	Ipomoea sp.		
Pest Name	Giant ragweed	Morning glory		Giant foxtail	Giant ragweed	Morning glory		
Crop Type, Code	C -	C -	C GLXMA	C -	C -	C -		
BBCH Scale			BSOY					
Crop Scientific Name			Glycine max					
Crop Name			Soybean					
Rating Date	6-26-2019	6-26-2019	7-8-2019	7-8-2019	7-8-2019	7-8-2019		
Rating Type	CONTRO	CONTRO	PHYGEN	CONTRO	CONTRO	CONTRO		
Rating Unit	%	%	%	%	%	%		
Number of Subsamples	1	1	1	1	1	1		
Days After First/Last Applic.	40 40	40 40	52 12	52 12	52 12	52 12		
Plant-Eval Interval	41 DP-1	41 DP-1	53 DP-1	53 DP-1	53 DP-1	53 DP-1		
Days After Emergence	36 DE-1	36 DE-1	48 DE-1	48 DE-1	48 DE-1	48 DE-1		
Trt Treatment	Rate	Appl						
No. Name	Rate Unit	Code	7	8	9	10	11	12
1 Enlist Duo	4.75 pt/a	A	87.5	86.5	0.0	99.0	99.0	99.0
Amsol AMS	2.5 % v/v	A						
Durango DMA	32 fl oz/a	B						
Amsol AMS	2.5 % v/v	B						
2 Enlist Duo	4.75 pt/a	A	86.5	84.3	0.0	99.0	99.0	99.0
Amsol AMS	2.5 % v/v	A						
Liberty	32 fl oz/a	B						
Amsol AMS	2.5 % v/v	B						
3 Enlist Duo	4.75 pt/a	A	86.5	84.3	0.0	99.0	99.0	99.0
Amsol AMS	2.5 % v/v	A						
Durango DMA	32 fl oz/a	B						
Liberty	32 fl oz/a	B						
Amsol AMS	2.5 % v/v	B						
4 Enlist Duo	4.75 pt/a	A	85.8	85.0	0.0	88.3	81.3	81.3
Sonic	6.45 oz/a	A						
Amsol AMS	2.5 % v/v	A						
Durango DMA	32 fl oz/a	C						
Amsol AMS	2.5 % v/v	C						
5 Enlist Duo	4.75 pt/a	A	92.5	84.3	0.0	87.3	87.0	81.3
Sonic	6.45 oz/a	A						
Amsol AMS	2.5 % v/v	A						
Liberty	32 fl oz/a	C						
Amsol AMS	2.5 % v/v	C						
6 Enlist Duo	4.75 pt/a	A	91.8	86.5	0.0	86.5	87.0	82.5
Sonic	6.45 oz/a	A						
Amsol AMS	2.5 % v/v	A						
Durango DMA	32 fl oz/a	C						
Liberty	32 fl oz/a	C						
Amsol AMS	2.5 % v/v	C						
7 Roundup PowerMax	28 fl oz/a	A	92.5	84.3	0.0	87.8	87.8	80.0
Sonic	6.45 oz/a	A						
Amsol AMS	2.5 % v/v	A						
Enlist Duo	4.75 pt/a	C						
Amsol AMS	2.5 % v/v	C						
8 Untreated			0.0	0.0	0.0	0.0	0.0	0.0
LSD P=.05			3.16	3.12	.	2.14	2.62	2.54
Standard Deviation			2.15	2.12	0.00	1.45	1.78	1.73
CV			2.76	2.85	0.0	1.8	2.22	2.22
Replicate F			0.271	0.333	0.000	0.133	0.105	0.000
Replicate Prob(F)			0.8454	0.8013	1.0000	0.9393	0.9561	1.0000
Treatment F			866.760	803.635	0.000	2080.854	1379.120	1430.760
Treatment Prob(F)			0.0001	0.0001	1.0000	0.0001	0.0001	0.0001

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,9,13,14,15,16 because error mean square = 0.

University of Kentucky

Pest Type		W Weed	W Weed	W Weed
Pest Code		SETFA	AMBTR	IPOSS
Pest Scientific Name		Setaria faberi	Ambrosia trifid	Ipomoea sp.
Pest Name		Giant foxtail	Giant ragweed	Morning glory
Crop Type, Code	C GLXMA	C -	C -	C -
BBCH Scale	BSOY			
Crop Scientific Name	Glycine max			
Crop Name	Soybean			
Rating Date	7-22-2019	7-22-2019	7-22-2019	7-22-2019
Rating Type	PHYGEN	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%
Number of Subsamples	1	1	1	1
Days After First/Last Applic.	66 14	66 14	66 14	66 14
Plant-Eval Interval	67 DP-1	67 DP-1	67 DP-1	67 DP-1
Days After Emergence	62 DE-1	62 DE-1	62 DE-1	62 DE-1
Trt Treatment	Rate	Appl		
No. Name	Rate Unit	Code	13	14
1 Enlist Duo	4.75 pt/a	A	0.0	99.0
Amsol AMS	2.5 % v/v	A		
Durango DMA	32 fl oz/a	B		
Amsol AMS	2.5 % v/v	B		
2 Enlist Duo	4.75 pt/a	A	0.0	99.0
Amsol AMS	2.5 % v/v	A		
Liberty	32 fl oz/a	B		
Amsol AMS	2.5 % v/v	B		
3 Enlist Duo	4.75 pt/a	A	0.0	99.0
Amsol AMS	2.5 % v/v	A		
Durango DMA	32 fl oz/a	B		
Liberty	32 fl oz/a	B		
Amsol AMS	2.5 % v/v	B		
4 Enlist Duo	4.75 pt/a	A	0.0	99.0
Sonic	6.45 oz/a	A		
Amsol AMS	2.5 % v/v	A		
Durango DMA	32 fl oz/a	C		
Amsol AMS	2.5 % v/v	C		
5 Enlist Duo	4.75 pt/a	A	0.0	99.0
Sonic	6.45 oz/a	A		
Amsol AMS	2.5 % v/v	A		
Liberty	32 fl oz/a	C		
Amsol AMS	2.5 % v/v	C		
6 Enlist Duo	4.75 pt/a	A	0.0	99.0
Sonic	6.45 oz/a	A		
Amsol AMS	2.5 % v/v	A		
Durango DMA	32 fl oz/a	C		
Liberty	32 fl oz/a	C		
Amsol AMS	2.5 % v/v	C		
7 Roundup PowerMax	28 fl oz/a	A	0.0	99.0
Sonic	6.45 oz/a	A		
Amsol AMS	2.5 % v/v	A		
Enlist Duo	4.75 pt/a	C		
Amsol AMS	2.5 % v/v	C		
8 Untreated			0.0	0.0
LSD P=.05			0.0	0.0
Standard Deviation			0.0	0.0
CV			0.0	0.0
Replicate F			0.000	0.000
Replicate Prob(F)			1.0000	1.0000
Treatment F			0.000	0.000
Treatment Prob(F)			1.0000	1.0000

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,9,13,14,15,16 because error mean square = 0.

University of Kentucky

Enlist Soybean Demo - UK Weed Science 2019

Trial ID: Enlist 2019 Location: Trial Year: 2019
Protocol ID: Enlist 2019 Investigator: Sara Carter
Project ID: Study Director:
Sponsor Contact:

Pest Type

W, Weed = Weed or volunteer crop

Pest Code

SETFA, Setaria faberi, Giant foxtail = US

AMBTR, Ambrosia trifida, Giant ragweed = US

IPOSS, Ipomoea sp., Morning glory = US

Crop Type, Code

C = EPPO species (Bayer) codes

GLXMA, BSOY, Glycine max, Soybean = US

Rating Type

PHYGEN = phytotoxicity - general / injury

CONTRO = control / burndown or knockdown

Rating Unit

% = percent

Plant-Eval Interval

22 DP-1 = 1 GLXMA 5-16-2019

41 DP-1 = 1 GLXMA 5-16-2019

53 DP-1 = 1 GLXMA 5-16-2019

67 DP-1 = 1 GLXMA 5-16-2019

University of Kentucky

LLGT27 Demo - UK Weed Science 2019		
Trial ID: LLGT27 2019 Demo	Location: Lexington	Trial Year: 2019
Protocol ID: LLGT27 2019 Demo	Investigator: Sara Carter	
Project ID:	Study Director:	
	Sponsor Contact:	

General Trial Information	
Study Director: Travis Legleiter	Title: Extension Specialist
Investigator: Sara Carter	Title: Research Specialist
Discipline: H herbicide	
Trial Status: F one-year/final	
ARM Trial Created On: 5-17-2019	
Initiation Date: 5-16-2019	Planned Completion Date: 8-1-2019
Trial Location	
City: Lexington	Country: USA United States
State/Prov.: Kentucky	
Postal Code: 40511	
Conducted Under GLP: No	
Conducted Under GEP: No	

Contacts	
Study Director: Travis Legleiter	Title: Extension Specialist
Organization: University of Kentucky	
Address: 348 University Drive, PO Box 469	Phone No.: 859-562-1323
City+State/Prov: Princeton, KY	
Postal Code: 42445	E-mail: travis.legleiter@uky.edu
Country: USA	United States
Investigator: Sara Carter	Title: Research Specialist
Organization: UNIVERSITY OF KENTUCKY	
Address: 105 PLANT SCIENCE BUILDING	Phone No.: 859-259-1914
City+State/Prov: LEXINGTON, KY	Mobile No.: 859-559-6710
Postal Code: 40546-0312	E-mail: sara.carter@uky.edu

Crop Description	
Crop 1: C GLXMA Glycine max Soybean	
Variety: Becks 3486FP	
Attributes: LLGT27	
Planting Date: 5-16-2019	Planting Rate: 120000 S/A
Depth: 1.25 IN	
Rows per Plot: 6	Planting Method: PLANTD planted
Row Spacing: 30 IN	Planting Equipment: FE field equipment
	Seed Bed: MEDIUM medium
Soil Temperature: 60 F	Soil Moisture: WET wet
Emergence Date: 5-21-2019	

Pest Description	
Pest 1 Type: W	Code: SETFA Setaria faberi
Common Name: Giant foxtail	
Crop: 1 GLXMA	
Pest 2 Type: W	Code: AMBTR Ambrosia trifida
Common Name: Giant ragweed	
Crop: 1 GLXMA	
Pest 3 Type: W	Code: IPOSS Ipomoea sp.
Common Name: Morning glory	
Crop: 1 GLXMA	

Site and Design	
Treated Plot Width: 10 FT	Site Type: FIELD field
Treated Plot Length: 30 FT	
Treated Plot Area: 300 FT2	Treatments: 6
Replications: 4	Tillage Type: NOTILL no-till
	Study Design: RACOB L Randomized Complete Block (RCB)

Soil Description	
Description Name: MAURY SILT LOAM	
% Sand: 6	% OM: 2.6 Texture: SIL silt loam
% Silt: 32	pH: 6.4 Soil Name: Maury
% Clay: 62	CEC: 18

Moisture and Weather Conditions	
Overall Moisture Conditions: WEWEDR wet-wet-dry	
Closest Weather Station: Spindletop	Distance: 1.25 mi

University of Kentucky

Application Description		
	A	B
Application Date	5-17-2019	6-26-2019
Appl. Start Time	5:30 PM	
Application Method	SPRAY	SPRAY
Application Timing	PRE	POST
Application Placement	BROFOL	BROFOL
Applied By	SARA	SARA
Air Temperature Start, Stop	86 F	91 F
% Relative Humidity Start, Stop	57	64
Wind Velocity+Dir. Start	2 MPH S	3 MPH NW
Soil Temperature	64 F	72 F
Soil Moisture	WET	WET
Soil Surface Condition	MEDIUM	MEDIUM
% Cloud Cover	40	5
Next Moisture Occurred On	5-20-2019	7-3-2019

Crop Stage At Each Application		
	A	B
Crop 1 Code, BBCH Scale	GLXMA BSOY	GLXMA BSOY
Days after Emergence	-4	36
Height Average		6 IN

Pest Stage At Each Application		
	A	B
Pest 1 Code, Type, Scale	SETFA W	SETFA W
Height Average	1 IN	3 IN
Pest 2 Code, Type, Scale	AMBTR W	AMBTR W
Height Average	2 IN	5 IN
Pest 3 Code, Type, Scale	IPOSS W	IPOSS W
Height Average	1 IN	2.5 IN

Application Equipment		
	A	B
Appl. Equipment	BELTSPRAYER	BELTSPRAYER
Equipment Type	SPRBEL	SPRBEL
Operation Pressure	30 PSI	30 PSI
Nozzle Type	FLAFDG	FLAFDG
Nozzle Size	8002	8002
Nozzle Spacing	30 IN	30 IN
Boom ID	6-TIP	6-TIP
Boom Length	10 FT	10 FT
Boom Height	24 IN	24 IN
Ground Speed	4 MPH	4 MPH
Carrier	WATER	WATER
Application Amount	15 GAL/AC	15 GAL/AC
Mix Size	2.5 L	2.5 L
Propellant	COMCO2	COMCO2
Tank Mix (Y/N)	Y yes	Y yes

Context	Date	By	Notes
STATUS	5-17-2019	Sara Carter	Automatically added by ARM: Trial Status updated to 'S' during trial creation.

SE Definitions	
	1.
Crop Type, Code	C

University of Kentucky

LLGT27 Demo - UK Weed Science 2019

Trial ID: LLGT27 2019 Demo	Location: Lexington	Trial Year: 2019
Protocol ID: LLGT27 2019 Demo	Investigator: Sara Carter	
Project ID:	Study Director:	
	Sponsor Contact:	

Pest Type		W Weed	W Weed	W Weed		W Weed				
Pest Code		SETFA	AMBTR	IPOSS		SETFA				
Pest Scientific Name		Setaria faberi	Ambrosia trifi>	Ipomoea sp.		Setaria faberi				
Pest Name		Giant foxtail	Giant ragweed	Morning glory		Giant foxtail				
Crop Type, Code	C GLXMA	C -	C -	C -	C GLXMA	C -				
BBCH Scale	BSOY				BSOY					
Crop Scientific Name	Glycine max				Glycine max					
Crop Name	Soybean				Soybean					
Rating Date	6-7-2019	6-7-2019	6-7-2019	6-7-2019	6-26-2019	6-26-2019				
Rating Type	PHYGEN	CONTRO	CONTRO	CONTRO	PHYGEN	CONTRO				
Rating Unit	%	%	%	%	%	%				
Number of Subsamples	1	1	1	1	1	1				
Days After First/Last Applic.	21 21	21 21	21 21	21 21	40 40	40 40				
Plant-Eval Interval	22 DP-1	22 DP-1	22 DP-1	22 DP-1	41 DP-1	41 DP-1				
Days After Emergence	17 DE-1	17 DE-1	17 DE-1	17 DE-1	36 DE-1	36 DE-1				
Trt No.	Treatment Name	Rate	Appl Unit	Code	1	2	3	4	5	6
1	Roundup PowerMax	32 fl oz/a	A		0.0	99.0	99.0	99.0	0.0	93.0
	Zidua Pro	6 fl oz/a	A							
	MSO	1 % v/v	A							
	Amsol AMS	2.5 % v/v	A							
	Durango DMA	32 fl oz/a	B							
	Amsol AMS	2.5 % v/v	B							
2	Roundup PowerMax	32 fl oz/a	A		0.0	99.0	99.0	99.0	0.0	92.3
	Zidua Pro	6 fl oz/a	A							
	MSO	1 % v/v	A							
	Amsol AMS	2.5 % v/v	A							
	Liberty	32 fl oz/a	B							
	Amsol AMS	2.5 % v/v	B							
3	Roundup PowerMax	32 fl oz/a	A		0.0	99.0	99.0	99.0	0.0	91.8
	Zidua Pro	6 fl oz/a	A							
	MSO	1 % v/v	A							
	Amsol AMS	2.5 % v/v	A							
	Durango DMA	32 fl oz/a	B							
	Liberty	32 fl oz/a	B							
	Amsol AMS	2.5 % v/v	B							
4	Roundup PowerMax	32 fl oz/a	A		0.0	99.0	99.0	99.0	0.0	91.8
	Alite 27	3 fl oz/a	A							
	MSO	1 % v/v	A							
	Amsol AMS	2.5 % v/v	A							
	Durango DMA	32 fl oz/a	B							
	Amsol AMS	2.5 % v/v	B							
5	Roundup PowerMax	32 fl oz/a	A		0.0	99.0	99.0	99.0	0.0	91.0
	Alite 27	3 fl oz/a	A							
	MSO	1 % v/v	A							
	Amsol AMS	2.5 % v/v	A							
	Liberty	32 fl oz/a	B							
	Amsol AMS	2.5 % v/v	B							
6	Roundup PowerMax	32 fl oz/a	A		0.0	99.0	99.0	99.0	0.0	92.5
	Alite 27	3 fl oz/a	A							
	MSO	1 % v/v	A							
	Amsol AMS	2.5 % v/v	A							
	Durango DMA	32 fl oz/a	B							
	Liberty	32 fl oz/a	B							
	Amsol AMS	2.5 % v/v	B							
LSD P=.05										3.80
Standard Deviation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.52
CV	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.74
Replicate F	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.848
Replicate Prob(F)	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.4892
Treatment F	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.306
Treatment Prob(F)	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9016

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,9,10,11,12 because error mean square = 0.

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Pest Type	W Weed	W Weed		W Weed	W Weed	W Weed				
Pest Code	AMBTR	IPOSS		SETFA	AMBTR	IPOSS				
Pest Scientific Name	Ambrosia trifi>	Ipomoea sp.		Setaria faberi	Ambrosia trifi>	Ipomoea sp.				
Pest Name	Giant ragweed	Morning glory		Giant foxtail	Giant ragweed	Morning glory				
Crop Type, Code	C -	C -	C GLXMA	C -	C -	C -				
BBCH Scale			BSOY							
Crop Scientific Name			Glycine max							
Crop Name			Soybean							
Rating Date	6-26-2019	6-26-2019	7-17-2019	7-17-2019	7-17-2019	7-17-2019				
Rating Type	CONTRO	CONTRO	PHYGEN	CONTRO	CONTRO	CONTRO				
Rating Unit	%	%	%	%	%	%				
Number of Subsamples	1	1	1	1	1	1				
Days After First/Last Applic.	40 40	40 40	61 21	61 21	61 21	61 21				
Plant-Eval Interval	41 DP-1	41 DP-1	62 DP-1	62 DP-1	62 DP-1	62 DP-1				
Days After Emergence	36 DE-1	36 DE-1	57 DE-1	57 DE-1	57 DE-1	57 DE-1				
Trt No.	Treatment Name	Rate	Unit	Appl Code	7	8	9	10	11	12
1	Roundup PowerMax	32 fl oz/a	A		93.0	93.0	0.0	99.0	99.0	99.0
	Zidua Pro	6 fl oz/a	A							
	MSO	1 % v/v	A							
	Amsol AMS	2.5 % v/v	A							
	Durango DMA	32 fl oz/a	B							
	Amsol AMS	2.5 % v/v	B							
2	Roundup PowerMax	32 fl oz/a	A		93.8	93.5	0.0	99.0	99.0	99.0
	Zidua Pro	6 fl oz/a	A							
	MSO	1 % v/v	A							
	Amsol AMS	2.5 % v/v	A							
	Liberty	32 fl oz/a	B							
	Amsol AMS	2.5 % v/v	B							
3	Roundup PowerMax	32 fl oz/a	A		92.3	90.0	0.0	99.0	99.0	99.0
	Zidua Pro	6 fl oz/a	A							
	MSO	1 % v/v	A							
	Amsol AMS	2.5 % v/v	A							
	Durango DMA	32 fl oz/a	B							
	Liberty	32 fl oz/a	B							
	Amsol AMS	2.5 % v/v	B							
4	Roundup PowerMax	32 fl oz/a	A		91.8	91.3	0.0	99.0	99.0	99.0
	Alite 27	3 fl oz/a	A							
	MSO	1 % v/v	A							
	Amsol AMS	2.5 % v/v	A							
	Durango DMA	32 fl oz/a	B							
	Amsol AMS	2.5 % v/v	B							
5	Roundup PowerMax	32 fl oz/a	A		93.0	91.8	0.0	99.0	99.0	99.0
	Alite 27	3 fl oz/a	A							
	MSO	1 % v/v	A							
	Amsol AMS	2.5 % v/v	A							
	Liberty	32 fl oz/a	B							
	Amsol AMS	2.5 % v/v	B							
6	Roundup PowerMax	32 fl oz/a	A		91.8	94.3	0.0	99.0	99.0	99.0
	Alite 27	3 fl oz/a	A							
	MSO	1 % v/v	A							
	Amsol AMS	2.5 % v/v	A							
	Durango DMA	32 fl oz/a	B							
	Liberty	32 fl oz/a	B							
	Amsol AMS	2.5 % v/v	B							
LSD P=.05		3.56			3.05		0.00	0.00	0.00	0.00
Standard Deviation		2.36			2.02		0.00	0.00	0.00	0.00
CV		2.55			2.19		0.00	0.00	0.00	0.00
Replicate F		1.048			0.634		0.000	0.000	0.000	0.000
Replicate Prob(F)		0.4002			0.6046		1.0000	1.0000	1.0000	1.0000
Treatment F		0.461			2.426		0.000	0.000	0.000	0.000
Treatment Prob(F)		0.7991			0.0841		1.0000	1.0000	1.0000	1.0000

Could not calculate LSD (% mean diff) for columns 1,2,3,4,5,9,10,11,12 because error mean square = 0.

University of Kentucky

LLGT27 Demo - UK Weed Science 2019

Trial ID: LLGT27 2019 Demo Location: Lexington Trial Year: 2019
Protocol ID: LLGT27 2019 Demo Investigator: Sara Carter
Project ID: Study Director:
Sponsor Contact:

Pest Type

W, Weed = Weed or volunteer crop

Pest Code

SETFA, Setaria faberi, Giant foxtail = US
AMBTR, Ambrosia trifida, Giant ragweed = US
IPOSS, Ipomoea sp., Morning glory = US

Crop Type, Code

C = EPPO species (Bayer) codes
GLXMA, BSOY, Glycine max, Soybean = US

Rating Type

PHYGEN = phytotoxicity - general / injury
CONTRO = control / burndown or knockdown

Rating Unit

% = percent

Plant-Eval Interval

22 DP-1 = 1 GLXMA 5-16-2019
41 DP-1 = 1 GLXMA 5-16-2019
62 DP-1 = 1 GLXMA 5-16-2019