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Experimental broadleaf herbicide programs for weed control in blueberries

Trial ID: BLUEBERRY100
Location: Unicoi, TN

Protocol ID: BLUEBERRY100
Study Director: Gregory R. Armel
Investigator: Gregory R. Armel

					VACCO BDIC Highbush bl>	W Weed RANBU Bulbous but>	W Weed PHTAM Common poke>	W Weed FRAVI Virginia st>						
Pest Type	Pest Code	Pest Name	Crop Code	BBCH Scale	Crop Name	Crop Variety	Description	Part Rated	Rating Date	Rating Data Type	Rating Unit	Days After First/Last Applic.	Trt-Eval Interval	Number of Decimals
					24/5/08 PHYGEN %	24/5/08 CONTRO %	24/5/08 CONTRO %	24/5/08 CONTRO %	15 15 15 DA-A	15 15 15 DA-A	15 15 15 DA-A	15 15 15 DA-A	0	0
Trt No.	Treatment Name	Form Conc	Rate	Unit	Appl Code	1	2	3	4					
1	GLUFOSINATE*LIBERTY AMINOCYCLOPYRACHLOR*DPX-KJM44 ORYZALIN*SURFLAN	1.67 25 4	409.15 17.5 1120	g ai/ha g ai/ha g ai/ha	A A A	22 de	68 cde	34 f	50 efg					
2	GLUFOSINATE*LIBERTY AMINOCYCLOPYRACHLOR*DPX-KJM44 ORYZALIN*SURFLAN	1.67 25 4	409.15 35 1120	g ai/ha g ai/ha g ai/ha	A A A	32 cd	63 de	56 de	63 c-f					
3	GLUFOSINATE*LIBERTY AMINOCYCLOPYRACHLOR*DPX-KJM44 ORYZALIN*SURFLAN	1.67 25 4	409.15 70 1120	g ai/ha g ai/ha g ai/ha	A A A	35 cd	77 b-e	71 a-d	67 cde					
4	GLUFOSINATE*LIBERTY AMINOCYCLOPYRACHLOR*DPX-KJM44 ORYZALIN*SURFLAN	1.67 25 4	409.15 140 1120	g ai/ha g ai/ha g ai/ha	A A A	35 cd	78 bcd	88 a	77 abc					
5	GLUFOSINATE*LIBERTY MESOTRIONE*CALLISTO ORYZALIN*SURFLAN	1.67 4 4	409.15 140 1120	g ai/ha g ai/ha g ai/ha	A A A	27 cd	78 bcd	78 abc	38 g					
6	GLUFOSINATE*LIBERTY MESOTRIONE*CALLISTO ORYZALIN*SURFLAN	1.67 4 4	409.15 280 1120	g ai/ha g ai/ha g ai/ha	A A A	23 cde	87 ab	78 abc	63 c-f					
7	GLUFOSINATE*LIBERTY HALOSULFURON*SANDEA ORYZALIN*SURFLAN	1.67 75 4	409.15 52.5 1120	g ai/ha g ai/ha g ai/ha	A A A	30 cd	78 bcd	67 b-e	60 c-f					
8	GLUFOSINATE*LIBERTY HALOSULFURON*SANDEA ORYZALIN*SURFLAN	1.67 75 4	409.15 105 1120	g ai/ha g ai/ha g ai/ha	A A A	33 cd	80 abc	63 cde	68 bcd					
9	GLUFOSINATE*LIBERTY TRIFLOXYSULFURON*ENVOKE ORYZALIN*SURFLAN	1.67 75 4	409.15 6.6 1120	g ai/ha g ai/ha g ai/ha	A A A	27 cd	62 e	64 cde	62 c-f					
10	GLUFOSINATE*LIBERTY TRIFLOXYSULFURON*ENVOKE ORYZALIN*SURFLAN	1.67 75 4	409.15 13.1 1120	g ai/ha g ai/ha g ai/ha	A A A	30 cd	62 e	57 de	68 bcd					
11	GLUFOSINATE*LIBERTY SIMAZINE*PRINCEP ORYZALIN*SURFLAN	1.67 4 4	409.15 4500 1120	g ai/ha g ai/ha g ai/ha	A A A	22 de	88 ab	70 a-d	47 fg					
12	GLUFOSINATE*LIBERTY FLUMIOXAZIN*CHATEAU ORYZALIN*SURFLAN	1.67 51 4	409.15 430 1120	g ai/ha g ai/ha g ai/ha	A A A	70 ab	95 a	83 ab	85 ab					
13	GLUFOSINATE*LIBERTY FLUMIOXAZIN*CHATEAU ORYZALIN*SURFLAN	1.67 51 4	409.15 860 1120	g ai/ha g ai/ha g ai/ha	A A A	80 a	88 ab	87 a	90 a					
14	GLUFOSINATE*LIBERTY V-10142 ORYZALIN*SURFLAN	1.67 75 4	409.15 560 1120	g ai/ha g ai/ha g ai/ha	A A A	45 cd	73 b-e	87 a	55 d-g					

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Pest Type						W Weed	W Weed	W Weed	
Pest Code						RANBU	PHTAM	FRAVI	
Pest Name						Bulbous but>	Common poke>	Virginia st>	
Crop Code					VACCO				
BBCH Scale					BDIC				
Crop Name					Highbush bl>				
Crop Variety									
Description									
Part Rated									
Rating Date					24/5/08	24/5/08	24/5/08	24/5/08	
Rating Data Type					PHYGEN	CONTRO	CONTRO	CONTRO	
Rating Unit					%	%	%	%	
Days After First/Last Applic.					15 15	15 15	15 15	15 15	
Trt-Eval Interval					15 DA-A	15 DA-A	15 DA-A	15 DA-A	
Number of Decimals					0	0	0	0	
Trt	Treatment	Form	Rate	Appl					
No.	Name	Conc	Rate	Unit	Code	1	2	3	4
15	GLUFOSINATE*LIBERTY V-10142	1.67 75	409.15 1120	g ai/ha g ai/ha	A A	47 bc	63 de	87 a	58 def
	ORYZALIN*SURFLAN	4	1120	g ai/ha	A				
16	GLUFOSINATE*LIBERTY ORYZALIN*SURFLAN	1.67 4	409.15 1120	g ai/ha g ai/ha	A A	32 cd	82 abc	50 ef	60 c-f
17	GLUFOSINATE*LIBERTY MESOTRIONE*CALLISTO SIMAZINE*PRINCEP ORYZALIN*SURFLAN	1.67 4 4 4	409.15 140 4500 1120	g ai/ha g ai/ha g ai/ha g ai/ha	A A A A	38 cd	87 ab	70 a-d	72 bcd
18	Untreated					0 e	0 f	0 g	0 h
LSD (P=.05)						23.7	16.3	19.0	17.2
Standard Deviation						14.2	9.8	11.3	10.3
CV						40.76	13.42	17.15	17.15
Bartlett's X2						6.742	13.606	10.33	19.268
P(Bartlett's X2)						0.978	0.556	0.798	0.202
Replicate F						14.080	5.288	0.319	4.751
Replicate Prob(F)						0.0001	0.0100	0.7294	0.0152
Treatment F						4.756	13.594	11.350	10.805
Treatment Prob(F)						0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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Pest Type Pest Code Pest Name Crop Code BBCH Scale Crop Name Crop Variety Description Part Rated Rating Date Rating Data Type Rating Unit Days After First/Last Applic. Trt-Eval Interval Number of Decimals					W Weed TRFRE Dutch clover	W Weed PRTQU Virginia cr>	W Weed GGGAN Annual gras>	W Weed Burndown-ov> PLADEA 24/5/08 PHYNEC %	
					24/5/08 CONTRO %	24/5/08 CONTRO %	24/5/08 CONTRO %		
					15 15 15 DA-A 0	15 15 15 DA-A 0	15 15 15 DA-A 0	15 15 15 DA-A 0	
Trt No.	Treatment Name	Form Conc	Rate	Rate Unit	Appl Code	5	6	7	8
1	GLUFOSINATE*LIBERTY AMINOCYCLOPYRACHLOR*DPX-KJM44 ORYZALIN*SURFLAN	1.67 25 4	409.15 17.5 1120	g ai/ha g ai/ha g ai/ha	A A A	90 ab	75 ab	57 d	58 bc
2	GLUFOSINATE*LIBERTY AMINOCYCLOPYRACHLOR*DPX-KJM44 ORYZALIN*SURFLAN	1.67 25 4	409.15 35 1120	g ai/ha g ai/ha g ai/ha	A A A	88 ab	55 abc	70 bcd	65 bc
3	GLUFOSINATE*LIBERTY AMINOCYCLOPYRACHLOR*DPX-KJM44 ORYZALIN*SURFLAN	1.67 25 4	409.15 70 1120	g ai/ha g ai/ha g ai/ha	A A A	95 a	73 abc	65 cd	63 bc
4	GLUFOSINATE*LIBERTY AMINOCYCLOPYRACHLOR*DPX-KJM44 ORYZALIN*SURFLAN	1.67 25 4	409.15 140 1120	g ai/ha g ai/ha g ai/ha	A A A	98 a	72 abc	73 abc	67 bc
5	GLUFOSINATE*LIBERTY MESOTRIONE*CALLISTO ORYZALIN*SURFLAN	1.67 4 4	409.15 140 1120	g ai/ha g ai/ha g ai/ha	A A A	65 c	40 bc	63 cd	60 bc
6	GLUFOSINATE*LIBERTY MESOTRIONE*CALLISTO ORYZALIN*SURFLAN	1.67 4 4	409.15 280 1120	g ai/ha g ai/ha g ai/ha	A A A	85 abc	68 abc	67 bcd	67 bc
7	GLUFOSINATE*LIBERTY HALOSULFURON*SANDEA ORYZALIN*SURFLAN	1.67 75 4	409.15 52.5 1120	g ai/ha g ai/ha g ai/ha	A A A	73 bc	58 abc	58 d	63 bc
8	GLUFOSINATE*LIBERTY HALOSULFURON*SANDEA ORYZALIN*SURFLAN	1.67 75 4	409.15 105 1120	g ai/ha g ai/ha g ai/ha	A A A	95 a	35 cd	70 bcd	65 bc
9	GLUFOSINATE*LIBERTY TRIFLOXYSULFURON*ENVOKE ORYZALIN*SURFLAN	1.67 75 4	409.15 6.6 1120	g ai/ha g ai/ha g ai/ha	A A A	80 abc	80 a	70 bcd	68 bc
10	GLUFOSINATE*LIBERTY TRIFLOXYSULFURON*ENVOKE ORYZALIN*SURFLAN	1.67 75 4	409.15 13.1 1120	g ai/ha g ai/ha g ai/ha	A A A	78 abc	75 ab	80 ab	70 bc
11	GLUFOSINATE*LIBERTY SIMAZINE*PRINCEP ORYZALIN*SURFLAN	1.67 4 4	409.15 4500 1120	g ai/ha g ai/ha g ai/ha	A A A	85 abc	35 cd	75 abc	55 c
12	GLUFOSINATE*LIBERTY FLUMIOXAZIN*CHATEAU ORYZALIN*SURFLAN	1.67 51 4	409.15 430 1120	g ai/ha g ai/ha g ai/ha	A A A	83 abc	78 ab	73 abc	73 ab
13	GLUFOSINATE*LIBERTY FLUMIOXAZIN*CHATEAU ORYZALIN*SURFLAN	1.67 51 4	409.15 860 1120	g ai/ha g ai/ha g ai/ha	A A A	95 a	60 abc	87 a	88 a
14	GLUFOSINATE*LIBERTY V-10142 ORYZALIN*SURFLAN	1.67 75 4	409.15 560 1120	g ai/ha g ai/ha g ai/ha	A A A	83 abc	68 abc	73 abc	60 bc
15	GLUFOSINATE*LIBERTY V-10142 ORYZALIN*SURFLAN	1.67 75 4	409.15 1120 1120	g ai/ha g ai/ha g ai/ha	A A A	90 ab	58 abc	70 bcd	63 bc
16	GLUFOSINATE*LIBERTY ORYZALIN*SURFLAN	1.67 4	409.15 1120	g ai/ha g ai/ha	A A	85 abc	53 abc	65 cd	63 bc

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Pest Type					W Weed	W Weed	W Weed	W Weed
Pest Code					TRFRE	PRTQU	GGGAN	
Pest Name					Dutch clover	Virginia cr>	Annual gras>	
Crop Code								
BBCH Scale								
Crop Name								
Crop Variety								
Description								Burndown-ov>
Part Rated								PLADEA
Rating Date					24/5/08	24/5/08	24/5/08	24/5/08
Rating Data Type					CONTRO	CONTRO	CONTRO	PHYNEC
Rating Unit					%	%	%	%
Days After First/Last Applic.					15 15	15 15	15 15	15 15
Trt-Eval Interval					15 DA-A	15 DA-A	15 DA-A	15 DA-A
Number of Decimals					0	0	0	0
Trt Treatment	Form	Rate	Appl					
No. Name	Conc	Rate	Unit	Code	5	6	7	8
17 GLUFOSINATE*LIBERTY	1.67	409.15	g ai/ha	A	93 ab		68 bcd	65 bc
MESOTRIONE*CALLISTO	4	140	g ai/ha	A				
SIMAZINE*PRINCEP	4	4500	g ai/ha	A				
ORYZALIN*SURFLAN	4	1120	g ai/ha	A				
18 Untreated					0 d	0 d	0 e	0 d
LSD (P=.05)					20.7	38.0	13.3	15.4
Standard Deviation					11.8	22.1	8.0	9.2
CV					14.56	38.27	12.15	14.87
Bartlett's X2					5.567	10.571	15.147	19.344
P(Bartlett's X2)					0.782	0.647	0.441	0.199
Replicate F					0.333	2.550	0.195	5.503
Replicate Prob(F)					0.7226	0.1076	0.8234	0.0085
Treatment F					10.316	2.622	15.023	10.234
Treatment Prob(F)					0.0001	0.0283	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)

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Pest Type					VACCO BDIC Highbush bl> Rabbiteye	W Weed	W Weed	W Weed	
Pest Code						PHTAM Common poke>	FRAVI Virginia st>	TRFRE Dutch clover	
Pest Name									
Crop Code									
BBCH Scale									
Crop Name									
Crop Variety									
Description									
Part Rated									
Rating Date					SUCKER 6/6/08	6/6/08	6/6/08	6/6/08	
Rating Data Type					PHYGEN	CONTRO	CONTRO	CONTRO	
Rating Unit					%	%	%	%	
Days After First/Last Applic.					28 28	28 28	28 28	28 28	
Trt-Eval Interval					28 DA-A	28 DA-A	28 DA-A	28 DA-A	
Number of Decimals					0	0	0	0	
Trt No.	Treatment Name	Form Conc	Rate	Rate Unit	Appl Code	9	10	11	12
1	GLUFOSINATE*LIBERTY AMINOCYCLOPYRACHLOR*DPX-KJM44 ORYZALIN*SURFLAN	1.67 25 4	409.15 17.5 1120	g ai/ha g ai/ha g ai/ha	A A A	10 cde	6 d	58 e	97 a
2	GLUFOSINATE*LIBERTY AMINOCYCLOPYRACHLOR*DPX-KJM44 ORYZALIN*SURFLAN	1.67 25 4	409.15 35 1120	g ai/ha g ai/ha g ai/ha	A A A	22 bc	53 ab	87 a-d	99 a
3	GLUFOSINATE*LIBERTY AMINOCYCLOPYRACHLOR*DPX-KJM44 ORYZALIN*SURFLAN	1.67 25 4	409.15 70 1120	g ai/ha g ai/ha g ai/ha	A A A	18 bc	57 ab	75 a-e	100 a
4	GLUFOSINATE*LIBERTY AMINOCYCLOPYRACHLOR*DPX-KJM44 ORYZALIN*SURFLAN	1.67 25 4	409.15 140 1120	g ai/ha g ai/ha g ai/ha	A A A	23 b	85 a	90 abc	98 a
5	GLUFOSINATE*LIBERTY MESOTRIONE*CALLISTO ORYZALIN*SURFLAN	1.67 4 4	409.15 140 1120	g ai/ha g ai/ha g ai/ha	A A A	5 de	69 ab	73 b-e	75 a
6	GLUFOSINATE*LIBERTY MESOTRIONE*CALLISTO ORYZALIN*SURFLAN	1.67 4 4	409.15 280 1120	g ai/ha g ai/ha g ai/ha	A A A	10 cde	72 ab	86 a-d	90 a
7	GLUFOSINATE*LIBERTY HALOSULFURON*SANDEA ORYZALIN*SURFLAN	1.67 75 4	409.15 52.5 1120	g ai/ha g ai/ha g ai/ha	A A A	17 bcd	37 bcd	72 cde	75 a
8	GLUFOSINATE*LIBERTY HALOSULFURON*SANDEA ORYZALIN*SURFLAN	1.67 75 4	409.15 105 1120	g ai/ha g ai/ha g ai/ha	A A A	17 bcd	50 abc	78 a-e	70 a
9	GLUFOSINATE*LIBERTY TRIFLOXYSULFURON*ENVOKE ORYZALIN*SURFLAN	1.67 75 4	409.15 6.6 1120	g ai/ha g ai/ha g ai/ha	A A A	17 bcd	14 cd	78 a-e	74 a
10	GLUFOSINATE*LIBERTY TRIFLOXYSULFURON*ENVOKE ORYZALIN*SURFLAN	1.67 75 4	409.15 13.1 1120	g ai/ha g ai/ha g ai/ha	A A A	13 bcd	57 ab	91 abc	98 a
11	GLUFOSINATE*LIBERTY SIMAZINE*PRINCEP ORYZALIN*SURFLAN	1.67 4 4	409.15 4500 1120	g ai/ha g ai/ha g ai/ha	A A A	10 cde	79 a	67 de	99 a
12	GLUFOSINATE*LIBERTY FLUMIOXAZIN*CHATEAU ORYZALIN*SURFLAN	1.67 51 4	409.15 430 1120	g ai/ha g ai/ha g ai/ha	A A A	47 a	66 ab	94 ab	90 a
13	GLUFOSINATE*LIBERTY FLUMIOXAZIN*CHATEAU ORYZALIN*SURFLAN	1.67 51 4	409.15 860 1120	g ai/ha g ai/ha g ai/ha	A A A	45 a	57 ab	95 a	85 a
14	GLUFOSINATE*LIBERTY V-10142 ORYZALIN*SURFLAN	1.67 75 4	409.15 560 1120	g ai/ha g ai/ha g ai/ha	A A A	17 bcd	67 ab	72 cde	80 a
15	GLUFOSINATE*LIBERTY V-10142 ORYZALIN*SURFLAN	1.67 75 4	409.15 1120 1120	g ai/ha g ai/ha g ai/ha	A A A	25 b	75 ab	82 a-d	94 a
16	GLUFOSINATE*LIBERTY ORYZALIN*SURFLAN	1.67 4	409.15 1120	g ai/ha g ai/ha	A A	5 de	53 ab	73 b-e	93 a

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					W Weed PHTAM Common poke>	W Weed FRAVI Virginia st>	W Weed TRFRE Dutch clover
Pest Type					VACCO		
Pest Code					BDIC		
Pest Name					Highbush bl>		
Crop Code					Rabbiteye		
BBCH Scale					SUCKER		
Crop Name					6/6/08	6/6/08	6/6/08
Crop Variety					PHYGEN	CONTRO	CONTRO
Description					%	%	%
Part Rated					28 28	28 28	28 28
Rating Date					28 DA-A	28 DA-A	28 DA-A
Rating Data Type					0	0	0
Rating Unit							
Days After First/Last Applic.							
Trt-Eval Interval							
Number of Decimals							
Trt Treatment	Form	Rate	Appl				
No. Name	Conc	Rate	Unit	Code	9	10	11
17 GLUFOSINATE*LIBERTY	1.67	409.15	g ai/ha	A	15 bcd	55 ab	93 abc
MESOTRIONE*CALLISTO	4	140	g ai/ha	A			88 a
SIMAZINE*PRINCEP	4	4500	g ai/ha	A			
ORYZALIN*SURFLAN	4	1120	g ai/ha	A			
18 Untreated					0 e	0 d	0 f
LSD (P=.05)					13.3	39.5	21.6
Standard Deviation					8.0	23.7	13.0
CV					45.59	44.83	17.14
Bartlett's X2					16.877	12.593	18.491
P(Bartlett's X2)					0.205	0.702	0.296
Replicate F					5.390	2.395	8.807
Replicate Prob(F)					0.0093	0.1084	0.0008
Treatment F					7.013	3.153	8.252
Treatment Prob(F)					0.0001	0.0029	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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Pest Type Pest Code Pest Name Crop Code BBCH Scale Crop Name Crop Variety Description Part Rated Rating Date Rating Data Type Rating Unit Days After First/Last Applic. Trt-Eval Interval Number of Decimals					W Weed PRTQU Virginia cr>	W Weed Burndown-ov>	VACCO BDIC Highbush bl> Rabbiteye	W Weed TRFRE Dutch clover	W Weed FRAVI Virginia st>	
					6/6/08 CONTRO %	6/6/08 PHYNEC %	3/7/08 SUCKER PHYGEN %	3/7/08 CONTRO %	3/7/08 CONTRO %	
					28 28 28 DA-A	28 28 28 DA-A	55 55 55 DA-A	55 55 55 DA-A	55 55 55 DA-A	
					0	0	0	0	0	
Trt No.	Treatment Name	Form Conc	Rate	Rate Unit	Appl Code	13	14	15	16	17
1	GLUFOSINATE*LIBERTY AMINOCYCLOPYRACHLOR*DPX-KJM44 ORYZALIN*SURFLAN	1.67 25 4	409.15 17.5 1120	g ai/ha g ai/ha g ai/ha	A A A	85 a	62 c	0 d	94 ab	58 c
2	GLUFOSINATE*LIBERTY AMINOCYCLOPYRACHLOR*DPX-KJM44 ORYZALIN*SURFLAN	1.67 25 4	409.15 35 1120	g ai/ha g ai/ha g ai/ha	A A A	57 abc	70 abc	2 cd	97 ab	75 abc
3	GLUFOSINATE*LIBERTY AMINOCYCLOPYRACHLOR*DPX-KJM44 ORYZALIN*SURFLAN	1.67 25 4	409.15 70 1120	g ai/ha g ai/ha g ai/ha	A A A	85 a	65 bc	2 cd	99 a	68 abc
4	GLUFOSINATE*LIBERTY AMINOCYCLOPYRACHLOR*DPX-KJM44 ORYZALIN*SURFLAN	1.67 25 4	409.15 140 1120	g ai/ha g ai/ha g ai/ha	A A A	72 ab	77 abc	0 d	99 a	80 abc
5	GLUFOSINATE*LIBERTY MESOTRIONE*CALLISTO ORYZALIN*SURFLAN	1.67 4 4	409.15 140 1120	g ai/ha g ai/ha g ai/ha	A A A	25 cd	63 bc	2 cd	79 abc	60 bc
6	GLUFOSINATE*LIBERTY MESOTRIONE*CALLISTO ORYZALIN*SURFLAN	1.67 4 4	409.15 280 1120	g ai/ha g ai/ha g ai/ha	A A A	42 bcd	65 bc	3 bcd	82 abc	82 abc
7	GLUFOSINATE*LIBERTY HALOSULFURON*SANDEA ORYZALIN*SURFLAN	1.67 75 4	409.15 52.5 1120	g ai/ha g ai/ha g ai/ha	A A A	25 cd	62 c	2 cd	68 c	67 abc
8	GLUFOSINATE*LIBERTY HALOSULFURON*SANDEA ORYZALIN*SURFLAN	1.67 75 4	409.15 105 1120	g ai/ha g ai/ha g ai/ha	A A A	55 abc	68 abc	0 d	79 abc	60 bc
9	GLUFOSINATE*LIBERTY TRIFLOXYSULFURON*ENVOKE ORYZALIN*SURFLAN	1.67 75 4	409.15 6.6 1120	g ai/ha g ai/ha g ai/ha	A A A	55 abc	65 bc	7 bc	89 abc	60 bc
10	GLUFOSINATE*LIBERTY TRIFLOXYSULFURON*ENVOKE ORYZALIN*SURFLAN	1.67 75 4	409.15 13.1 1120	g ai/ha g ai/ha g ai/ha	A A A	85 a	75 abc	0 d	89 abc	65 abc
11	GLUFOSINATE*LIBERTY SIMAZINE*PRINCEP ORYZALIN*SURFLAN	1.67 4 4	409.15 4500 1120	g ai/ha g ai/ha g ai/ha	A A A	58 abc	67 bc	0 d	97 ab	73 abc
12	GLUFOSINATE*LIBERTY FLUMIOXAZIN*CHATEAU ORYZALIN*SURFLAN	1.67 51 4	409.15 430 1120	g ai/ha g ai/ha g ai/ha	A A A	79 ab	80 ab	8 ab	98 ab	82 abc
13	GLUFOSINATE*LIBERTY FLUMIOXAZIN*CHATEAU ORYZALIN*SURFLAN	1.67 51 4	409.15 860 1120	g ai/ha g ai/ha g ai/ha	A A A	80 ab	85 a	13 a	94 ab	85 ab
14	GLUFOSINATE*LIBERTY V-10142 ORYZALIN*SURFLAN	1.67 75 4	409.15 560 1120	g ai/ha g ai/ha g ai/ha	A A A	53 abc	73 abc	2 cd	75 bc	63 abc
15	GLUFOSINATE*LIBERTY V-10142 ORYZALIN*SURFLAN	1.67 75 4	409.15 1120 1120	g ai/ha g ai/ha g ai/ha	A A A	77 ab	80 ab	0 d	98 ab	65 abc
16	GLUFOSINATE*LIBERTY ORYZALIN*SURFLAN	1.67 4	409.15 1120	g ai/ha g ai/ha	A A	52 abc	62 c	0 d	82 abc	70 abc

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Pest Type					W Weed	W Weed		W Weed	W Weed	
Pest Code					PRTQU			TRFRE	FRAVI	
Pest Name					Virginia cr>			Dutch clover	Virginia st>	
Crop Code							VACCO			
BBCH Scale							BDIC			
Crop Name							Highbush bl>			
Crop Variety							Rabbiteye			
Description						Burndown-ov>				
Part Rated						PLADEA	SUCKER			
Rating Date					6/6/08	6/6/08	3/7/08	3/7/08	3/7/08	
Rating Data Type					CONTRO	PHYNEC	PHYGEN	CONTRO	CONTRO	
Rating Unit					%	%	%	%	%	
Days After First/Last Applic.					28 28	28 28	55 55	55 55	55 55	
Trt-Eval Interval					28 DA-A	28 DA-A	55 DA-A	55 DA-A	55 DA-A	
Number of Decimals					0	0	0	0	0	
Trt	Treatment	Form	Rate	Appl						
No.	Name	Conc	Rate	Unit	Code	13	14	15	16	17
17	GLUFOSINATE*LIBERTY	1.67	409.15	g ai/ha	A		73 abc	0 d	90 abc	88 a
	MESOTRIONE*CALLISTO	4	140	g ai/ha	A					
	SIMAZINE*PRINCEP	4	4500	g ai/ha	A					
	ORYZALIN*SURFLAN	4	1120	g ai/ha	A					
18	Untreated					0 d	0 d	0 d	0 d	0 d
	LSD (P=.05)					42.5	17.3	6.7	23.5	26.6
	Standard Deviation					24.8	10.4	4.0	13.9	15.9
	CV					43.02	15.64	179.61	16.56	23.88
	Bartlett's X2					9.854	10.238	9.51	28.015	22.958
	P(Bartlett's X2)					0.544	0.805	0.301	0.009*	0.115
	Replicate F					0.923	4.929	3.400	0.780	12.586
	Replicate Prob(F)					0.4144	0.0132	0.0451	0.4705	0.0001
	Treatment F					2.894	9.055	2.523	8.148	4.324
	Treatment Prob(F)					0.0146	0.0001	0.0106	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Tennessee - Knoxville

Pest Type Pest Code Pest Name Crop Code BBCH Scale Crop Name Crop Variety Description Part Rated Rating Date Rating Data Type Rating Unit Days After First/Last Applic. Trt-Eval Interval Number of Decimals					W Weed IPOSS Morning glo>	W Weed Burndown-ov> PLADEA 3/7/08 PHYNEC % 55 55 55 DA-A 0	
Trt No.	Treatment Name	Form Conc	Rate	Rate Unit	Appl Code	18	19
1	GLUFOSINATE*LIBERTY AMINOCYCLOPYRACHLOR*DPX-KJM44 ORYZALIN*SURFLAN	1.67 25 4	409.15 17.5 1120	g ai/ha g ai/ha g ai/ha	A A A	63 a-d	52 bc
2	GLUFOSINATE*LIBERTY AMINOCYCLOPYRACHLOR*DPX-KJM44 ORYZALIN*SURFLAN	1.67 25 4	409.15 35 1120	g ai/ha g ai/ha g ai/ha	A A A	82 ab	68 abc
3	GLUFOSINATE*LIBERTY AMINOCYCLOPYRACHLOR*DPX-KJM44 ORYZALIN*SURFLAN	1.67 25 4	409.15 70 1120	g ai/ha g ai/ha g ai/ha	A A A	63 a-d	58 abc
4	GLUFOSINATE*LIBERTY AMINOCYCLOPYRACHLOR*DPX-KJM44 ORYZALIN*SURFLAN	1.67 25 4	409.15 140 1120	g ai/ha g ai/ha g ai/ha	A A A	72 abc	78 a
5	GLUFOSINATE*LIBERTY MESOTRIONE*CALLISTO ORYZALIN*SURFLAN	1.67 4 4	409.15 140 1120	g ai/ha g ai/ha g ai/ha	A A A	73 abc	65 abc
6	GLUFOSINATE*LIBERTY MESOTRIONE*CALLISTO ORYZALIN*SURFLAN	1.67 4 4	409.15 280 1120	g ai/ha g ai/ha g ai/ha	A A A	55 a-d	65 abc
7	GLUFOSINATE*LIBERTY HALOSULFURON*SANDEA ORYZALIN*SURFLAN	1.67 75 4	409.15 52.5 1120	g ai/ha g ai/ha g ai/ha	A A A	68 a-d	48 c
8	GLUFOSINATE*LIBERTY HALOSULFURON*SANDEA ORYZALIN*SURFLAN	1.67 75 4	409.15 105 1120	g ai/ha g ai/ha g ai/ha	A A A	21 de	50 c
9	GLUFOSINATE*LIBERTY TRIFLOXYSULFURON*ENVOKE ORYZALIN*SURFLAN	1.67 75 4	409.15 6.6 1120	g ai/ha g ai/ha g ai/ha	A A A	48 b-e	57 abc
10	GLUFOSINATE*LIBERTY TRIFLOXYSULFURON*ENVOKE ORYZALIN*SURFLAN	1.67 75 4	409.15 13.1 1120	g ai/ha g ai/ha g ai/ha	A A A	91 ab	60 abc
11	GLUFOSINATE*LIBERTY SIMAZINE*PRINCEP ORYZALIN*SURFLAN	1.67 4 4	409.15 4500 1120	g ai/ha g ai/ha g ai/ha	A A A	79 ab	72 abc
12	GLUFOSINATE*LIBERTY FLUMIOXAZIN*CHATEAU ORYZALIN*SURFLAN	1.67 51 4	409.15 430 1120	g ai/ha g ai/ha g ai/ha	A A A	99 a	75 ab
13	GLUFOSINATE*LIBERTY FLUMIOXAZIN*CHATEAU ORYZALIN*SURFLAN	1.67 51 4	409.15 860 1120	g ai/ha g ai/ha g ai/ha	A A A	78 ab	75 ab
14	GLUFOSINATE*LIBERTY V-10142 ORYZALIN*SURFLAN	1.67 75 4	409.15 560 1120	g ai/ha g ai/ha g ai/ha	A A A	90 ab	58 abc
15	GLUFOSINATE*LIBERTY V-10142 ORYZALIN*SURFLAN	1.67 75 4	409.15 1120 1120	g ai/ha g ai/ha g ai/ha	A A A	45 b-e	65 abc
16	GLUFOSINATE*LIBERTY ORYZALIN*SURFLAN	1.67 4	409.15 1120	g ai/ha g ai/ha	A A	0 e	62 abc

University of Tennessee - Knoxville

Pest Type					W Weed	W Weed
Pest Code					IPOSS	
Pest Name					Morning glo>	
Crop Code						
BBCH Scale						
Crop Name						
Crop Variety						
Description						Burndown-ov>
Part Rated						PLADEA
Rating Date					3/7/08	3/7/08
Rating Data Type					CONTRO	PHYNEC
Rating Unit					%	%
Days After First/Last Applic.					55 55	55 55
Trt-Eval Interval					55 DA-A	55 DA-A
Number of Decimals					0	0
Trt Treatment	Form	Rate	Appl			
No. Name	Conc	Rate	Unit	Code	18	19
17 GLUFOSINATE*LIBERTY	1.67	409.15	g ai/ha	A	23 cde	55 abc
MESOTRIONE*CALLISTO	4	140	g ai/ha	A		
SIMAZINE*PRINCEP	4	4500	g ai/ha	A		
ORYZALIN*SURFLAN	4	1120	g ai/ha	A		
18 Untreated					0 e	0 d
LSD (P=.05)					50.0	24.1
Standard Deviation					30.0	14.5
CV					51.57	24.52
Bartlett's X2					11.997	16.327
P(Bartlett's X2)					0.607	0.43
Replicate F					0.975	5.643
Replicate Prob(F)					0.3885	0.0077
Treatment F					3.004	4.207
Treatment Prob(F)					0.0038	0.0002

Means followed by same letter do not significantly differ (P=.05, LSD)

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Tennessee - Knoxville

Experimental broadleaf herbicide programs for weed control in blueberries

Trial ID: BLUEBERRY100 Protocol ID: BLUEBERRY100
 Location: Unicoi, TN Study Director: Gregory R. Armel
 Investigator: Gregory R. Armel

General Trial Information

Study Director: Gregory R. Armel **Title:** Assistant Professor
Affiliation: University of Tennessee
Postal Code: 37996 **E-mail:** garmel@utk.edu
Investigator: Gregory R. Armel

Trial Location

City: Unicoi **Trial Status:** ESTABLISHED
State/Prov.: TN
Country: USA **Initiation Date:** 9/5/08
 Planned Completion Date: 3/7/08

Cooperator/Landowner

Cooperator: Dave Lockwood **Country:** USA
Organization: University of Tennessee
 E-mail: dlockwood@utk.edu

Crop Description

Vaccinium ashei
Variety: Rabbiteye
BBCH Scale: BDIC
Planting Method: TRANSPLANTED - HAND
Seed Bed: COARSE/TRASHY

Pest Description

Pest 1 Type: W **Code:** PHTAM *Phytolacca americana*
 Common Name: Common pokeweed

Pest 2 Type: W **Code:** FRAVI *Fragaria virginiana*
 Common Name: Virginia strawberry

Pest 3 Type: W **Code:** TRFRE *Trifolium repens*
 Common Name: Dutch clover

Pest 4 Type: W **Code:** PRTQU *Parthenocissus quinquefolia*
 Common Name: Virginia creeper

Pest 5 Type: W **Code:** RANBU *Ranunculus bulbosus*
 Common Name: Bulbous buttercup

Pest 6 Type: W **Code:** GGGGG Gramineae
 Common Name: Grasses
 Description: Orchardgrass, fescue

Site and Design

Plot Width, Unit: 10 FT
Plot Length, Unit: 20 FT
Replications: 3 **Study Design:** Randomized Complete Block

Application Description

	A
Application Date:	9/5/08
Time of Day:	11:30 AM
Application Method:	SPRAY
Application Timing:	EAPOCR
Application Placement:	BRODIR
Applied By:	Armel, G.
Air Temperature, Unit:	68 F
Wind Velocity, Unit:	15 MPH
% Cloud Cover:	95

Next Rain Occurred On:	9/5/08
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21/11/08 (BLUEBERRY100[1])

Site Description Page 22 of 22

University of Tennessee - Knoxville

Crop Stage At Each Application

A	
	BDIC
Height, Unit:	7.5 FT
Height Minimum, Maximum:	8

Pest Stage At Each Application

A	
Pest 1 Code, Disc., Scale:	PHTAM W
	IN
Height Minimum, Maximum:	1 5
Pest 2 Code, Disc., Scale:	FRAVI W
	IN
Height Minimum, Maximum:	1 5
Pest 3 Code, Disc., Scale:	TRFRE W
	IN
Height Minimum, Maximum:	1 5
Pest 4 Code, Disc., Scale:	PRTQU W
	IN
Height Minimum, Maximum:	1 5
Pest 5 Code, Disc., Scale:	RANBU W
	IN
Height Minimum, Maximum:	1 8
Pest 6 Code, Disc., Scale:	GGGGG W
	IN
Height Minimum, Maximum:	3 12

Application Equipment

A	
Appl. Equipment:	Backpack
Nozzle Type:	Even
Nozzle Size:	8004
Nozzles/Row:	2
Ground Speed, Unit:	3 MPH
Carrier:	Water
Spray Volume, Unit:	23 GAL/AC
Mix Size, Unit:	1.6
Propellant:	CO2
Tank Mix (Y/N):	Y

Trt No Treatment Application Comment

No visible injury was present from any treatment on the main blueberry bushes. Injury was representative of that noted on root suckers that were approximately 8 in to 2 ft in height when post-directed applications were made.

University of Tennessee - Knoxville

Experimental broadleaf herbicide programs for weed control in blackberries

Trial ID: BLACKBERRY100
Location: Crossville, TN

Protocol ID: BLACKBERRY100
Study Director: Gregory R. Armel
Investigator: Gregory R. Armel

					W Weed TAROF Common dand>	W Weed GGGGG Grasses	W Weed TRFRE Dutch clover			
Pest Type	Pest Code	Pest Name	Crop Code	BBCH Scale	VACMY BPER Blackberry				VACMY BPER Blackberry	
Crop Name	Crop Variety	Rating Date	Rating Data Type	Rating Unit	4/6/08 PHYGEN %	4/6/08 CONTRO %	4/6/08 CONTRO %	4/6/08 CONTRO %	19/6/08 PHYGEN %	
Collection Basis Unit	Days After First/Last Applic.	Trt-Eval Interval	Number of Decimals		15 15 15 DA-A 0	15 15 15 DA-A 0	15 15 15 DA-A 0	15 15 15 DA-A 0	30 30 30 DA-A 0	
Trt	Treatment	Form	Rate	Appl	1	2	3	4	5	
No.	Name	Conc	Rate	Unit	Code					
1	GLUFOSINATE*LIBERTY	1.67	409.15	g ai/ha	A	23 ab	83 bc	72 cd	77 a-d	28 bc
	AMINOCYCLOPYRACHLOR*DPX-KJM44	25	35	g ai/ha	A					
	ORYZALIN*SURFLAN	4	1120	g ai/ha	A					
	NIS	100	0.25	% v/v	A					
2	GLUFOSINATE*LIBERTY	1.67	409.15	g ai/ha	A	22 ab	85 bc	78 a-d	90 a	33 ab
	AMINOCYCLOPYRACHLOR*DPX-KJM44	25	70	g ai/ha	A					
	ORYZALIN*SURFLAN	4	1120	g ai/ha	A					
	NIS	100	0.25	% v/v	A					
3	GLUFOSINATE*LIBERTY	1.67	409.15	g ai/ha	A	30 a	95 a	90 a	90 a	38 a
	AMINOCYCLOPYRACHLOR*DPX-KJM44	25	140	g ai/ha	A					
	ORYZALIN*SURFLAN	4	1120	g ai/ha	A					
	NIS	100	0.25	% v/v	A					
4	GLUFOSINATE*LIBERTY	1.67	409.15	g ai/ha	A	8 cd	85 bc	80 a-d	67 b-f	3 f
	MESOTRIONE*CALLISTO	4	140	g ai/ha	A					
	ORYZALIN*SURFLAN	4	1120	g ai/ha	A					
	NIS	100	0.25	% v/v	A					
5	GLUFOSINATE*LIBERTY	1.67	409.15	g ai/ha	A	12 bcd	88 abc	75 bcd	72 b-e	7 ef
	MESOTRIONE*CALLISTO	4	280	g ai/ha	A					
	ORYZALIN*SURFLAN	4	1120	g ai/ha	A					
	NIS	100	0.25	% v/v	A					
6	GLUFOSINATE*LIBERTY	1.67	409.15	g ai/ha	A	15 bcd	88 abc	67 d	58 ef	12 def
	HALOSULFURON*SANDEA	75	52.5	g ai/ha	A					
	ORYZALIN*SURFLAN	4	1120	g ai/ha	A					
	NIS	100	0.25	% v/v	A					
7	GLUFOSINATE*LIBERTY	1.67	409.15	g ai/ha	A	23 ab	92 ab	67 d	57 ef	18 d
	HALOSULFURON*SANDEA	75	105	g ai/ha	A					
	ORYZALIN*SURFLAN	4	1120	g ai/ha	A					
	NIS	100	0.25	% v/v	A					
8	GLUFOSINATE*LIBERTY	1.67	409.15	g ai/ha	A	18 a-d	95 a	83 abc	82 ab	12 def
	TRIFLOXYSULFURON*ENVOKE	75	6.6	g ai/ha	A					
	ORYZALIN*SURFLAN	4	1120	g ai/ha	A					
	NIS	100	0.25	% v/v	A					
9	GLUFOSINATE*LIBERTY	1.67	409.15	g ai/ha	A	8 cd	88 abc	67 d	65 c-f	7 ef
	TRIFLOXYSULFURON*ENVOKE	75	13.1	g ai/ha	A					
	ORYZALIN*SURFLAN	4	1120	g ai/ha	A					
	NIS	100	0.25	% v/v	A					
10	GLUFOSINATE*LIBERTY	1.67	409.15	g ai/ha	A	8 cd	80 c	82 abc	80 abc	5 f
	SIMAZINE*PRINCEP	4	4500	g ai/ha	A					
	ORYZALIN*SURFLAN	4	1120	g ai/ha	A					
	NIS	100	0.25	% v/v	A					
11	GLUFOSINATE*LIBERTY	1.67	409.15	g ai/ha	A	15 bcd	97 a	88 ab	63 def	12 def
	FLUMIOXAZIN*CHATEAU	51	430	g ai/ha	A					
	ORYZALIN*SURFLAN	4	1120	g ai/ha	A					

NIS

100 0.25 % v/v A

University of Tennessee - Knoxville

					W Weed TAROF Common dand>	W Weed GGGGG Grasses	W Weed TRFRE Dutch clover			
Pest Type					VACMY				VACMY	
Pest Code					BPER				BPER	
Pest Name					Blackberry				Blackberry	
Crop Code					Apache				Apache	
BBCH Scale					4/6/08	4/6/08	4/6/08	4/6/08	19/6/08	
Crop Name					PHYGEN	CONTRO	CONTRO	CONTRO	PHYGEN	
Crop Variety					%	%	%	%	%	
Rating Date					15 15	15 15	15 15	15 15	30 30	
Rating Data Type					15 DA-A	15 DA-A	15 DA-A	15 DA-A	30 DA-A	
Rating Unit					0	0	0	0	0	
Collection Basis Unit										
Days After First/Last Applic.										
Trt-Eval Interval										
Number of Decimals										
Trt No.	Treatment Name	Form Conc	Rate	Rate Unit	Appl Code	1	2	3	4	5
12	GLUFOSINATE*LIBERTY	1.67	409.15	g ai/ha	A	18 a-d	97 a	83 abc	78 a-d	18 d
	FLUMIOXAZIN*CHATEAU	51	860	g ai/ha	A					
	ORYZALIN*SURFLAN	4	1120	g ai/ha	A					
	NIS	100	0.25	% v/v	A					
13	GLUFOSINATE*LIBERTY	1.67	409.15	g ai/ha	A	20 abc	80 c	80 a-d	60 ef	15 de
	V-10142	75	560	g ai/ha	A					
	ORYZALIN*SURFLAN	4	1120	g ai/ha	A					
	NIS	100	0.25	% v/v	A					
14	GLUFOSINATE*LIBERTY	1.67	409.15	g ai/ha	A	30 a	85 bc	85 abc	78 a-d	20 cd
	V-10142	75	1120	g ai/ha	A					
	ORYZALIN*SURFLAN	4	1120	g ai/ha	A					
	NIS	100	0.25	% v/v	A					
15	GLUFOSINATE*LIBERTY	1.67	409.15	g ai/ha	A	7 d	82 c	67 d	53 f	5 f
	ORYZALIN*SURFLAN	4	1120	g ai/ha	A					
	NIS	100	0.25	% v/v	A					
LSD (P=.05)						12.6	9.9	13.7	15.4	8.9
Standard Deviation						7.5	5.9	8.2	9.2	5.3
CV						43.69	6.71	10.52	12.87	34.12
Bartlett's X2						10.12	11.424	10.139	10.358	9.018
P(Bartlett's X2)						0.753	0.652	0.752	0.664	0.701
Replicate F						0.347	6.995	0.102	1.129	0.241
Replicate Prob(F)						0.7101	0.0036	0.9031	0.3381	0.7877
Treatment F						3.133	2.942	2.965	4.995	12.063
Treatment Prob(F)						0.0053	0.0078	0.0075	0.0002	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Tennessee - Knoxville

Pest Type Pest Code Pest Name Crop Code BBCH Scale Crop Name Crop Variety Rating Date Rating Data Type Rating Unit Collection Basis Unit Days After First/Last Applic. Trt-Eval Interval Number of Decimals					W Weed TAROF Common dand>	W Weed GGGGG Grasses	W Weed TRFRE Dutch clover	VACMY BPER Blackberry Apache 18/7/08 PHYGEN %	
					19/6/08 CONTRO %	19/6/08 CONTRO %	19/6/08 CONTRO %		
					30 30 30 DA-A 0	30 30 30 DA-A 0	30 30 30 DA-A 0	59 59 59 DA-A 0	
Trt No.	Treatment Name	Form Conc	Rate	Unit	Appl Code	6	7	8	9
1	GLUFOSINATE*LIBERTY AMINOCYCLOPYRACHLOR*DPX-KJM44 ORYZALIN*SURFLAN NIS	1.67 25 4 100	409.15 35 1120 0.25	g ai/ha g ai/ha g ai/ha % v/v	A A A A	95 a	77 abc	97 a	20 bc
2	GLUFOSINATE*LIBERTY AMINOCYCLOPYRACHLOR*DPX-KJM44 ORYZALIN*SURFLAN NIS	1.67 25 4 100	409.15 70 1120 0.25	g ai/ha g ai/ha g ai/ha % v/v	A A A A	93 a	77 abc	97 a	27 ab
3	GLUFOSINATE*LIBERTY AMINOCYCLOPYRACHLOR*DPX-KJM44 ORYZALIN*SURFLAN NIS	1.67 25 4 100	409.15 140 1120 0.25	g ai/ha g ai/ha g ai/ha % v/v	A A A A	98 a	85 ab	98 a	32 a
4	GLUFOSINATE*LIBERTY MESOTRIONE*CALLISTO ORYZALIN*SURFLAN NIS	1.67 4 4 100	409.15 140 1120 0.25	g ai/ha g ai/ha g ai/ha % v/v	A A A A	70 bc	80 abc	62 def	3 fgh
5	GLUFOSINATE*LIBERTY MESOTRIONE*CALLISTO ORYZALIN*SURFLAN NIS	1.67 4 4 100	409.15 280 1120 0.25	g ai/ha g ai/ha g ai/ha % v/v	A A A A	83 abc	83 ab	77 bc	5 e-h
6	GLUFOSINATE*LIBERTY HALOSULFURON*SANDEA ORYZALIN*SURFLAN NIS	1.67 75 4 100	409.15 52.5 1120 0.25	g ai/ha g ai/ha g ai/ha % v/v	A A A A	72 bc	70 cd	52 fg	8 d-g
7	GLUFOSINATE*LIBERTY HALOSULFURON*SANDEA ORYZALIN*SURFLAN NIS	1.67 75 4 100	409.15 105 1120 0.25	g ai/ha g ai/ha g ai/ha % v/v	A A A A	83 abc	63 de	52 fg	5 e-h
8	GLUFOSINATE*LIBERTY TRIFLOXYSULFURON*ENVOKE ORYZALIN*SURFLAN NIS	1.67 75 4 100	409.15 6.6 1120 0.25	g ai/ha g ai/ha g ai/ha % v/v	A A A A	98 a	82 abc	97 a	2 gh
9	GLUFOSINATE*LIBERTY TRIFLOXYSULFURON*ENVOKE ORYZALIN*SURFLAN NIS	1.67 75 4 100	409.15 13.1 1120 0.25	g ai/ha g ai/ha g ai/ha % v/v	A A A A	92 a	83 ab	87 ab	3 fgh
10	GLUFOSINATE*LIBERTY SIMAZINE*PRINCEP ORYZALIN*SURFLAN NIS	1.67 4 4 100	409.15 4500 1120 0.25	g ai/ha g ai/ha g ai/ha % v/v	A A A A	42 d	88 a	67 cde	3 fgh
11	GLUFOSINATE*LIBERTY FLUMIOXAZIN*CHATEAU ORYZALIN*SURFLAN NIS	1.67 51 4 100	409.15 430 1120 0.25	g ai/ha g ai/ha g ai/ha % v/v	A A A A	81 abc	87 ab	57 efg	10 def
12	GLUFOSINATE*LIBERTY FLUMIOXAZIN*CHATEAU ORYZALIN*SURFLAN NIS	1.67 51 4 100	409.15 860 1120 0.25	g ai/ha g ai/ha g ai/ha % v/v	A A A A	92 a	83 ab	58 efg	15 cd
13	GLUFOSINATE*LIBERTY V-10142 ORYZALIN*SURFLAN	1.67 75 4	409.15 560 1120	g ai/ha g ai/ha g ai/ha	A A A	95 a	75 bcd	48 fg	12 de

NIS

100 0.25 % v/v A

University of Tennessee - Knoxville

Pest Type					W Weed TAROF Common dand>	W Weed GGGGG Grasses	W Weed TRFRE Dutch clover	
Pest Code								
Pest Name								VACMY
Crop Code								BPER
BBCH Scale								Blackberry
Crop Name								Apache
Crop Variety								18/7/08
Rating Date					19/6/08	19/6/08	19/6/08	PHYGEN
Rating Data Type					CONTRO	CONTRO	CONTRO	%
Rating Unit					%	%	%	%
Collection Basis Unit								
Days After First/Last Applic.					30 30	30 30	30 30	59 59
Trt-Eval Interval					30 DA-A	30 DA-A	30 DA-A	59 DA-A
Number of Decimals					0	0	0	0
Trt Treatment	Form	Rate	Appl					
No. Name	Conc	Rate	Unit	Code	6	7	8	9
14 GLUFOSINATE*LIBERTY	1.67	409.15	g ai/ha	A	88 ab	82 abc	75 bcd	20 bc
V-10142	75	1120	g ai/ha	A				
ORYZALIN*SURFLAN	4	1120	g ai/ha	A				
NIS	100	0.25	% v/v	A				
15 GLUFOSINATE*LIBERTY	1.67	409.15	g ai/ha	A	63 c	57 e	47 g	0 h
ORYZALIN*SURFLAN	4	1120	g ai/ha	A				
NIS	100	0.25	% v/v	A				
LSD (P=.05)					20.3	12.5	14.0	7.9
Standard Deviation					12.1	7.5	8.3	4.7
CV					14.61	9.57	11.7	43.3
Bartlett's X2					31.67	13.419	18.849	6.861
P(Bartlett's X2)					0.003*	0.416	0.171	0.867
Replicate F					1.254	1.556	1.568	0.492
Replicate Prob(F)					0.3014	0.2294	0.2269	0.6170
Treatment F					5.000	4.191	16.599	12.645
Treatment Prob(F)					0.0002	0.0007	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Tennessee - Knoxville

Pest Type					W Weed	W Weed	W Weed	W Weed	
Pest Code					TAROF	GGGGG	TRFRE	EPHMA	
Pest Name					Common dand>	Grasses	Dutch clover	Spotted spu>	
Crop Code									
BBCH Scale									
Crop Name									
Crop Variety									
Rating Date					18/7/08	18/7/08	18/7/08	18/7/08	
Rating Data Type					CONTRO	CONTRO	CONTRO	CONTRO	
Rating Unit					%	%	%	%	
Collection Basis Unit									
Days After First/Last Applic.					59 59	59 59	59 59	59 59	
Trt-Eval Interval					59 DA-A	59 DA-A	59 DA-A	59 DA-A	
Number of Decimals					0	0	0	0	
Trt No.	Treatment Name	Form Conc	Rate	Unit	Appl Code	10	11	12	13
1	GLUFOSINATE*LIBERTY AMINOCYCLOPYRACHLOR*DPX-KJM44 ORYZALIN*SURFLAN NIS	1.67 25 4 100	409.15 35 1120 0.25	g ai/ha g ai/ha g ai/ha % v/v	A A A A	78 bc	50 de	98 a	45 bcd
2	GLUFOSINATE*LIBERTY AMINOCYCLOPYRACHLOR*DPX-KJM44 ORYZALIN*SURFLAN NIS	1.67 25 4 100	409.15 70 1120 0.25	g ai/ha g ai/ha g ai/ha % v/v	A A A A	91 ab	53 d	99 a	72 ab
3	GLUFOSINATE*LIBERTY AMINOCYCLOPYRACHLOR*DPX-KJM44 ORYZALIN*SURFLAN NIS	1.67 25 4 100	409.15 140 1120 0.25	g ai/ha g ai/ha g ai/ha % v/v	A A A A	99 a	70 a-d	99 a	83 ab
4	GLUFOSINATE*LIBERTY MESOTRIONE*CALLISTO ORYZALIN*SURFLAN NIS	1.67 4 4 100	409.15 140 1120 0.25	g ai/ha g ai/ha g ai/ha % v/v	A A A A	75 bc	62 bcd	60 d-g	18 cde
5	GLUFOSINATE*LIBERTY MESOTRIONE*CALLISTO ORYZALIN*SURFLAN NIS	1.67 4 4 100	409.15 280 1120 0.25	g ai/ha g ai/ha g ai/ha % v/v	A A A A	63 cde	62 bcd	72 cde	18 cde
6	GLUFOSINATE*LIBERTY HALOSULFURON*SANDEA ORYZALIN*SURFLAN NIS	1.67 75 4 100	409.15 52.5 1120 0.25	g ai/ha g ai/ha g ai/ha % v/v	A A A A	47 ef	52 de	42 gh	12 de
7	GLUFOSINATE*LIBERTY HALOSULFURON*SANDEA ORYZALIN*SURFLAN NIS	1.67 75 4 100	409.15 105 1120 0.25	g ai/ha g ai/ha g ai/ha % v/v	A A A A	45 ef	52 de	37 h	22 cde
8	GLUFOSINATE*LIBERTY TRIFLOXYSULFURON*ENVOKE ORYZALIN*SURFLAN NIS	1.67 75 4 100	409.15 6.6 1120 0.25	g ai/ha g ai/ha g ai/ha % v/v	A A A A	75 bc	68 a-d	96 ab	75 ab
9	GLUFOSINATE*LIBERTY TRIFLOXYSULFURON*ENVOKE ORYZALIN*SURFLAN NIS	1.67 75 4 100	409.15 13.1 1120 0.25	g ai/ha g ai/ha g ai/ha % v/v	A A A A	66 cd	82 abc	90 abc	53 bc
10	GLUFOSINATE*LIBERTY SIMAZINE*PRINCEP ORYZALIN*SURFLAN NIS	1.67 4 4 100	409.15 4500 1120 0.25	g ai/ha g ai/ha g ai/ha % v/v	A A A A	37 f	65 a-d	58 d-g	27 cde
11	GLUFOSINATE*LIBERTY FLUMIOXAZIN*CHATEAU ORYZALIN*SURFLAN NIS	1.67 51 4 100	409.15 430 1120 0.25	g ai/ha g ai/ha g ai/ha % v/v	A A A A	63 cde	60 cd	48 fgh	99 a
12	GLUFOSINATE*LIBERTY FLUMIOXAZIN*CHATEAU ORYZALIN*SURFLAN NIS	1.67 51 4 100	409.15 860 1120 0.25	g ai/ha g ai/ha g ai/ha % v/v	A A A A	75 bc	85 a	55 e-h	99 a
13	GLUFOSINATE*LIBERTY V-10142 ORYZALIN*SURFLAN	1.67 75 4	409.15 560 1120	g ai/ha g ai/ha g ai/ha	A A A	72 c	77 abc	63 def	50 bc

NIS

100 0.25 % v/v A

University of Tennessee - Knoxville

Pest Type					W Weed	W Weed	W Weed	W Weed	
Pest Code					TAROF	GGGGG	TRFRE	EPHMA	
Pest Name					Common dand>	Grasses	Dutch clover	Spotted spu>	
Crop Code									
BBCH Scale									
Crop Name									
Crop Variety									
Rating Date					18/7/08	18/7/08	18/7/08	18/7/08	
Rating Data Type					CONTRO	CONTRO	CONTRO	CONTRO	
Rating Unit					%	%	%	%	
Collection Basis Unit									
Days After First/Last Applic.					59 59	59 59	59 59	59 59	
Trt-Eval Interval					59 DA-A	59 DA-A	59 DA-A	59 DA-A	
Number of Decimals					0	0	0	0	
Trt No.	Treatment Name	Form Conc	Rate	Unit	Appl Code	10	11	12	13
14	GLUFOSINATE*LIBERTY V-10142	1.67	409.15	g ai/ha	A	82 abc	83 ab	77 bcd	93 a
	ORYZALIN*SURFLAN	75	1120	g ai/ha	A				
	NIS	4	1120	g ai/ha	A				
	NIS	100	0.25	% v/v	A				
15	GLUFOSINATE*LIBERTY	1.67	409.15	g ai/ha	A	50 def	30 e	40 gh	0 e
	ORYZALIN*SURFLAN	4	1120	g ai/ha	A				
	NIS	100	0.25	% v/v	A				
LSD (P=.05)						18.5	23.1	21.0	38.0
Standard Deviation						11.1	13.8	12.5	22.7
CV						16.31	21.74	18.19	44.51
Bartlett's X2						17.514	21.491	24.138	19.499
P(Bartlett's X2)						0.177	0.09	0.019*	0.053
Replicate F						1.409	1.539	1.148	2.863
Replicate Prob(F)						0.2619	0.2328	0.3323	0.0745
Treatment F						7.521	3.543	10.041	6.719
Treatment Prob(F)						0.0001	0.0023	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, LSD)

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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Pest Type Pest Code Pest Name Crop Code BBCH Scale Crop Name Crop Variety Rating Date Rating Data Type Rating Unit Collection Basis Unit Days After First/Last Applic. Trt-Eval Interval Number of Decimals					W Weed LEPVI Virginia pe>	VACMY BPER Blackberry Apache 18/7/08 YIELD KG Harv 1 59 59 59 DA-A 0	VACMY BPER Blackberry Apache 24/7/08 YIELD KG Harv 2 65 65 65 DA-A 2	VACMY BPER Blackberry Apache 30/7/08 YIELD KG Harv 3 71 71 71 DA-A 2	VACMY BPER Blackberry Apache 6/8/08 YIELD KG Harv 4 78 78 78 DA-A 2	
Trt No.	Treatment Name	Form Conc	Rate	Unit	Appl Code	14	15	16	17	18
1	GLUFOSINATE*LIBERTY AMINOCYCLOPYRACHLOR*DPX-KJM44 ORYZALIN*SURFLAN NIS	1.67 25 4 100	409.15 35 1120 0.25	g ai/ha g ai/ha g ai/ha % v/v	A A A A	3 a	0.82 a	1.35 a	0.73 ef	0.43 a
2	GLUFOSINATE*LIBERTY AMINOCYCLOPYRACHLOR*DPX-KJM44 ORYZALIN*SURFLAN NIS	1.67 25 4 100	409.15 35 1120 0.25	g ai/ha g ai/ha g ai/ha % v/v	A A A A	45 a	2.03 a	2.00 a	0.91 c-f	0.35 a
3	GLUFOSINATE*LIBERTY AMINOCYCLOPYRACHLOR*DPX-KJM44 ORYZALIN*SURFLAN NIS	1.67 25 4 100	409.15 140 1120 0.25	g ai/ha g ai/ha g ai/ha % v/v	A A A A	61 a	1.52 a	1.37 a	0.82 def	0.32 a
4	GLUFOSINATE*LIBERTY MESOTRIONE*CALLISTO ORYZALIN*SURFLAN NIS	1.67 4 4 100	409.15 140 1120 0.25	g ai/ha g ai/ha g ai/ha % v/v	A A A A	53 a	2.20 a	2.89 a	2.13 a-d	0.79 a
5	GLUFOSINATE*LIBERTY MESOTRIONE*CALLISTO ORYZALIN*SURFLAN NIS	1.67 4 4 100	409.15 280 1120 0.25	g ai/ha g ai/ha g ai/ha % v/v	A A A A	43 a	2.23 a	4.74 a	2.77 a	0.77 a
6	GLUFOSINATE*LIBERTY HALOSULFURON*SANDEA ORYZALIN*SURFLAN NIS	1.67 75 4 100	409.15 52.5 1120 0.25	g ai/ha g ai/ha g ai/ha % v/v	A A A A	80 a	1.49 a	2.78 a	1.81 a-e	0.48 a
7	GLUFOSINATE*LIBERTY HALOSULFURON*SANDEA ORYZALIN*SURFLAN NIS	1.67 75 4 100	409.15 105 1120 0.25	g ai/ha g ai/ha g ai/ha % v/v	A A A A	65 a	1.42 a	1.48 a	0.77 def	0.23 a
8	GLUFOSINATE*LIBERTY TRIFLOXYSULFURON*ENVOKE ORYZALIN*SURFLAN NIS	1.67 75 4 100	409.15 6.6 1120 0.25	g ai/ha g ai/ha g ai/ha % v/v	A A A A	45 a	1.14 a	1.61 a	1.23 b-f	0.33 a
9	GLUFOSINATE*LIBERTY TRIFLOXYSULFURON*ENVOKE ORYZALIN*SURFLAN NIS	1.67 75 4 100	409.15 13.1 1120 0.25	g ai/ha g ai/ha g ai/ha % v/v	A A A A	91 a	2.27 a	2.66 a	2.22 abc	0.87 a
10	GLUFOSINATE*LIBERTY SIMAZINE*PRINCEP ORYZALIN*SURFLAN NIS	1.67 4 4 100	409.15 4500 1120 0.25	g ai/ha g ai/ha g ai/ha % v/v	A A A A	43 a	1.16 a	2.17 a	1.10 b-f	0.75 a
11	GLUFOSINATE*LIBERTY FLUMIOXAZIN*CHATEAU ORYZALIN*SURFLAN NIS	1.67 51 4 100	409.15 430 1120 0.25	g ai/ha g ai/ha g ai/ha % v/v	A A A A	40 a	1.74 a	2.02 a	1.21 b-f	0.51 a
12	GLUFOSINATE*LIBERTY FLUMIOXAZIN*CHATEAU ORYZALIN*SURFLAN NIS	1.67 51 4 100	409.15 860 1120 0.25	g ai/ha g ai/ha g ai/ha % v/v	A A A A	23 a	1.87 a	2.72 a	2.00 a-e	0.59 a
13	GLUFOSINATE*LIBERTY V-10142 ORYZALIN*SURFLAN	1.67 75 4	409.15 560 1120	g ai/ha g ai/ha g ai/ha	A A A	81 a	1.39 a	1.92 a	1.53 a-f	0.81 a

NIS

100 0.25 % v/v A

University of Tennessee - Knoxville

Pest Type					W Weed					
Pest Code					LEPVI					
Pest Name					Virginia pe>					
Crop Code						VACMY	VACMY	VACMY	VACMY	
BBCH Scale						BPER	BPER	BPER	BPER	
Crop Name						Blackberry	Blackberry	Blackberry	Blackberry	
Crop Variety						Apache	Apache	Apache	Apache	
Rating Date					18/7/08	18/7/08	24/7/08	30/7/08	6/8/08	
Rating Data Type					CONTRO	YIELD	YIELD	YIELD	YIELD	
Rating Unit					%	KG	KG	KG	KG	
Collection Basis Unit						Harv 1	Harv 2	Harv 3	Harv 4	
Days After First/Last Applic.					59 59	59 59	65 65	71 71	78 78	
Trt-Eval Interval					59 DA-A	59 DA-A	65 DA-A	71 DA-A	78 DA-A	
Number of Decimals					0	2	2	2	2	
Trt No.	Treatment Name	Form Conc	Rate	Unit	Appl Code	14	15	16	17	18
14	GLUFOSINATE*LIBERTY V-10142	1.67	409.15	g ai/ha	A	71 a	0.61 a	0.83 a	0.30 f	0.18 a
	ORYZALIN*SURFLAN NIS	4	1120	g ai/ha	A					
		100	0.25	% v/v	A					
15	GLUFOSINATE*LIBERTY	1.67	409.15	g ai/ha	A	0 a	1.50 a	2.23 a	2.37 ab	0.87 a
	ORYZALIN*SURFLAN	4	1120	g ai/ha	A					
	NIS	100	0.25	% v/v	A					
LSD (P=.05)						57.6	1.470	2.302	1.390	0.644
Standard Deviation						34.3	0.878	1.374	0.829	0.385
CV						69.01	56.25	62.89	56.81	69.67
Bartlett's X2						14.743	19.54	16.357	12.186	5.113
P(Bartlett's X2)						0.324	0.145	0.292	0.591	0.984
Replicate F						0.668	7.826	1.645	1.549	0.517
Replicate Prob(F)						0.5216	0.0021	0.2119	0.2307	0.6021
Treatment F						1.818	0.994	1.368	2.271	1.191
Treatment Prob(F)						0.0933	0.4856	0.2346	0.0327	0.3362

Means followed by same letter do not significantly differ (P=.05, LSD)

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Tennessee - Knoxville

Pest Type						VACMY BPER Blackberry Apache 30/9/08 YIELD KG Total 133 133 133 DA-A 2
Pest Code						
Pest Name						
Crop Code						
BBCH Scale						
Crop Name						
Crop Variety						
Rating Date						
Rating Data Type						
Rating Unit						
Collection Basis Unit						
Days After First/Last Applic.						
Trt-Eval Interval						
Number of Decimals						
Trt No.	Treatment Name	Form Conc	Rate	Rate Unit	Appl Code	
1	GLUFOSINATE*LIBERTY	1.67	409.15	g ai/ha	A	3.32 a
	AMINOCYCLOPYRACHLOR*DPX-KJM44	25	35	g ai/ha	A	
	ORYZALIN*SURFLAN	4	1120	g ai/ha	A	
	NIS	100	0.25	% v/v	A	
2	GLUFOSINATE*LIBERTY	1.67	409.15	g ai/ha	A	5.30 a
	AMINOCYCLOPYRACHLOR*DPX-KJM44	25	70	g ai/ha	A	
	ORYZALIN*SURFLAN	4	1120	g ai/ha	A	
	NIS	100	0.25	% v/v	A	
3	GLUFOSINATE*LIBERTY	1.67	409.15	g ai/ha	A	4.03 a
	AMINOCYCLOPYRACHLOR*DPX-KJM44	25	140	g ai/ha	A	
	ORYZALIN*SURFLAN	4	1120	g ai/ha	A	
	NIS	100	0.25	% v/v	A	
4	GLUFOSINATE*LIBERTY	1.67	409.15	g ai/ha	A	8.01 a
	MESOTRIONE*CALLISTO	4	140	g ai/ha	A	
	ORYZALIN*SURFLAN	4	1120	g ai/ha	A	
	NIS	100	0.25	% v/v	A	
5	GLUFOSINATE*LIBERTY	1.67	409.15	g ai/ha	A	10.51 a
	MESOTRIONE*CALLISTO	4	280	g ai/ha	A	
	ORYZALIN*SURFLAN	4	1120	g ai/ha	A	
	NIS	100	0.25	% v/v	A	
6	GLUFOSINATE*LIBERTY	1.67	409.15	g ai/ha	A	6.57 a
	HALOSULFURON*SANDEA	75	52.5	g ai/ha	A	
	ORYZALIN*SURFLAN	4	1120	g ai/ha	A	
	NIS	100	0.25	% v/v	A	
7	GLUFOSINATE*LIBERTY	1.67	409.15	g ai/ha	A	3.90 a
	HALOSULFURON*SANDEA	75	105	g ai/ha	A	
	ORYZALIN*SURFLAN	4	1120	g ai/ha	A	
	NIS	100	0.25	% v/v	A	
8	GLUFOSINATE*LIBERTY	1.67	409.15	g ai/ha	A	4.31 a
	TRIFLOXYSULFURON*ENVOKE	75	6.6	g ai/ha	A	
	ORYZALIN*SURFLAN	4	1120	g ai/ha	A	
	NIS	100	0.25	% v/v	A	
9	GLUFOSINATE*LIBERTY	1.67	409.15	g ai/ha	A	8.03 a
	TRIFLOXYSULFURON*ENVOKE	75	13.1	g ai/ha	A	
	ORYZALIN*SURFLAN	4	1120	g ai/ha	A	
	NIS	100	0.25	% v/v	A	
10	GLUFOSINATE*LIBERTY	1.67	409.15	g ai/ha	A	5.18 a
	SIMAZINE*PRINCEP	4	4500	g ai/ha	A	
	ORYZALIN*SURFLAN	4	1120	g ai/ha	A	
	NIS	100	0.25	% v/v	A	
11	GLUFOSINATE*LIBERTY	1.67	409.15	g ai/ha	A	5.48 a
	FLUMIOXAZIN*CHATEAU	51	430	g ai/ha	A	
	ORYZALIN*SURFLAN	4	1120	g ai/ha	A	
	NIS	100	0.25	% v/v	A	
12	GLUFOSINATE*LIBERTY	1.67	409.15	g ai/ha	A	7.18 a
	FLUMIOXAZIN*CHATEAU	51	860	g ai/ha	A	
	ORYZALIN*SURFLAN	4	1120	g ai/ha	A	
	NIS	100	0.25	% v/v	A	
13	GLUFOSINATE*LIBERTY	1.67	409.15	g ai/ha	A	5.65 a
	V-10142	75	560	g ai/ha	A	
	ORYZALIN*SURFLAN	4	1120	g ai/ha	A	

NIS

100 0.25 % v/v A

University of Tennessee - Knoxville

Pest Type						
Pest Code						
Pest Name						
Crop Code						VACMY
BBCH Scale						BPER
Crop Name						Blackberry
Crop Variety						Apache
Rating Date						30/9/08
Rating Data Type						YIELD
Rating Unit						KG
Collection Basis Unit						Total
Days After First/Last Applic.						133 133
Trt-Eval Interval						133 DA-A
Number of Decimals						2
Trt No.	Treatment Name	Form Conc	Rate	Rate Unit	Appl Code	
14	GLUFOSINATE*LIBERTY V-10142	1.67	409.15	g ai/ha	A	19
	ORYZALIN*SURFLAN NIS	75	1120	g ai/ha	A	1.92 a
		4	1120	g ai/ha	A	
		100	0.25	% v/v	A	
15	GLUFOSINATE*LIBERTY	1.67	409.15	g ai/ha	A	6.98 a
	ORYZALIN*SURFLAN	4	1120	g ai/ha	A	
	NIS	100	0.25	% v/v	A	
LSD (P=.05)						5.056
Standard Deviation						3.018
CV						52.42
Bartlett's X2						18.009
P(Bartlett's X2)						0.206
Replicate F						3.230
Replicate Prob(F)						0.0553
Treatment F						1.571
Treatment Prob(F)						0.1522

Means followed by same letter do not significantly differ (P=.05, LSD)

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Tennessee - Knoxville

Experimental broadleaf herbicide programs for weed control in blackberries

Trial ID: BLACKBERRY100 Protocol ID: BLACKBERRY100
 Location: Crossville, TN Study Director: Gregory R. Armel
 Investigator: Gregory R. Armel

General Trial Information

Study Director: Gregory R. Armel **Title:** Assistant Professor
Affiliation: University of Tennessee
Postal Code: 37996 **E-mail:** garmel@utk.edu
Investigator: Gregory R. Armel

Trial Location

City: Crossville **Trial Status:** ESTABLISHED
State/Prov.: Tennessee
Country: USA **Initiation Date:** 20/5/08
 Planned Completion Date: 6/8/08

Crop Description

Crop 1: VACMY Vaccinium myrtillus Blackberry
Variety: Apache
BBCH Scale: BPER
Planting Method: TRANSPLANTED - HAND

Pest Description

Pest 1 Type: W **Code:** TAROF Taraxacum officinale
 Common Name: Common dandelion
Pest 2 Type: W **Code:** GGGGG Gramineae
 Common Name: Grasses
 Description: fescue and bluegrass
Pest 3 Type: W **Code:** TRFRE Trifolium repens
 Common Name: Dutch clover
Pest 4 Type: W **Code:** EPHMA Euphorbia maculata
 Common Name: Spotted spurge
Pest 5 Type: W **Code:** LEPVI Lepidium virginicum
 Common Name: Virginia pepperweed

Site and Design

Plot Width, Unit: 10 FT
Plot Length, Unit: 20 FT
Replications: 3 **Study Design:** Randomized Complete Block

Application Description

	A
Application Date:	20/5/08
Time of Day:	4:45 pm
Application Method:	SPRAY
Application Timing:	POSPOS
Application Placement:	BRODIR
Applied By:	Armel, G.
Air Temperature, Unit:	65 F
Wind Velocity, Unit:	25 MPH
% Cloud Cover:	45

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	VACMY BPER
Height, Unit:	0.5 ft
Height Minimum, Maximum:	6

University of Tennessee - Knoxville

Pest Stage At Each Application

A	
Pest 1 Code, Disc., Scale:	TAROF W
Diameter, Unit:	6 in
Height, Unit:	14
Pest 2 Code, Disc., Scale:	GGGGG W
Height, Unit:	1 in
Height Minimum, Maximum:	14
Pest 3 Code, Disc., Scale:	TRFRE W
Height, Unit:	1 in
Height Minimum, Maximum:	6
Pest 4 Code, Disc., Scale:	EPHMA W
Height, Unit:	1 in
Height Minimum, Maximum:	6
Pest 5 Code, Disc., Scale:	LEPVI W
Height, Unit:	1 in
Height Minimum, Maximum:	6

Application Equipment

A	
Appl. Equipment:	Backpack
Nozzle Type:	Even
Nozzles/Row:	1
Ground Speed, Unit:	3 MPH
Carrier:	Water
Spray Volume, Unit:	23 GPA
Mix Size, Unit:	0.8 Liters
Propellant:	CO2
Tank Mix (Y/N):	Y

University of Tennessee - Knoxville

Evaluation of herbicide mixtures with Brassica meal for weed control in strawberries grown under plastic

Trial ID: STRAW100 Protocol ID: STRAW100
 Location: Knoxville, TN Study Director: Greg Armel, Carl Sams, Dennis Deyton
 Investigator: Gregory R. Armel

Pest Type		W Weed CYPES Chufa	W Weed CYPES Chufa	W Weed LAMAM Henbit	W Weed ECHCG Common barn>	W Weed MOLVE Carpetweed				
Pest Code										
Pest Name										
Crop Code	FRASS									
BBCH Scale	BSTR									
Crop Name	Strawberry									
Crop Variety	'Chandler'									
Rating Date	20/10/08	20/10/08	20/10/08	20/10/08	20/10/08	20/10/08				
Rating Data Type	PHYGEN	CONTRO	COUPLA	COUPLA	COUPLA	COUPLA				
Rating Unit	%	%	NUMBER	NUMBER	NUMBER	NUMBER				
Days After First/Last Applic.	31 31	31 31	31 31	31 31	31 31	31 31				
Trt-Eval Interval	31 DA-A	31 DA-A	31 DA-A	31 DA-A	31 DA-A	31 DA-A				
Plant-Eval Interval	18 DP-1	18 DP-1	18 DP-1	18 DP-1	18 DP-1	18 DP-1				
Number of Decimals	0	0	1	1	1	1				
Trt Treatment No. Name	Form Conc	Rate Rate	Appl Unit	Code	1	2	3	4	5	6
1 MUSTARD MEAL	100	2240	kg ai/ha	A	18 ab	28 ef	10.3 a	0.8 a	0.0 b	0.0 a
2 HALOSULFURON*SANDEA	75	26.3	g ai/ha	A	16 ab	76 a-d	3.3 a	2.5 a	0.0 b	0.0 a
3 HALOSULFURON*SANDEA	75	52.5	g ai/ha	A	16 ab	71 a-d	4.5 a	6.5 a	0.0 b	0.5 a
4 TRIFLOXYSULFURON*ENVOKE	75	5.25	g ai/ha	A	26 ab	84 ab	2.5 a	1.5 a	0.0 b	0.0 a
5 TRIFLOXYSULFURON*ENVOKE	75	10.5	g ai/ha	A	18 ab	92 ab	2.0 a	0.5 a	0.0 b	0.0 a
6 SULFENTRAZONE*SPARTAN	4	140	g ai/ha	A	14 bc	51 cde	8.0 a	1.0 a	0.0 b	0.0 a
7 SULFENTRAZONE*SPARTAN	4	280	g ai/ha	A	23 ab	76 a-d	4.5 a	0.5 a	0.0 b	0.0 a
8 V-10142	75	560	g ai/ha	A	18 ab	86 ab	2.3 a	0.3 a	0.0 b	0.0 a
9 V-10142	75	1120	g ai/ha	A	24 ab	99 a	0.5 a	0.0 a	0.0 b	0.0 a
10 MUSTARD MEAL	100	2240	kg ai/ha	A	25 ab	90 ab	1.8 a	0.5 a	1.0 a	0.0 a
HALOSULFURON*SANDEA	75	26.3	g ai/ha	A						
11 MUSTARD MEAL	100	2240	kg ai/ha	A	25 ab	67 a-d	5.5 a	1.5 a	0.0 b	0.0 a
TRIFLOXYSULFURON*ENVOKE	75	5.25	g ai/ha	A						
12 MUSTARD MEAL	100	2240	kg ai/ha	A	23 ab	62 bcd	6.8 a	2.0 a	0.0 b	0.0 a
SULFENTRAZONE*SPARTAN	4	140	g ai/ha	A						
13 MUSTARD MEAL	100	4484	kg ai/ha	A	16 ab	81 abc	3.0 a	1.8 a	0.0 b	0.0 a
V-10142	75	560	g ai/ha	A						
14 MUSTARD MEAL- NO ISTs	100	2240	kg ai/ha	A	20 ab	49 de	11.3 a	1.0 a	0.0 b	0.8 a
15 BASAMID G	99	390	kg ai/ha	A	30 a	82 abc	2.8 a	0.8 a	0.0 b	0.0 a
16 Untreated Check					0 c	0 f	10.8 a	3.5 a	0.0 b	0.0 a
LSD (P=.05)					14.0	32.1	8.10	4.16	0.51	0.58
Standard Deviation					9.8	22.5	5.67	2.91	0.35	0.41
CV					50.54	32.94	114.04	190.26	565.69	520.92
Bartlett's X2					28.489	37.306	58.164	55.95	0.0	2.374
P(Bartlett's X2)					0.012*	0.001*	0.001*	0.001*	.	0.123
Replicate F					0.250	3.147	4.402	0.827	1.000	0.597
Replicate Prob(F)					0.8610	0.0341	0.0085	0.4859	0.4016	0.6200
Treatment F					1.972	5.270	1.480	1.217	2.000	1.151
Treatment Prob(F)					0.0402	0.0001	0.1537	0.2948	0.0372	0.3428

Means followed by same letter do not significantly differ (P=.05, LSD)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

University of Tennessee - Knoxville

Evaluation of herbicide mixtures with Brassica meal for weed control in strawberries grown under plastic

Trial ID: STRAW100 Protocol ID: STRAW100
 Location: Knoxville, TN Study Director: Greg Armel, Carl Sams, Dennis Deyton
 Investigator: Gregory R. Armel

General Trial Information

Study Director: Greg Armel, Carl Sams, Dennis Deyton
Affiliation: University of Tennessee
E-mail: garmel@utk.edu
Investigator: Gregory R. Armel

Trial Location

City: Knoxville **Trial Status:** ESTABLISHED
State/Prov.: Tennessee
Initiation Date: 19/9/08
Country: USA **Planned Completion Date:** 31/5/08

Crop Description

Crop 1: FRASS *Fragaria* sp. Strawberry
Variety: Chandler
BBCH Scale: BSTR **Planting Date:** 2/10/08
Planting Method: TRANSPLANTED - HAND
Row Spacing, Unit: 8 FT **Spacing Within Row, Unit:** 12 IN
Seed Bed: SMOOTH/TRASHY
Soil Moisture: SLIGHTLY WET

Pest Description

Pest 1 Type: W **Code:** CYPES *Cyperus esculentus*
Common Name: Chufa
Pest 2 Type: W **Code:** LAMAM *Lamium amplexicaule*
Common Name: Henbit
Pest 3 Type: W **Code:** ECHCG *Echinochloa crus-galli*
Common Name: Common barnyardgrass
Pest 4 Type: W **Code:** MOLVE *Mollugo verticillata*
Common Name: Carpetweed

Site and Design

Plot Width, Unit: 10 FT
Plot Length, Unit: 14 FT
Replications: 4 **Study Design:** Randomized Complete Block

Maintenance

No.	Date	Maintenance Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit	Tank Mix
1.	22/10/08	Finale	1	LB	EC	4	qt	N

Application Description

A	
Application Date:	19/9/08
Time of Day:	10:30
Application Method:	SPRAY
Application Timing:	PRETRA
Application Placement:	BROSOI
Applied By:	Armel, G.
Wind Velocity, Unit:	3 MPH
Soil Moisture:	INADEQUATE
% Cloud Cover:	30

University of Tennessee - Knoxville

Crop Stage At Each Application

A	
Crop 1 Code, BBCH Scale:	FRASS BSTR
Stage Scale Used:	IN
Stage Majority, Percent:	4
Stage Minimum, Percent:	3
Stage Maximum, Percent:	6

Pest Stage At Each Application

A	
Pest 1 Code, Disc., Scale:	CYPES W
Pest 2 Code, Disc., Scale:	LAMAM W
Pest 3 Code, Disc., Scale:	ECHCG W
Pest 4 Code, Disc., Scale:	MOLVE W

Application Equipment

A	
Appl. Equipment:	Backpack
Nozzle Type:	EVEN
Nozzle Size:	8004
Nozzles/Row:	2
Incorporation Equip.:	rototille
Hours to Incorp.:	1
Carrier:	water
Spray Volume, Unit:	23 GPA
Propellant:	CO2
Tank Mix (Y/N):	Y

Date	By	Notes
19/9/08	Armel, G.	Spread 5 quarts of yellow nutsedge tubers to the entire study.