

## Sanda Tank-Mixtures with Postemergence Grass Herbicides.

Project Code: 04-HRC-pumpkins Location: Horticulture Research Center  
Investigator: Bryan Young

Investigator: Bryan Young, Assistant Professor, Southern Illinois University

City State Zip Country: Carbondale IL 62901 USA  
Trial Status: Final Updated: 11-24-04

## Objective:

Determine the interaction of Sandea tank-mixed with postemergence grass herbicides with different adjuvants.

Weed Code	Common Name	Scientific Name
1.	DIGIS crabgrass, smooth	Digitaria ischaemum (Schreb. ex Schweig)
2.	ERACN stinkgrass	Eragrostis cilianensis (all.) e.mosher
3.	AMARE pigweed, redroot	Amaranthus retroflexus L.
4.	GGGAN grasses, annual	
5.	ANNBR broadleaf, annual	

Crop 1: CUUPE pumpkin Variety: Appalachian  
Planting Method: Seeded  
Rate: 0.25 S/ROW-FT Depth: 2.0 IN  
Row Spacing: 48 IN

Plot Width, Unit: 4 FT Plot Length, Unit: 20 FT Reps: 4  
Tillage Type: Reduced-Till Study Design: Randomized complete block

## APPLICATION DESCRIPTION

	A	B
Application Method:	Spray	Spray
Application Timing:	PRE	3WAP
Applic. Placement:	BROSOI	BROFOL

## CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	CUUPE NA	CUUPE
Height, Unit:	NA NA	IN

## APPLICATION EQUIPMENT

	A	B
Appl. Equipment:	CO2 sprayer	CO2 sprayer
Operating Pressure:	40 PSI	40 PSI
Nozzle Type:	Flat fan	Flat fan
Nozzle Size:	8003	8002
Boom Length, Unit:	3.33 FT	3.33 FT
Spray Volume, Unit:	20 GPA	20 GPA

## NOTES:

Southern Illinois University

Sandea Tank-Mixtures with Postemergence Grass Herbicides.

Project Code: 04-HRC-pumpkins Location: Horticulture Research Center  
 Investigator: Bryan Young

Weed Code																DIGIS	DIGIS	DIGIS
Crop Code																		
Rating Data Type																		
Rating Unit																		
Rating Date																		
Trt-Eval Interval																		

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	CUUPE Fruit lb/Fruit	CUUPE Fruit No./A	CUUPE Stunt Percent 6-14-04 7DAT	CUUPE Stunt Percent 7-21-04 14DAT	CUUPE Stunt Percent 8-4-04 28DAT	CUUPE DISCOLOR Percent 6-14-04 7DAT	CUUPE DISCOLOR Percent 7-21-04 14DAT	CUUPE DISCOLOR Percent 8-4-04 28DAT	CUUPE Injury Percent 6-14-04 7DAT	CUUPE Injury Percent 7-21-04 14DAT	CUUPE Injury Percent 8-4-04 28DAT	DIGIS Control Percent 7-21-04 14DAT	DIGIS Control Percent 8-4-04 28DAT	DIGIS Control Percent 9-2-04 56DAT	
1	HANDWEED									9.4	2314	-6	0	0	0	0	0	0	-6	0	0	99	99	99
2	NONTREATED									4.9	136	8	0	0	0	0	0	0	5	0	0	0	0	0
3	STRATEGY	2.1	EC	1.31	LB A/A	2.5	QT/A	PRE	A	4.7	1225	13	15	13	3	20	6	13	24	15	83	83	89	
3	SANDEA	75	WG	0.031	LB A/A	0.66	OZ/A	3WAP	B															
3	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	3WAP	B															
4	SANDEA	75	WG	0.031	LB A/A	0.66	OZ/A	3WAP	B	1.8	136	19	20	16	0	11	6	14	25	18	5	5	75	
4	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	3WAP	B															
5	SANDEA	75	WG	0.031	LB A/A	0.66	OZ/A	3WAP	B	3.2	408	23	24	26	5	19	9	21	34	28	0	3	70	
5	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	3WAP	B															
6	SANDEA	75	WG	0.031	LB A/A	0.66	OZ/A	3WAP	B	0.0	0	21	25	25	5	15	18	20	33	35	0	0	79	
6	HI-PER-OIL	100	LIQ	0.5	% V/V	0.5	% V/V	3WAP	B															
7	SELECT	2	EC	0.094	LB A/A	6	FL OZ/A	3WAP	B	1.2	272	23	19	18	1	11	11	19	23	24	80	86	92	
7	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	3WAP	B															
8	POAST	1.53	EC	0.191	LB A/A	1	PT/A	3WAP	B	1.1	272	18	20	16	1	10	6	15	24	19	79	68	91	
8	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	3WAP	B															
9	SELECT	2	EC	0.094	LB A/A	6	FL OZ/A	3WAP	B	2.8	408	21	18	21	3	6	8	20	18	24	86	91	92	
9	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	3WAP	B															
10	POAST	1.53	EC	0.191	LB A/A	1	PT/A	3WAP	B	2.1	272	18	21	16	3	5	6	18	21	19	86	85	94	
10	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	3WAP	B															
11	SELECT	2	EC	0.094	LB A/A	6	FL OZ/A	3WAP	B	1.2	136	16	23	20	0	8	5	11	25	20	88	88	94	
11	HI-PER-OIL	100	LIQ	0.5	% V/V	0.5	% V/V	3WAP	B															
12	POAST	1.53	EC	0.191	LB A/A	1	PT/A	3WAP	B	1.5	272	13	19	16	1	8	9	10	21	19	89	83	99	
12	HI-PER-OIL	100	LIQ	0.5	% V/V	0.5	% V/V	3WAP	B															
13	SANDEA	75	WG	0.031	LB A/A	0.66	OZ/A	3WAP	B	2.8	545	15	14	18	1	11	6	13	19	19	61	63	85	
13	SELECT	2	EC	0.094	LB A/A	6	FL OZ/A	3WAP	B															
13	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	3WAP	B															
14	SANDEA	75	WG	0.031	LB A/A	0.66	OZ/A	3WAP	B	0.8	272	18	18	18	3	13	10	10	25	21	81	65	83	
14	POAST	1.53	EC	0.191	LB A/A	1	PT/A	3WAP	B															
14	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	3WAP	B															
15	SANDEA	75	WG	0.031	LB A/A	0.66	OZ/A	3WAP	B	1.8	545	21	24	21	1	21	10	18	34	25	85	86	91	
15	SELECT	2	EC	0.094	LB A/A	6	FL OZ/A	3WAP	B															
15	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	3WAP	B															
16	SANDEA	75	WG	0.031	LB A/A	0.66	OZ/A	3WAP	B	3.5	1089	28	25	18	5	11	13	28	31	24	84	78	83	
16	POAST	1.53	EC	0.191	LB A/A	1	PT/A	3WAP	B															
16	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	3WAP	B															

Sandea Tank-Mixtures with Postemergence Grass Herbicides.

Project Code: 04-HRC-pumpkins Location: Horticulture Research Center  
 Investigator: Bryan Young

Weed Code																	DIGIS	DIGIS	DIGIS					
Crop Code	Rating Data Type	CUUPE Fruit	CUUPE Fruit	CUUPE Stunt	CUUPE Stunt	CUUPE Stunt	CUUPE DISCOLOR	CUUPE DISCOLOR	CUUPE DISCOLOR	CUUPE Injury	CUUPE Injury	CUUPE Injury	CUUPE Control	CUUPE Control	CUUPE Control									
Rating Unit	Rating Date	lb/Fruit	No./A	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent									
Trt-Eval Interval				6-14-04	7-21-04	8-4-04	6-14-04	7-21-04	8-4-04	6-14-04	7-21-04	8-4-04	7-21-04	8-4-04	9-2-04									
				7DAT	14DAT	28DAT	7DAT	14DAT	28DAT	7DAT	14DAT	28DAT	14DAT	28DAT	56DAT									
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code															
17	SANDEA	75	WG	0.031	LB A/A	0.66	OZ/A	3WAP	B	1.2	817	21	23	16	3	11	8	19	30	19	81	85	90	
17	SELECT	2	EC	0.094	LB A/A	6	FL OZ/A	3WAP	B															
17	HI-PER-OIL	100	LIQ	0.5	% V/V	0.5	% V/V	3WAP	B															
18	SANDEA	75	WG	0.031	LB A/A	0.66	OZ/A	3WAP	B	2.2	545	21	21	20	3	10	9	19	26	24	80	70	86	
18	POAST	1.53	EC	0.191	LB A/A	1	PT/A	3WAP	B															
18	HI-PER-OIL	100	LIQ	0.5	% V/V	0.5	% V/V	3WAP	B															
LSD (P=.05)										4.34	672.3	10.4	8.4	8.6	4.1	6.5	7.3	12.0	10.3	12.1	14.4	17.0	9.6	
Replicate F										2.596	1.039	5.753	4.274	1.855	0.479	5.419	2.539	2.025	4.809	0.843	1.707	2.610	0.220	
Replicate Prob(F)										0.0624	0.3834	0.0018	0.0091	0.1490	0.6985	0.0026	0.0668	0.1220	0.0050	0.4765	0.1773	0.0614	0.8818	
Treatment F										1.956	5.382	4.111	6.126	5.143	1.315	6.532	2.480	3.034	7.038	3.831	49.274	33.866	42.526	
Treatment Prob(F)										0.0335	0.0001	0.0001	0.0001	0.0001	0.2213	0.0001	0.0064	0.0011	0.0001	0.0001	0.0001	0.0001	0.0001	

Southern Illinois University

Sandea Tank-Mixtures with Postemergence Grass Herbicides.

Project Code: 04-HRC-pumpkins Location: Horticulture Research Center  
 Investigator: Bryan Young

Weed Code		ERACN		ERACN		ERACN		AMARE		AMARE		AMARE		GGGGG		ANNBR		GGGGG		ANNBR	
Crop Code		Control		Control		Control		Control		Control		Control		Plants		Plants		Biomass		Biomass	
Rating Data Type		7-21-04		8-4-04		9-2-04		7-21-04		8-4-04		9-2-04		1.0 SQFT		1.0 SQFT		oz/plot		oz/plot	
Rating Unit		14DAT		28DAT		56DAT		14DAT		28DAT		56DAT		10-1-04		10-1-04		10-1-04		10-1-04	
Rating Date		14DAT		28DAT		56DAT		14DAT		28DAT		56DAT		10-1-04		10-1-04		10-1-04		10-1-04	
Trt-Eval Interval		14DAT		28DAT		56DAT		14DAT		28DAT		56DAT		10-1-04		10-1-04		10-1-04		10-1-04	
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code												
1	HANDWEED									99	99	99	99	99	99	1.3	0.0	2.4	0.0		
2	NONTREATED									0	0	0	0	0	0	7.8	6.0	3.2	3.0		
3	STRATEGY	2.1	EC	1.31	LB A/A	2.5	QT/A	PRE	A	84	86	91	91	81	89	4.0	3.5	2.5	2.5		
3	SANDEA	75	WG	0.031	LB A/A	0.66	OZ/A	3WAP	B												
3	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	3WAP	B												
4	SANDEA	75	WG	0.031	LB A/A	0.66	OZ/A	3WAP	B	0	3	85	80	85	88	8.8	3.0	2.7	1.6		
4	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	3WAP	B												
5	SANDEA	75	WG	0.031	LB A/A	0.66	OZ/A	3WAP	B	0	0	86	80	80	98	9.5	0.3	3.5	0.3		
5	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	3WAP	B												
6	SANDEA	75	WG	0.031	LB A/A	0.66	OZ/A	3WAP	B	0	3	86	80	78	89	8.5	3.8	3.6	1.4		
6	HI-PER-OIL	100	LIQ	0.5	% V/V	0.5	% V/V	3WAP	B												
7	SELECT	2	EC	0.094	LB A/A	6	FL OZ/A	3WAP	B	88	85	87	0	0	63	1.8	13.3	1.2	4.1		
7	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	3WAP	B												
8	POAST	1.53	EC	0.191	LB A/A	1	PT/A	3WAP	B	83	71	88	0	0	71	3.3	11.5	1.9	3.7		
8	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	3WAP	B												
9	SELECT	2	EC	0.094	LB A/A	6	FL OZ/A	3WAP	B	88	93	90	0	0	59	1.8	14.5	0.8	5.5		
9	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	3WAP	B												
10	POAST	1.53	EC	0.191	LB A/A	1	PT/A	3WAP	B	88	89	92	0	0	55	0.0	19.0	0.0	5.2		
10	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	3WAP	B												
11	SELECT	2	EC	0.094	LB A/A	6	FL OZ/A	3WAP	B	86	89	96	0	0	65	1.3	16.8	0.4	5.0		
11	HI-PER-OIL	100	LIQ	0.5	% V/V	0.5	% V/V	3WAP	B												
12	POAST	1.53	EC	0.191	LB A/A	1	PT/A	3WAP	B	86	85	97	0	0	34	0.3	25.3	0.1	4.5		
12	HI-PER-OIL	100	LIQ	0.5	% V/V	0.5	% V/V	3WAP	B												
13	SANDEA	75	WG	0.031	LB A/A	0.66	OZ/A	3WAP	B	64	65	90	56	53	81	4.5	5.8	2.5	2.5		
13	SELECT	2	EC	0.094	LB A/A	6	FL OZ/A	3WAP	B												
13	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	3WAP	B												
14	SANDEA	75	WG	0.031	LB A/A	0.66	OZ/A	3WAP	B	84	76	88	76	61	78	7.3	5.3	2.4	1.9		
14	POAST	1.53	EC	0.191	LB A/A	1	PT/A	3WAP	B												
14	ACTIVATOR 90	100	LIQ	0.25	% V/V	0.25	% V/V	3WAP	B												
15	SANDEA	75	WG	0.031	LB A/A	0.66	OZ/A	3WAP	B	84	90	94	69	46	53	2.5	18.3	1.3	2.8		
15	SELECT	2	EC	0.094	LB A/A	6	FL OZ/A	3WAP	B												
15	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	3WAP	B												
16	SANDEA	75	WG	0.031	LB A/A	0.66	OZ/A	3WAP	B	85	79	90	81	69	65	5.0	13.8	2.3	3.5		
16	POAST	1.53	EC	0.191	LB A/A	1	PT/A	3WAP	B												
16	PRIME OIL COC	100	LIQ	1.0	% V/V	1	% V/V	3WAP	B												

Sandea Tank-Mixtures with Postemergence Grass Herbicides.

Project Code: 04-HRC-pumpkins Location: Horticulture Research Center  
 Investigator: Bryan Young

Weed Code	ERACN	ERACN	ERACN	AMARE	AMARE	AMARE	GGGGG	ANNBR	GGGGG	ANNBR
Crop Code	Control	Control	Control	Control	Control	Control	Plants	Plants	Biomass	Biomass
Rating Data Type	Percent	Percent	Percent	Percent	Percent	Percent	1.0 SQFT	1.0 SQFT	oz/plot	oz/plot
Rating Unit	7-21-04	8-4-04	9-2-04	7-21-04	8-4-04	9-2-04	10-1-04	10-1-04	10-1-04	10-1-04
Rating Date	14DAT	28DAT	56DAT	14DAT	28DAT	56DAT				
Trt-Eval Interval										

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code										
17	SANDEA	75	WG	0.031	LB A/A	0.66	OZ/A	3WAP	B	85	88	90	69	54	65	3.3	14.3	1.5	2.7
17	SELECT	2	EC	0.094	LB A/A	6	FL OZ/A	3WAP	B										
17	HI-PER-OIL	100	LIQ	0.5	% V/V	0.5	% V/V	3WAP	B										
18	SANDEA	75	WG	0.031	LB A/A	0.66	OZ/A	3WAP	B	86	68	88	79	69	81	5.3	7.3	2.1	2.7
18	POAST	1.53	EC	0.191	LB A/A	1	PT/A	3WAP	B										
18	HI-PER-OIL	100	LIQ	0.5	% V/V	0.5	% V/V	3WAP	B										
LSD (P=.05)										15.1	16.0	7.1	15.7	17.2	24.9	2.60	8.74	1.39	1.81
Replicate F										2.454	3.834	0.338	1.348	0.746	0.435	1.512	0.975	0.167	1.746
Replicate Prob(F)										0.0738	0.0150	0.7978	0.2692	0.5296	0.7292	0.2226	0.4118	0.9180	0.1692
Treatment F										47.425	40.338	74.456	52.269	37.824	7.549	10.996	5.428	4.945	6.028
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Trial Comments

1. Protocol: SIU: Walters/Young.
2. Ratings: CI and WC at POST; CI 7, 14 and 28 DA "B"; WC 14, 28 DA "B" and at harvest.
3. Yield.
4. POST timing is 3 weeks after planting but target 4-6" weeds.
5. DAT = Days after 3WAP application.
6. Fruit = Marketable harvested pumpkins. Biomass = oven dry weight of weeds. 1.0 SQFT = 1.0 square foot.