

Evaluation of West Central adjuvant systems with glyphosate for weed control in soybean at Rochester, MN, in 2008.

Behnken, Lisa M., Fritz R. Breitenbach, Ryan P. Miller, Matthew M. White and Ceara L. Suther.

The objective of this trial was to evaluate West Central adjuvant systems with glyphosate for weed control in soybeans. The research site was a Lawler loam series with a pH of 6.7 and soil test P and K levels of 36 ppm and 146 ppm, respectively. The field was spring disked and field cultivated prior to planting. The soybean variety, NK S12-P4 with Cruiser Max, was planted on June 10, 2008, at a depth of 1.5 inches in 30 inch rows at 150,000 seeds per acre. A randomized complete block design was used with four replications. Postemergence treatments were applied with a tractor-mounted sprayer delivering 20 gpa at 32 psi using Turbo Tee 11002 nozzles. Evaluations of the plots were taken on July 18 and 30, 2008. Application dates, environmental conditions, and weed stages are listed below. (University of Minnesota Extension, Regional Office – Rochester).

Date	7/2
Treatment	POST I
Temperature (F)	
Air	80
soil	91
Relative Humidity (%)	39
Wind (mph)	13
Soil moisture	Inadequate
Bean	
stage	V1-V2
height (inch)	4.0
Velvetleaf	
weed density (ft ²)	1.0
height (inch)	3.0
Common Lambsquarters	
weed density (ft ²)	3.8
height (inch)	1.1
Common Waterhemp	
weed density (ft ²)	5.3
height (inch)	2.2
Giant Ragweed	
weed density (ft ²)	0.25
height (inch)	4.0
Grass	
weed density (ft ²)	0.25
height (inch)	4.0
Winter Annuals	
weed density (ft ²)	5.0
height (inch)	2.0
Rainfall after each application (inch)	
week 1	0.87
week 2	0.92
week 3	0.60

Table 1. Performance of adjuvants systems with glyphosate for velvetleaf control in soybeans on July 18 and 30 at Rochester, MN in 2008.

Treatment	Rate	Velvetleaf Control	
		7/18	7/30
	(rate/A)		(%)
POST I			
Buccaneer Plus + Premium AMS	16 fl oz + 1 lb	61	54
Buccaneer Plus + N-Tense	16 fl oz + 0.5% v/v	63	55
Buccaneer Plus + N-Tense + Sedate	16 fl oz + 0.5% v/v + 1 pt/100 gal	60	48
Buccaneer Plus + WC073	16 fl oz + 0.75% v/v	61	49
Buccaneer Plus + N-Tense	16 fl oz + 0.25% v/v	60	48
Buccaneer Plus + WC073	16 fl oz + 0.5% v/v	59	45
Buccaneer Plus + WC073	16 fl oz + 1.0% v/v	61	50
	LSD (P=0.10)	3	4

Table 2. Performance of adjuvants with glyphosate for giant ragweed control in soybeans on July 18 and 30 at Rochester, MN in 2008.

Treatment	Rate	Giant Ragweed Control	
		7/18	7/30
	(rate/A)		(%)
POST I			
Buccaneer Plus + Premium AMS	16 fl oz + 1 lb	59	49
Buccaneer Plus + N-Tense	16 fl oz + 0.5% v/v	64	53
Buccaneer Plus + N-Tense + Sedate	16 fl oz + 0.5% v/v + 1 pt/100 gal	61	55
Buccaneer Plus + WC073	16 fl oz + 0.75% v/v	60	51
Buccaneer Plus + N-Tense	16 fl oz + 0.25% v/v	63	54
Buccaneer Plus + WC073	16 fl oz + 0.5% v/v	60	49
Buccaneer Plus + WC073	16 fl oz + 1.0% v/v	64	54
	LSD (P=0.10)	5	6

Table 3. Performance of adjuvants with glyphosate for common waterhemp control in soybeans on July 18 and 30 at Rochester, MN in 2008.

Treatment	Rate	Common Waterhemp Control	
		7/18	7/30
	(rate/A)		(%)
POST I			
Buccaneer Plus + Premium AMS	16 fl oz + 1 lb	64	55
Buccaneer Plus + N-Tense	16 fl oz + 0.5% v/v	71	61
Buccaneer Plus + N-Tense + Sedate	16 fl oz + 0.5% v/v + 1 pt/100 gal	70	59
Buccaneer Plus + WC073	16 fl oz + 0.75% v/v	64	58
Buccaneer Plus + N-Tense	16 fl oz + 0.25% v/v	61	51
Buccaneer Plus + WC073	16 fl oz + 0.5% v/v	63	49
Buccaneer Plus + WC073	16 fl oz + 1.0% v/v	63	54
	LSD (P=0.10)	9	11

