

Effect of tank mixing on the performance of imazethapyr and AC 299,263 in soybeans at Lamberton, MN in 1998. Getting, Jodie K. The objective of this study was to evaluate tank mix partners with imazethapyr and AC 299,263 for annual grass and annual broadleaf control in soybeans. This study was conducted on a Ves loam soil containing 5.0 % organic matter, pH 6.3 and soil test P and K levels of 52 and 390 lb/A, respectively. A randomized complete block design with four replications and a plot size of 10 by 30 ft was used. The test site was planted to oats in 1997. The site was fall moldboard plowed. On May 7, 1998 Asgrow 'AG 2101' glyphosate tolerant soybeans were planted in 30-inch rows at a seeding rate of 160,000 seeds/A. All treatments were applied with a tractor-mounted sprayer delivering 20 gpa at a pressure of 40 psi. The sprayer was equipped with 8002 flat-fan nozzles spaced 15 inches apart on the boom. Application dates, environmental conditions, plant sizes and rainfall data are listed below:

Date	June 2
Treatment	POST
Temperature (F)	
air	51
soil (4 inch)	61
Relative humidity (%)	79
Wind (mph)	NW 5-8
Sky	cloudy
Soil moisture	moist
Soybean	
leaf no.	V1
height (inch)	3
Yellow foxtail	
leaf no.	2 to 4
height (inch)	1 to 3
no./ft ²	104
Common lambsquarters	
leaf no.	3 to 4
height (inch)	1 to 2
no./ft ²	8
Rainfall after application (inch)	
1 week	0.17
2 week	0.50
3 week	0.39

In September, AC 299,263 applied at 0.04 lb ai/A resulted in 91% yellow foxtail control. AC 299,263 applied in combination with either acifluorfen, fomesafen, or lactofen resulted in 79%, 83%, and 81% yellow foxtail control, respectively. Imazethapyr resulted in 85% yellow foxtail control. Imazethapyr applied in combination with either acifluorfen, fomesafen, or lactofen resulted in 61%, 68%, and 70% yellow foxtail control, respectively. Imazethapyr applied in combination with NAF-75 had 83% yellow foxtail control. AC 299,263 had slightly better common lambsquarters control than imazethapyr. Soybean yields were negatively affected by the lack of control of yellow foxtail and common lambsquarters when compared to the hand-weeded check.

Table. Effect of tank mixing on the performance of imazethapyr and AC 299,263 in soybeans at Lamberton, MN in 1998 (Getting).

Treatment ^a	Rate (lb/A)	Yeft			Cola			Yield (bu/A) ^b
		6/26	7/8	9/11	6/26	7/8	9/11	
Weedy check	-	0	0	0	0	0	0	18.0
<u>POST (3 to 4-inch weeds)</u>		(% control)						
AC 299,263	0.03	91	88	88	90	85	89	50.9
AC 299,263	0.04	92	91	91	93	88	90	49.5
AC 299,263+Acif	0.04+0.1875	86	80	79	89	88	86	46.9
AC 299,263+Fome	0.04+0.24	89	83	83	94	90	91	47.0
AC 299,263+Lact	0.04+0.063	88	81	81	86	81	85	48.1
Imep	0.063	84	81	85	84	74	80	49.0
Imep+Acif	0.063+0.1875	74	65	61	79	78	83	40.2
Imep+Fome	0.063+0.24	75	71	68	84	79	83	42.1
Imep+Lact	0.063+0.063	75	65	70	80	74	78	39.4
Imep+NAF-75	0.063+0.008	84	80	83	88	81	80	45.7
Hand-weeded check	-	97	100	100	92	100	100	54.4
	LSD (0.10)	4	7	7	8	7	4	4.1

^a AC 299,263 = Raptor 1L; Acif = Status 2S; Fome = Flexstar 1.88L; Imep = Pursuit 70WDG; Lact = Cobra 2E; NAF-75 = FirstRate 84WG. All treatments were applied with nonionic surfactant at 0.25% v/v and spray grade ammonium sulfate at 2.5 lbs/A.

^b Yield adjusted to 13% moisture.