Effect of adjuvants tank-mixed with clethodim and lactofen on weed control in soybeans at Lamberton, MN in 2001. Getting, Jodie K., and Bruce D. Potter. The objective of this study was to evaluate adjuvants tank-mixed with clethodim and lactofen for annual grass and annual broadleaf weed control in glyphosate-resistant soybeans. This study was conducted on a Normania loam soil containing 4.4% organic matter, pH 6.2 and soil test P and K levels of 60 and 422 lb/A, respectively. A randomized complete block design with four replications and a plot size of 10 by 30 ft was used. The site was planted to oats in 2000 and was fall chiseled. On May 29, 2001 Pioneer '92BO5' glyphosate-resistant 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 21
Treatment	POST I
Temperature (F)	
air	66
soil (4 inch)	72
Relative humidity (%)	56
Wind (mph)	NW 5-8
Sky	clear
Soil moisture	dry
Soybean	
leaf no.	unifolioate
height (inch)	4
Yellow foxtail	
leaf no.	2 to 4
height (inch)	2 to 4
no./ft^2	31
Common lambsquarters	
leaf no.	2 to 4
height (inch)	2 to 4
no./ft^2	4
Redroot pigweed	
leaf no.	2 to 4
height (inch)	1 to 3
no./ft^2	5
Rainfall after application (inch)	
1 week	0.00
2 week	0.50
3 week	0.00

All treatments provide greater than 90% control of yellow foxtail. Foxtail control was slightly reduced (compared to clethodim and COC alone) when the 0.2 lb/acre rate of lact^1 + Pro-X or lact^2 +COC + AMS were added. All rates and adjuvant combinations with lact^1 or lact^2 performed similarly. All rates of lact^1 or lact^2 resulted in poor (48-65%) control of common lambsquarters and greater than 95% redroot pigweed control. The addition of fomesafen + COC + AMS resulted in greater common lambsquarters and poorer redroot pigweed control than any lact^1 or lact^2 combinations with clethodim. (Southwest Research and Outreach Center, University of Minnesota, Lamberton).

Table. Effect of adjuvants tank-mixed with clethodim and lactofen on weed control in soybeans at Lamberton, MN in 2001 (Getting and Potter).

		Injury		SETLU			CHEAL			AMARE			
Treatment[a]	Rate	6/25	7/2	7/2	7/11	9/11	7/2	7/11	9/11	7/2	7/11	9/11	Yield
	(lb/A or %)	(%)		----------(% control)----------									(bu/A)[b]
POST (2 to 4-inch weeds)													
Clet+Lact[1]+AMS	0.094+0.2+2.5	15	5	95	93	93	74	65	48	95	96	95	39.3
Clet+Lact[1]+AMS	0.094+0.125+2.5	14	5	91	92	93	73	73	50	94	97	95	42.0
Clet+Lact[1]+Pro-X	0.094+0.2+0.625%	19	5	95	93	91	76	76	60	95	97	95	39.9
Clet+Lact[1]+Pro-X	0.094+0.125+0.625%	19	5	94	90	93	74	70	59	95	97	95	41.4
Clet+Lact[2]+COC+AMS	0.094+0.2+0.625%+2.5	23	5	95	91	91	81	76	65	95	98	96	41.6
Clet+Lact[2]+COC+AMS	0.094+0.125+0.625%+2.5	20	5	94	91	93	80	78	61	95	98	97	40.9
Clet+Fome+COC+AMS	0.094+0.18+0.625%+2.5	15	5	95	93	95	90	88	83	93	91	90	47.0
Clet+COC+AMS	0.094+0.625%+2.5	4	3	93	94	95	0	0	0	0	0	0	32.6
Weedy Check	-	0	0	0	0	0	0	0	0	0	0	0	11.2
Weed-free check	-	2	0	100	100	100	100	100	100	100	100	100	50.6
	LSD (0.10)	4.5	1.1	1.9	2.4	2.6	6.0	7.7	12.0	1.5	3.2	3.5	5.59

[a] Clet = Select 2EC; Fome = Flexstar 1.88EC; Lact[1] = Phoenix 2EC; Lact[2] = Cobra 2EC.

[b] Yield adjusted to 13% moisture.