

Effect of spray adjuvants tank mixed with Liberty, Stout + Callisto, and Steadfast + Status in corn at Lamberton, MN in 2007. Getting, Jodie K. The objective of this study was to evaluate spray adjuvants tank mixed with either Liberty, Stout + Callisto, or Steadfast + Status for annual grass and annual broadleaf weed control in corn. This study was conducted on a Ves loam soil containing 4.3% organic matter, pH 6.5 and soil test P and K levels of 26 and 332 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 soybeans in 2006 and was fall chiseled. The area was fertilized with 150 lbs/A nitrogen applied as urea. On April 30, 2007, Pioneer '35F40' glufosinate resistant/glyphosate resistant field corn was planted in 30-inch rows at a seeding rate of 33,000 seeds/A. Tefluthrin (Force) was applied at 5.0 oz/1000 row feet in a T-band for the control of northern corn rootworm larvae. 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	May 1	May 25
Treatment	PRE	POST
Temperature (F)		
air	64	43
soil (4 inch)	66	56
Relative humidity (%)	34	76
Wind (mph)	NW 7	S 6
Sky	clear	clear
Soil moisture	dry	dry
Corn		
leaf no.	-	V4
height (inch)	-	7
Green foxtail		
leaf no.	-	3 to 4
height (inch)	-	2 to 4
no./ft ²	-	29
Common lambsquarters		
leaf no.	-	3 to 5
height (inch)	-	1 to 3
no./ft ²	-	1
Tall waterhemp		
leaf no.	-	3 to 4
height (inch)	-	1 to 3
no./ft ²	-	8
Rainfall after application (inch)		
1 week	1.83	0.14
2 week	0.15	1.90
3 week	0.06	0.19

(Southwest Research and Outreach Center, University of Minnesota, Lamberton).

Table. Effect of spray adjuvants tank mixed with Liberty in corn at Lamberton, MN in 2007 (Getting).

Treatment	Rate	Green foxtail			Common lambsquarters			Tall waterhemp		
		6/1	6/7	6/19	6/1	6/7	6/19	6/1	6/7	6/19
<u>POST (2 to 4-inch weeds)</u>	(oz/A, lb/A or %)	-----(% control)-----								
Liberty	20 oz	93	88	66	89	82	78	71	63	63
Liberty + Premium AMS	20 oz + 3 lb	94	92	74	91	89	85	84	76	73
Liberty + N-Tense	20 oz + 0.75%	95	93	75	93	91	84	89	81	79
Weedy check	-	0	0	0	0	0	0	0	0	0
	LSD (0.10)	2.6	6.3	6.1	3.9	9.0	9.4	6.9	5.8	7.2

Table Effect of spray adjuvants tank mixed with Stout + Callisto in corn at Lamberton, MN in 2007 (Getting).

Treatment	Rate	Green foxtail			Common lambsquarters			Tall waterhemp		
		6/4	6/11	6/19	6/4	6/11	6/19	6/4	6/11	6/19
<u>POST (2 to 4-inch weeds)</u>	(oz/A, lb/A or %)	-----(% control)-----								
Stout + Callisto	0.33 oz + 2 oz	60	58	43	76	90	91	79	84	86
Stout + Callisto + Premium COC + N-Tense	0.33 oz + 2 oz + 1% + 0.5%	77	85	66	98	100	98	95	98	95
Stout + Callisto + Trophy Gold + N-Tense	0.33 oz + 2 oz + 0.25% + 0.5%	80	84	60	97	99	98	96	95	93
Stout + Callisto + Premium COC + Premium AMS	0.33 oz + 2 oz + 1% + 8.5 lb/100gallon	78	91	71	98	99	97	97	97	95
Weedy check	-	0	0	0	0	0	0	0	0	0
	LSD (0.10)	5.6	5.0	4.4	4.4	4.0	3.0	3.2	6.2	4.4

Table. Effect of spray adjuvants tank mixed with Steadfast + Status in corn at Lamberton, MN in 2007 (Getting).

Treatment	Rate	Green foxtail			Common lambsquarters			Tall waterhemp		
		6/4	6/11	6/19	6/4	6/11	6/19	6/4	6/11	6/19
<u>POST (2 to 4-inch weeds)</u>	(oz/A, lb/A or %)	-----(% control)-----								
Steadfast + Status + SoyStik	0.5 oz + 1.75 oz + 1 pt	78	90	80	94	95	95	76	73	61
Steadfast + Status + SoyStik + Gardian Plus	0.5 oz + 1.75 oz + 1 pt + 1.25%	86	91	86	95	95	95	83	86	79
Steadfast + Status + SoyStik + N-Tense	0.5 oz + 1.75 oz + 1 pt + 0.5%	76	91	81	94	95	95	83	80	75
Steadfast + Status + SoyStik + WC061	0.5 oz + 1.75 oz + 1 pt + 0.75%	87	94	86	96	95	95	91	85	74
Weedy check	-	0	0	0	0	0	0	0	0	0
	LSD (0.10)	4.1	3.1	5.0	2.2	ns	ns	6.6	6.0	4.5