## **Balance Pro & Callisto**

**Evaluation of soil applied Balance Pro and Callisto, and post applied Define, Liberty, and Aatrex performance in corn at Rochester, MN in 2002.** Schaufler, Kristal L., Fritz R.Breitenbach, and Lisa M. Behnken. The objective of this trial was to evaluate weed control performance of soil applied Balance Pro and Callisto and post applied Define, Liberty, and Aatrex in corn in southeastern Minnesota. The research site was a Lawler Ioam soil containing 2.4% organic matter with a pH of 6.2 and soil test P and K levels of 35 and 132 ppm, respectively. The previous crop was soybean. The area was fertilized in the fall of 2001 with 200 lb/A Pel-lime, 200 lb/A potash and 8 tons/A turkey manure. The soil was disked twice and chisel plowed once. Spring tillage consisted of two passes with a field cultivator. The corn hybrid, NK 32-L9, was planted on May 1, 2002, at a 2-inch depth in 30-inch rows at a population of 31,000 seeds/A. A randomized complete block design with four replications was used. Preemergence (PRE) and postemergence (POST) treatments were applied with a tractormounted sprayer, delivering 20 gpa at 32 psi using TurboTee 11002 nozzles. Evaluations of the plot were taken on May 20 and June 5, 14, and 25. Application dates, environmental conditions, crop and weed stages are listed below.

Date	May 1	June 6
Treatment	PRE	POST
Temperature (F)		
air	49	70
soil	51	
Relative humidity (%)	64	59
Wind (mph)	8	16
Soil moisture	adequate	adequate
Corn		
Stage		4 collar
height (inch)		8
Giant ragweed		
weed density/ft <sup>2</sup>		9
height (inch)		10
Common lambsquarters		
weed density/ft <sup>2</sup>		5.6
height (inch)		3.9
Common waterhemp		
weed density/ft <sup>2</sup>		14.5
height (inch)		2.5
Giant foxtail		
weed density/ft <sup>2</sup>		22.1
height (inch)		4
Rainfall after application (inch)		
week 1	0.51	1.24
week 2	0.56	0.64
week 3	0.00	2.68

Post applied Liberty + Aatrex and Liberty + Aatrex + Define, and soil applied Callisto at 6.0 oz/A + Dual II Magnum resulted in the best giant ragweed control. Soil applied Balance Pro (with or without Define and Aatrex), and Callisto alone and at 3.0 oz/A with Dual II Magnum + Aatrex resulted in slightly lower giant ragweed control. Soil applied Balance Pro alone and Balance Pro + Define (with and without Aatrex), and Callisto at 3.0 oz/A alone and with Dual II Magnum + Aatrex gave slightly lower giant ragweed control. All treatments provided consistently good common lambsquaters and common waterhemp control. Postemergence applications of Liberty + Aatrex, and Liberty + Aatrex + Define, along with soil applied Balance Pro, Balance Pro + Define (with and without Aatrex) and Callisto + Dual II Magnum (with and without Aatrex) resulted in good giant foxtail control. Callisto soil applied Balance Pro at 2.25 oz/A + Define and Callisto at 6.0 oz/A + Dual II Magnum and all postemergnce treatments. (Southeast District, University of Minnesota Extension Service, Rochester).

Treatment	Rate	Giant ragweed control	Common lambsquarters control	Common waterhemp control	Giant foxtail control	Corn yield
	(rate/A)	(%)	(%)	(%)	(%)	(bu/A)
<u>Preemergence</u>						
Balance Pro	1.5 oz	71	99	97	88	28
Callisto	3 oz	70	99	99	0	41
Balance Pro	2.25 oz	71	95	95	88	51
Callisto	4.5 oz	83	99	99	0	89
Balance Pro	3.0 oz	78	99	98	94	111
Callisto	6 oz	83	99	99	0	122
Balance Pro + Define	2.25 oz+12 oz	78	99	97	94	139
Callisto + Dual II Magnum	6 oz+1.33 pt	89	99	99	92	147
Balance Pro + Define + Aatrex	1.5 oz+14 oz+1 qt	80	98	99	92	111
Callisto + Dual II Magnum + Aatrex	3 oz+1.33 pt+1 qt	80	99	99	91	100
<u>Postemergence</u>						
Liberty + Aatrex + AMS	24 oz+16 oz+3 lb	88	98	90	91	148
Liberty + Aatrex + Define + AMS	24 oz+16 oz+6 oz+3 lb	89	99	92	93	154
Liberty + Aatrex + Define + AMS	24 oz+16 oz+9 oz+3 lb	89	99	92	92	152
Liberty + Aatrex + Define + AMS	24 oz+16 oz+12 oz+3 lb	90	99	93	93	144
Liberty + Aatrex + AMS	28 oz+16 oz+3 lb	90	98	93	91	139
Untreated		0	0	0	0	3
	LSD (0.10)	9	2	3	4	29

 Table.
 Performance of soil applied Balance Pro and Callisto and post applied Define, Liberty, and

 Aatrex in corn on June 14 at Rochester, MN in 2002 (Schaufler, Breitenbach, and Behnken).