

Influence of Nortron Plus Roundup for Late-Season Weed Control in Roundup Ready® Sugarbeets.

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A field study was initiated near Scottsbluff, Nebraska to compare Nortron plus Roundup Original Max for late season weed control in Roundup Ready sugarbeets. The experimental design was a randomized complete block with four replications. Plots were 11 feet wide by 30 feet long and were located on a sandy loam soil with a pH of 8 and organic matter content of 1%. Sugarbeet, 'BTS-RZ03RR07', was planted on April 26. Herbicides were applied postemergence on May 21 when sugarbeets were in the 2 true-leaf growth stage (Table 1). Herbicides were applied with a tractor-mounted sprayer calibrated to deliver 20 gallons of water per acre at 32-psi pressure with Spraying Systems 11002 VS nozzles. The environmental conditions at the time of spraying are given in Table 1.

Postemergence application of Nortron caused minor crop injury in the form of leaf crinkling (Table 2). There was a trend for injury to increase as Nortron rate increased from 0.375 to 1.5 lb/acre. Sugarbeet stand was not influenced by herbicide treatments. The entire plot area was treated with Roundup Original Max on June 11 to kill existing weeds so the late season emergence of weeds could be evaluated. Nortron applied postemergence reduced weed density measured in late June. Nortron applied at 1.5 lb/acre to sugarbeets in the 6 to 8 true-leaf growth stage reduced mid-season weed emergence by 92%. Applying Nortron at the same rate at the 2 true-leaf growth stage reduced weed density by 75%. The results from this experiment suggest that Nortron could be applied with glyphosate to help provide late season weed control. The limiting factor in utilizing Nortron broadcast would be the cost of Nortron compared to Dual Magnum or Outlook.

Table 1. Environmental Conditions at the Time of Herbicide Application

Date	Air temperature (F)	Humidity (%)	Wind speed & direction (mph)	Time of day	Crop growth stage	Weed Heights					
						Colq	Rrpw	Hans	Copu	Stgr	Grft
						----- (inches) -----					
May 21	73	40	5 SE	10:00 am	2 true-leaves	1.5	1.5	1	0.5	0	0
June 5	63	69	5 SE	9:00 am	6-8 true-leaves	5	4	3	1	0	0

Rainfall before and after herbicide application:

Date	Amount	Date	Amount
	- (inches) -		- (inches) -
May 9	0.50	May 29	0.23
May 21	0.23	June 6	0.75
May 22	0.75		

Table 2. Influence of Nortron Plus Roundup for Late-Season Weed Control in Roundup Ready Sugarbeets - 2007 (a and b).

Herbicide treatment	Sugarbeet														
	Rate	Time of application	Visual injury		Stand 6/27	Root Yield	Sucrose	SLM	Weed density 6/27						
			6/3	6/21					Colq	Rrpw	Hans	Copu	Stgr	Grft	Total
(lb/acre)	---	(%)	---	(plants/acre)	(tons/acre)	(%)	----- (plants/92 sq.ft) -----								
Nontreated	—	—	0	0	31363	33.1	14.2	1.5	27	5	82	26	18	2	165
Roundup Original Max + Nortron + AMS	0.75 + 0.375	2 TL	3	5	35482	43.2	12.8	1.9	11	2	16	7	2	1	38
Roundup Original Max + Nortron + AMS	0.75 + 1.5	2 TL	6	8	34690	42.3	13.2	1.8	7	0	24	0	8	3	42
Roundup Original Max + AMS	0.75	2 TL													
Roundup Original Max + Nortron + AMS	0.75 + 0.375	6-8 TL	0	10	35244	41.5	13.6	1.8	11	1	25	3	6	0	45
Roundup Original Max + AMS	0.75	2 TL													
Roundup Original Max + Nortron + AMS	0.75 + 1.5	6-8 TL	0	12	34927	39.1	13.5	1.8	1	0	4	2	7	0	14
LSD at 5%	—	—	4	7	NS	6.4	1.4	0.3	28	6	56	15	11	3	56

Herbicide treatment	Weed density 9/6								
	Rate	Time of application	Colq	Rrpw	Hans	Copu	Stgr	Total	
			----- (plants/92 sq.ft) -----						
(lb/acre)									
Nontreated	—	—	0	0	1	2	1	4	
Roundup Original Max + Nortron + AMS	0.75 + 0.375	2 TL	5	0	0	3	0	8	
Roundup Original Max + Nortron + AMS	0.75 + 1.5	2 TL	0	0	0	1	0	1	
Roundup Original Max + AMS	0.75	2 TL							
Roundup Original Max + Nortron + AMS	0.75 + 0.375	6-8 TL	2	0	0	1	0	3	
Roundup Original Max + AMS	0.75	2 TL							
Roundup Original Max + Nortron + AMS	0.75 + 1.5	6-8 TL	2	0	0	0	0	2	
LSD at 5%	—	—	NS	NS	NS	NS	NS	NS	