

Sunflower Response to Headline, Carrington, 2005

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Crop response was investigated with Headline fungicide in direct-seeded, imidazolinone-resistant (Clearfield™) sunflower. Experimental design was a randomized complete block with three replicates. The experiment was conducted on a loam soil with 6.7 pH and 2.9% organic matter at the NDSU Carrington Research Extension Center. Glyphosate at 0.75 lb ae/A + AMS at 1% v/v was applied across the trial on June 3. Mycogen '8N429CL' was direct-seeded in wheat stubble in 30-inch rows on June 10 and hand-thinned to 20,000 plants/A on July 6. Beyond at 4 fl oz/a + NIS at 0.25% v/v + UAN at 2.5% v/v was applied across the trial on July 2 to V4- to V6-stage sunflower. Fungicide treatments were applied to 10- by 30-ft plots with a CO₂ pressurized hand-held plot sprayer at 17 gal/A and 30 psi through paired-orifice 8002 flat-fan nozzles on July 22 with 71 F, 56% RH, 95% clear sky, and 10 mph wind to R1-stage sunflower. The trial was harvested with a plot combine on October 26.

Crop response and sunflower rust was absent from the trial when visually evaluated August 5 and 18, and September 2 (data not shown). Crop maturity, seed yield, test weight, and oil content were similar among treatments (Table).

Table.							
Treatment				Maturity	Seed Yield	Test Weight	Oil
No.	Name	Rate	Unit	Jday	lb/A	lb/bu	%
1	Headline	3	fl oz/a	273	1488	28.8	41.7
	NIS	0.25	%v/v				
2	Headline	6	fl oz/a	273	1413	29.2	42.1
	NIS	0.25	%v/v				
3	Headline	9	fl oz/a	273	1652	28.6	41.7
	NIS	0.25	%v/v				
4	Untreated check	x	x	272	1575	28.9	42.2
Mean				273	1532	28.9	42.0
CV (%)				0.4	9.9	1.0	1.7
LSD (P=.05)				NS	NS	NS	NS