

## Performance of Sharpen as a Preharvest Desiccant in Sunflower, Carrington, 2009

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The field experiment was conducted in cooperation with BASF at the NDSU Carrington Research Extension Center to test Sharpen (saflufenacil) for effectiveness as a preharvest desiccant in sunflower. The experimental design was a randomized complete block with three replicates. Mycogen '8N386CL' sunflower was planted at 26,000 seeds/A in 30-inch rows on May 19. Best management practices were used for sunflower production. Preharvest treatments were applied on September 29 with a tractor-mounted CO<sub>2</sub>-pressurized sprayer with 015F110 flat-fan nozzles delivering 13 gal/A at 30 psi with 44° F, 81% relative humidity, and 10 mph wind to R9 stage (physiologically mature) sunflower at 35% seed moisture. Two hours of 30-31° F occurred on September 29 prior to application of desiccants and a minimum air temperature of 22° F occurred on October 8. Visual evaluation of sunflower plant desiccation was conducted on October 7 and 15. The trial was harvested on November 13 with a plot combine.

Sharpen and Gramoxone Inteon generally increased whole plant and leaf tissue desiccation 8 days after application (DAA) compared to the untreated check (Table). The tank mixture of glyphosate with Sharpen did not increase tissue desiccation compared to Sharpen. Plant tissue throughout trial was uniformly desiccated on October 15 (16 DAA) due to low temperatures beginning October 8. Seed yield, moisture and quality were similar among treatments.

Table. Performance of Sharpen as a Preharvest Desiccant in Sunflower.

Herbicide		Sunflower desiccation (7-Oct)			Sunflower seed			
		Whole plant	Leaves	Heads	Yield	Moisture	Test weight	Oil
Treatment <sup>1</sup>	fl oz product/A	% brown tissue			lb/A	%	lb/bu	%
untreated check	x	38	40	27	1082	10.3	28.2	36.6
glyphosate+NIS+AMS	24+0.25%v/v+64	42	45	28	992	11.0	27.2	36.7
Sharpen+glyphosate+MSO+AMS	1+16+1%v/v+64	50	58	32	1338	10.6	28.4	37.3
Sharpen+MSO+AMS	1+1%v/v+64	48	57	32	1264	10.8	28.2	37.9
Sharpen+MSO+AMS	2+1%v/v+64	42	47	35	1136	10.7	28.0	36.7
Gramoxone Inteon+NIS	24+0.25%v/v	53	63	33	1213	10.3	27.6	36.2
mean		46	52	31	1171	10.6	27.9	36.7
C.V. (%)		12	15.1	11.2	17.8	3.8	1.7	3.4
LSD (0.05)		10	14	NS	NS	NS	NS	NS

<sup>1</sup>Glyphosate = GlyStarPlus, 3 lb ae/gal (Albaugh); NIS = Preference (Winfield Solutions); AMS = N-Pak AMS liquid (Winfield Solutions); MSO = Destiny (Winfield Solutions).