Performance of Preharvest Desiccants in Sunflower, Carrington, 2008

Greg Endres

The field experiment was conducted at the NDSU Carrington Research Extension Center to test selected herbicides for effectiveness of preharvest desiccation in sunflower. The experimental design was a randomized complete block with three replicates. Mycogen '8N358CL' sunflower was planted in 30-inch rows on May 14. Best management practices were used for sunflower production. Preharvest treatments were applied with a CO_2-hand-boom plot sprayer delivering 19 gal/A at 35 psi through 8001 flat-fan nozzles on September 25 with 67° F, 69% RH, 70% clear sky, and no wind to R9 stage (physiologically mature) sunflower. Visual evaluation of sunflower plant desiccation was conducted on September 30, and October 3 and 9 using the scale of 0-9 (0=100% brown and 9=100% green). The trial was harvested on October 27 with a plot combine.

Valor and Valor plus glyphosate provided the highest amount of sunflower plant tissue desiccation when evaluated five days after application (DAT) (Table). Glyphosate and Valor plus glyphosate provided the highest amount of tissue desiccation when evaluated 14 DAT. Seed moisture content at harvest was similar among treatments. Seed yield and quality were similar among treatments.

Table. Performance of preharvest desiccants in sunflower.

		Sunflower plant desiccation			Sunflower Seed			
Herbicide		30-Sep	3-Oct	9-Oct	Yield	Moisture	Test Weight	Oil
Treatment[1]	fl oz product/A	0-9[2]			lb/A	%	lb/bu	%
untreated check	x	6	4	3	597	9.6	30.8	41.6
Valor+Superb HC+AMS	2 oz+32+1%	3	3	2	753	9.2	30.1	42.4
untreated check	x	6	4	2	965	9.7	31.4	43.1
Valor+glyt+Superb HC+AM	2	4	1	0	736	9.2	31.1	42.9
glyt+Superb HC+AMS	22+32+1%	5	3	1	744	9.2	31.4	43.4
C.V. (%)		17.7	42.2	40.4	25.3	3.1	3.3	2.9
LSD (0.05)		2	NS	1	NS	NS	NS	NS

[1]Superb HC=high surfactant oil concentrate (Winfield); AMS=Cornbelt Amstik (West Central); glyt=RU WeatherMax (4.5 lb ae).

[2]0=brown and 9=green.

Sunflower response to desiccants, October 2008.