

## Grain Sorghum Tolerance and Weed Control with Huskie Herbicide

A field study was conducted at the High Plains Agricultural Laboratory located near Sidney, NE to evaluate the tolerance of grain sorghum to early and mid-postemergence applications of Huskie herbicide. Weed control efficacy was also evaluated. The experimental design was a randomized complete block with three replications. Plots were 10 feet wide by 30 feet long. Herbicide treatments were applied with an ATV-mounted sprayer set to deliver 12 gallons/acre at 3 miles/hour and 15 psi. 'Dekalb 29-28 S' grain sorghum was no-till seeded into wheat stubble on June 10, 2008 at a rate of 40,000 seeds per acre. The study was located on an Alliance silt loam soil with an organic matter content of 3.3% and a pH of 6.3. Preplant (PP) treatments were applied on May 31, 2008. Early POST (EPOST) applications were applied on July 8, 2008 to weeds that were 1 to 2 inches in height and the grain sorghum was in the 3- to 4-leaf stage. The weeds present at the time of EPOST application were buffalobur and tumble pigweed. The grain sorghum was 6 to 8 inches in height when the mid-POST (MPOST) treatments were applied on July 19, 2008 to buffalobur and tumble pigweed that were approximately 4 to 6 inches in height. The plots were harvested on October 28, 2008.

Crop injury was observed two weeks after POST applications of Huskie herbicide. Symptoms included a slight curling of the leaves and plant stunting. The greatest level of crop injury was observed when 2,4-D amine was tank mixed with Huskie and atrazine and applied EPOST. The injury from this treatment was not as great when the application was delayed until MPOST.

Weed pressure was light, but uniformly distributed. The PP treatment of Dual II Magnum plus atrazine provided excellent weed control. Applying Huskie plus atrazine POST also provided excellent weed control, except for the EPOST application containing 2,4-D amine. Although the light weed pressure in this study makes it difficult to draw a strong conclusion, the 2,4-D amine in this treatment may have resulted in some reduction in efficacy, although this was not observed with the MPOST application of this same treatment.

Wet weather in early June delayed planting of this study until June 10. The summer of 2008 was uncharacteristically cool, at least by recent standards, and the grain sorghum crop had difficulty developing even though the first killing frost was not until mid-October, about three weeks later than average. Grain yields in the Huskie treatments did not differ from the local standard treatment of Dual II Magnum plus atrazine applied PP or from the nontreated check.



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Treatment	Rate oz ai/A	Timing	Crop injury 2 WAT	Weed control 4 WAT		Yield bu/A
				Buffalobur %	Tumble pigweed	
Nontreated check			0	0	0	18.3
Dual II Magnum Huskie Atrazine AMS	15.3 3.5 8 1.28 lb/A	PP EPOST	8	100	100	14.7
Dual II Magnum Huskie Atrazine AMS	15.3 4.03 8 1.28 lb/A	PP EPOST	7	100	100	18.1
Dual II Magnum Huskie Atrazine 2,4-D amine AMS	15.3 3.5 8 4 1.28 lb/A	PP EPOST	15	67	67	23.1
Dual II Magnum Atrazine	15.3 16	PP	0	100	100	19.3
Dual II Magnum Huskie Atrazine AMS	15.3 3.5 8 1.28 lb/A	PP MPOST	10	100	100	20.4
Dual II Magnum Huskie Atrazine AMS	15.3 4.03 8 1.28 lb/A	PP MPOST	10	100	100	20.0
Dual II Magnum Huskie Atrazine 2,4-D amine AMS	15.3 3.5 8 4 1.28 lb/A	PP MPOST	10	100	100	14.4
LSD (5 %)			3	41	36	6.7