

Evaluation of Express® for Puncturevine Control in Express-Tolerant Sunflower

A field study was initiated at the High Plains Agricultural Laboratory near Sidney, NE to evaluate the efficacy of Express herbicide in Express-tolerant (ExpressSun™) sunflower hybrids. The weed of primary interest in this study was puncturevine. The experimental design was a randomized complete block with three replications. Plots were 10 feet wide by 40 feet long. Herbicide treatments were applied with an ATV-mounted sprayer set to deliver 12 gallons/acre at three miles/hour and 15 psi. Express-tolerant sunflower 'Pioneer 63N82' was no-till seeded into winter wheat residue on May 28, 2010 at the rate of 15,000 seeds per acre. Postemergence treatments were applied on July 9 when sunflowers were in the V-8 to V-10 growth stage. The weeds at time of POST applications were puncturevine, and a light infestation redroot pigweed and kochia. Puncturevine was 1-2" in diameter. Weed pressure was light. The study was located on an Alliance loam soil with 2.5% organic matter content and a pH of 6.8. Sunflowers were harvested on September 30, 2010.

Because of the low density of puncturevine plants in this study, it is difficult to draw strong conclusions from the results. We did not see any significant differences in puncturevine control between the two rates of Express herbicide applied in this study, but both herbicide treatments provided noticeably superior puncturevine control compared to the nontreated check. No significant yield differences were observed in this study.

Sunflower stands in this study were generally good, that is, there were a sufficient number of plants with few skips. The season was conducive for good sunflower growth and yields. Sunflower is very competitive with puncturevine. Puncturevine tends to be a problem in areas of the field with poor sunflower stands and along field edges, particularly along field roads and roadsides. Growers may wish to consider using Express-tolerant sunflower along field edges where puncturevine has been problematic.

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Treatment ^a	Rate	Puncturevine control		Yield
		July 27	August 19	
	oz prod/A	%		bu/A
Express	0.25	83	95	1870
Express	0.5	85	97	1790
Nontreated check		0	0	1760
LSD (5%)		17	12	273

^aAll herbicide treatments contained MSO at 8 fluid ounces per acre.