Weed Control in Soybean

Soybean response to bentazon & sethoxydim premix. Zollinger, Richard K. and Jerry L. Ries. An experiment was conducted near Casselton, ND, to evaluate soybean response to bentazon & sethoxydim premix with adjuvants. Asgrow 'AG0801' soybean was planted on May 30, 2002. POST treatments were applied June 28 at 1:30 pm with 87 F air, 96 F soil surface, 53% humidity, 10% clouds, 12 mph S wind, dry soil surface, moist subsoil, excellent crop vigor, and no dew present to V2 to V3 soybean. Treatments were applied to the center 6.67 feet of the 10 by 40 plots with bicycle-wheel-type plot sprayer with an attached windscreen delivering 8.5 gpa at 40 psi through 8001 flat fan nozzles. The experiment had a randomized complete block design with three replicates per treatment.

The study was initiated due to grower complaints from suspected soybean injury from a registered premix that has been assumed not to cause soybean injury. Treatments were applied to V2 to V3 soybean which may have been a little later than grower practice. Soybean injury at July 2 (4 DAT) was mostly speckling type necrosis. Injury at July 8(10 DAT), and 29 (31 DAT) was mostly stunting and slight chlorosis. It was surprising that injury was observed even when no adjuvant was used, all treatments caused soybean stunting, and that soybeans did not recover from initial injury. Treatments containing MSO adjuvant usually caused the greater injury. (Dept. of Plant Sciences, North Dakota State University, Fargo).

Table. Soybean response to bentazon & sethoxydim premix (Zollinger and Ries).

		Soybean injury		
Treatment[1]	Rate	July 2	July 8	July29
	(lb/A)	(%)	(%)	(%)
Bentazon&sethoxydim+imazamox+	1&0.2+0.0156	12	18	17
PO	1% v/v	17	17	15
MSO	1% v/v	17	17	15
PO+AMS	1% v/v+2.5lb	17	13	15
MSO+AMS	1% v/v+2.5lb	22	22	18
PO+AMS	1% v/v+1lb	19	18	16
MSO+AMS	1% v/v+1lb	22	23	18
LSD (0.05)		5	6	NS

[1]PO = petroleum oil concentrate = Herbimax; MSO = methylated seed oil = Scoil; AMS = ammonium sulfate.