

ROTATIONAL CROP SENSITIVITY TO FALL-APPLIED BAS 800H. Brian M. Jenks, Gary P. Willoughby, and Shanna A. Mazurek, North Dakota State University, Minot, ND 58701; Phillip W. Stahlman and Patrick W. Geier, Kansas State University Agricultural Research Center, Hays, KS 67601; and Leo D. Charvat, BASF Corporation, Lincoln, NE 68523.

Studies were conducted in ND, KS, and NE to determine rotational crop sensitivity to fall-applied BAS 800H (saflufenacil). At Minot, ND, studies were conducted in 2007 and 2008. BAS 800H was applied September 1, 2006 into wheat stubble at 25, 38, and 50 g/ha. Canola, flax, and lentil were direct-seeded into the treated area May 1, 2007. No visible crop injury was observed with any treatment. The soil was a loam with pH 5.4 and 3.4% OM.

In a separate study at Minot, BAS 800H was applied September 11, 2007 to wheat stubble at 25, 38, 50, 75, 100, and 200 g/ha. Sunflower, safflower, and lentil were planted May 15-20, 2008. BAS 800H caused severe crop injury including significant reductions in sunflower and safflower density and height. However, lentil injury was above 10% only at 100 g or higher. The study was conducted in a loam soil with pH 4.8 and 3.3% OM.

At Hays, KS, BAS 800H was applied September 2, 2007 at 25, 38, 50, 75, 100, and 200 g/ha onto bare soil in a non-replicated study. Alfalfa was seeded October 1, 2007. Canola and alfalfa were also seeded the following spring on April 2, 2008. There was no biomass reduction or visible crop injury to fall-seeded alfalfa or spring-seeded canola or alfalfa.

Also at Hays, KS, BAS 800H was applied September 2, 2007 at 25, 38, 50, 75, 100, and 200 g/ha onto bare soil that had been in fallow in 2007. In spring 2008, the plot area was tilled about 5 cm-deep and firmed with a Brillion seeder prior to seeding spring crops. Canola and alfalfa were seeded April 2, 2008. Sunflower and cotton were seeded June 5, 2008. There were no differences in crop density or biomass with any treatment. There was no visible injury to any crop. The soil at Hays was a silt loam with pH 7.8 and 1.5% OM.

At Lincoln, NE, BAS 800H was applied at 25, 38, and 50 g/ha to winter wheat stubble August 3, 2007. Canola and alfalfa were planted the following spring on March 28, 2008. Two maturities of RR soybeans and one sunflower were planted May 5, 2008. Stand counts were similar between treated and untreated plots and there was no visible injury to any crop. Thus, rotational spring crops of canola, alfalfa, soybean, and sunflower were not affected by a post-harvest application of BAS 800H, when planted in a normal rotation, in a no-till planting the following year. This study was conducted in a silty clay loam soil with pH 6.5 and 2.5% OM.

In a separate study at Lincoln, NE, BAS 800H was applied at 25, 38, 50, 75, 100, and 200 g/ha to winter wheat stubble September 12, 2007. An additional 25 g of BAS 800H was applied to the back 10 feet of each treatment on April 21, 2008. Canola and alfalfa were planted the following spring on March 28, 2008. Two maturities of RR soybeans and one sunflower were planted May 5, 2008 in the fall and fall plus spring application areas. Stand counts were similar between treated and untreated plots with no visible injury to canola, alfalfa, or soybeans. Canola stand counts were slightly lower at 200 g, but not significant. There was no stand reduction or visible injury to sunflower from the fall-applied treatments; however, sunflower stands were reduced where BAS 800H at 25 g was applied in the spring. The soil in this study was a silty loam with pH 4.7 and 2.7% OM.