

Study Name: Crop injury following application of Ally in spring wheat

Study Number: 9925

Objectives: Evaluate injury to canola, Clearfield canola, flax, lentil, pea, soybean, and sunflower the year following an application of Ally.

Results:

Wheat was seeded in May 1998 in a conventional-tilled field. Four rates of Ally were applied onto 40 x 200 ft strips in July 1998. Following wheat harvest, the field was not tilled in the fall of 1998. In late April 1999, we spread urea (92 lbs actual N) and tilled the field once with a chisel plow. In early May we received heavy rains that prevented us from seeding. We received nearly seven inches of rain in the month of May. In late May we were able to work the ground one more time with a field cultivator. We applied Treflan (PPI) May 28 on all plots except wheat to help control weeds. The crops were seeded on June 1. We had a hailstorm on July 13 that injured some crops more than others. Lentils were definitely injured more than the other crops.

The crops listed below were planted into 100 feet of the 200-ft strip. Wheat was planted into the remaining 100 ft. We treated the wheat with another application of Ally in July 1999. We will plant these same crops into that area in spring 2000.

Flax:

No visible injury to flax at any Ally rate. Flax yields were higher than the untreated.

Peas:

No visible injury to peas at any Ally rate. Pea yields were similar to or higher than the untreated.

Soybeans:

No visible injury to soybeans at any Ally rate. Soybean yields were higher than the untreated.

Lentils:

There was no visible injury to lentils early in the season. The lentils were injured severely by hail on July 13. In addition to crop injury, the hail allowed weeds to be very competitive. We have generally seen lentil yields between 1000-1700 lbs in Minot the past three years. Despite no visible injury symptoms, the yields in the Ally treatments were much lower compared to the untreated. However, I don't believe we can make a definitive statement that the yield differences were caused solely by Ally residue. Hail injury and weed pressure following the hailstorm probably contributed to yield differences. The hail damaged three other lentil studies this year at Minot. Two were not harvested and one had 150 lb yields or lower.

Canola:

There were no injury symptoms on the canola variety, 45A71. However, on many Hyola 401 plants, the first true leaf to emerge was reddish on the leaf margin and veins on the backside of the leaf. This symptom was no longer visible by the time the plant reached the 3-leaf stage. Hyola 401 yields in the Ally plots were higher than the untreated. 45A71 yields showed that 3 of 4 Ally plots yielded higher than the untreated.

Sunflower:

There were no injury symptoms on sunflower. One week after the hailstorm, we had 80 mph winds that knocked over up to 60% of the sunflower stalks. We did not harvest the sunflowers.