2009 Minnesota Canola Research Summary
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The growing season of 2009 will be remembered as both unforgettable and one to be forgotten about. A challenge not only to get a crop in the ground, but to get it harvested before snowfall as well. Many growers were able to get canola in the ground just prior to the planting deadline, but unfortunately not able to get as many acres planted as they would have liked. And if only our crystal ball would have been working, we would have planted canola on every acre we had. Maybe it will be working by next year!

The growing season in Roseau County normally sees rainfall of 17 inches from April to September. The 2009 season rainfall was 13 inches, so not overly wet. What truly set this year apart was the lack of warm summer temperatures. From April to August, the average temperature was 3 degrees Fahrenheit cooler than normal. And although September 2009 was both warmer than July and the warmest September on record, the growing season was very nice for canola growth. While other crops like soybeans or sunflowers stood still when the temperature was 65, canola was loving it.

The Minnesota Canola Production Centre was planted into a cool and wet 40 acre field on the Brian and Sheldon Rice farm near Roseau between June 4 and 11. The experiments planted in 2009 included the large and small plot public variety trials, nitrogen fertilizer timing and rates trial, the potential for desiccation and straight harvest trial, the effects of canola in rotation with winter wheat, wheat, soybean, sunflower, soybean and ryegrass trial, and a Monsanto Performance Ready Canola trial. Early plant stands were very nice, however cool and wet conditions slowed development of plants.

Record cool growing conditions affected the rotation trials significantly. Sunflowers and soybeans used as treatments in the rotation trials were so delayed, that we were unable to plant the fall-seeded crops such as winter wheat and ryegrass. These rotation trials were thus abandoned.

Overall yields in the canola variety trials and nitrogen and straight harvest trials were above average and crop health exceptional. Aster yellows which was a problem in 2008 was not present, and disease pressure such as alternaria and sclerotinia were present but came in late in the season and did not seem to affect yields.

Yields in the variety trials ranged from 1561 pounds per acre to 2302 pounds per acre. Roundup Ready varieties had respectable yields, but Invigor varieties topped yields in both small and large-scale plots. A total of 46 varieties from 9 different companies were tested.

Yields in the nitrogen rate and timing trial ranged from 1059 pounds per acre to 2112 pounds per acre. Treatments included; no nitrogen, 30 pounds urea PPI, 60 pounds urea PPI, 90 pounds urea PPI, 60 pounds ammonium nitrate PPI, 30 pounds urea ESN PPI, 60 pounds urea ESN PPI, and 90 pounds urea ESN PPI. ESN is a polymer coating that is meant to slow the release and uptake of the nitrogen fertilizer. The variety used was

Pioneer Hi-Bred 45H28. It was fertilized at a rate of 90 pounds of nitrogen pre-plant incorporated. In the plots where no nitrogen was applied and background levels where tested at 15 pounds per acre, yield averaged 1059 pounds. The top average yield of 2112 pounds was achieved by spring applying 90 pounds of ESN nitrogen prior to planting. Close behind were the treatments of 90 pounds of urea nitrogen incorporated pre-plant at 1949 pounds, and 90 pounds of urea nitrogen applied at the 6-leaf stage.

Yields in the straight harvest trial ranged from 1476 pounds per acre to 2026 pounds per acre. The variety used was Pioneer Hi-Bred 45H28. It was fertilized at a rate of 90 pounds of nitrogen pre-plant incorporated. The top yield of 2026 pounds was achieved in the conventionally swathed treatment. The yield of plots treated with the desiccant Reglone and straight harvested 7 days later was 1638 pounds. Plots that were straight harvested without the use of a desiccant at 8.5 % moisture was 1697 pounds. Plots that were harvested 2 weeks after canola should have been harvested yielded 1476 pounds likely due to shattering of dry pods.