

## **Canola success stories from Thunder Bay**

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Last fall, John Hanna, an enterprising grower from Thunder Bay, had seeded winter wheat in 24 acres (variety CDC Falcon) and had applied all N at seeding (91.7 kg N/ha from ESN, 8.5 kg N/ha as ammonium sulphate and 4.6 kg N/ha from 0-0-52). This recommendation was based on three years data from an experiment on winter wheat at the Thunder Bay Agricultural Research Station (TBARS), Thunder Bay, which showed that ESN out yielded urea in winter wheat by 1MT grains/ha. Phosphorus and potassium to winter wheat were applied based on soil tests @ 21.7 kg P<sub>2</sub>O<sub>5</sub> and 25 kg K<sub>2</sub>O/ha. Ammonium sulphate in the fertilizer blend supplied 10 kg S/ha, which would be sufficient for winter wheat. Unfortunately, the winter wheat was eaten by the geese to an extent that the crop stand was too poor in the spring for a bountiful yield. Hanna decided to seed RR canola, in spring on May 29, 2013, in the same field after a Round Up spray to clear the field of left over winter wheat and weeds, if any. Canola is a heavy feeder of fertilizer nutrients and could respond to N application @150 kg/ha or more. Hanna applied 42.7 kg N/ha as ammonium sulphate (that would also supply 50 kg S/ha, which is a lot) to canola at seeding and top dressed N as urea @ 62.5 kg N/ha. Thus a total of 105.2 kg N/ha was applied to canola in the spring. I would assume that most of the N applied to winter wheat would be available to canola, which was left to thrive on the P and K applied to winter wheat. In other words, canola in this field didn't get P and K fertilizers in the spring. Guess how much canola seed yield Hanna got? Despite late seeding, due to cold and wet spring, he got 1.5 MT seed yield per acre, which is double than what he had been getting from canola seeded at normal times in the previous years. However, in the previous years Hanna didn't apply as much fertilizer nutrients as this year. Weather in the growing season was good for canola, fertility was good and Hanna had also applied lime to this field a year before. His soils are acidic (pH 5.0-5.5). The field was under sod (grass and alfalfa mixture) for 7-8 years before seeding winter wheat/canola. This field has clay loam soil that produced a bumper canola crop. Hanna got 145 large square straw bales from this 24 acre field! At \$30/bale this means an additional bonus/income of \$181.25 per acre. Twenty five percent of the bales were sold within a week of baling indicating a strong demand for straw in Thunder Bay.

In another field (42 acres) with sandy loam soil, Hanna seeded RR canola on May 27, 2013 and applied 46.1 kg N/ha (33.9 kg from a 19-19-19 NPK fertilizer mixture, 12.2 kg as ammonium sulphate that would also supply 14.3 kg S/ha), 33.9 kg P<sub>2</sub>O<sub>5</sub>/ha and 33.9 kg K<sub>2</sub>O/ha at seeding. Hanna top dressed this field with urea @ 52.1 kg N/ha. Thus the total nutrients supplied to this field were 98.2 kg N, 33.9 kg P<sub>2</sub>O<sub>5</sub>/ha, 33.9 kg K<sub>2</sub>O/ha and 14.3 kg S/ha. Lime was applied a couple of years before seeding canola. Barley was the crop grown in the previous year (to canola). Hanna got a good 1 MT canola seed yield per acre from this field and he chopped the straw in the field to build up the soil organic matter. Hanna could have saved somewhat on P and K and added some more N and S and he would have probably got as much canola seed yield from this field as from the other one! The moral of the story is that investment in fertilizer application to crops in balanced form pays. John Hanna had consultation sessions with me for fertilizers application to winter wheat and canola.

Jeff Burke, another enterprising grower from Thunder Bay, grew non GMO canola (variety Wizzard) past spring. The crop was seeded @ 6.8 kg seed/ha on May 27 and was supplied with 101 kg N/ha+ 50 kg P<sub>2</sub>O<sub>5</sub>/ha + 19 kg K<sub>2</sub>O/ha + 32.6 kg S/ha. P and K were drilled with the seed, whereas N and S were broadcast and incorporated with seeding. Select and Muster (tank mix) were used to control weeds. The crop, swathed on September 8 and combined on September 30, produced 1.2 MT seed yield per acre, which is very encouraging for a first time canola grower! Jeff could have cut down rate of S application to 24 kg S/ha and the dollars saved could be used to apply some more N. Canola could take up to 150 kg N/ha in a cold and wet year (such as the one we had this year). I remember we got 2 MT seed yield per acre from Hyola (a non GMO canola variety) at TBARS in 2004, which was a relatively cold and wet year. Advantage of growing non GMO canola is that you wouldn't have the challenge to control volunteer RR canola in a RR crop such as soybean or corn next year. Another option to overcome this challenge is to grow Liberty Canola that can be killed with Round Up in a RR crop. We have grown both RR and Liberty canola at TBARS during the past few years with equal success.

Burke feels, and rightly so, that canola is a good crop to be included in the crop rotation. He is planning to increase his acreage under canola next year. You may consider adding canola to your crop rotation as well. I am sure John Hanna (cell phone: 807-632-1832; home phone: 807-476-0901) and Jeff Burke (cell phone: 807-629-1446; work phone: 807-933-0570) will be willing to answer any questions on canola cultivation that you may have.

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