

Producer Profile

Cory Nelson – Grassy Lake, Alberta

In the Grassy Lake-Burdett area of southern Alberta, Cory Nelson and his family farm a mix of irrigated and dryland acres.

“Winter wheat has lots of benefits that make it a great option for our farm,” says Cory. “The crop is productive and competes well against weeds. Early growth and anchored stubble help reduce soil erosion. We are able to start combining our winter wheat earlier than with spring wheat or durum which spreads out the harvest season. I can sell it for feed to local markets like pig and chicken farms and have early cash flow in the fall. Having some of my seeding done in the fall gives me the chance to seed my spring crops on time. All these little advantages add up.”

Winter Wheat on Irrigation

“The main reason we started growing winter wheat was to control erosion,” explains Cory Nelson. “After harvesting potatoes, we had to do something to reduce erosion on our irrigated land. In 1994, we tried seeding winter wheat and it held the soil all winter long. We try to seed by the 1st of September on potato land and we hope the crop will be 6 or 7 inches high by freeze-up.”

The other big benefit of winter wheat is that it is usually cheaper for the Nelson’s to grow than spring wheat. “I like to pencil out the variable costs and most years, the winter wheat is more profitable than hard red spring wheat on this farm,” says Cory. “Winter wheat is an early and competitive crop. We never use wild oat spray on our winter wheat and we don’t spray for broadleaves every year. Three of the last 12 years I have avoided spraying my winter wheat altogether. If we seed by August 31st, the next year we rarely have to spray at all, but I plan for it anyway. The problem is the potatoes don’t always come off in time to seed early. If I seed the 20th of September, the weeds come as early as the crop and we lose a lot of the benefit. I walk my fields in the spring and see what I have for weed pressure.”

“Winter wheat uses fertilizer very efficiently,” Cory explains. “We produce more bushels of grain per pound of fertilizer with winter wheat than with spring wheat. I used to consider winter wheat a low-yielding, poor quality crop, but it is actually quite productive. On our farm, winter wheat out-yields spring wheat by 20-30%. Our winter wheat typically yields around 95 bushels/acre. We’ve also found that the newer varieties of winter wheat yield very consistently for us compared with other crops. Winter wheat is a very low-risk crop. It grows at the time of year that we tend to get more moisture. I find it easier to get 95 bu/ac of winter wheat than 85 bu/ac of spring wheat on irrigation.”

Although Cory had concerns about winter kill in his winter wheat, he has never had a problem. “Usually the winter wheat is at the 6 leaf stage going into the winter but I’ve had it survive, even at the 3 leaf stage. That was the year we seeded our winter wheat late (on September 22) and it still out-yielded our spring wheat.”

The Nelson’s seed their winter wheat as soon as the potato harvest will allow. “We try to put early potatoes in on our sandiest soil,” says Cory. “After we harvest, we float some fertilizer down the potato rows. Then my Dad goes out with an old press drill and double discs. Next we bring the pivot around and water before we plant. We seed 120lbs/acre of winter wheat $\frac{3}{4}$ inch deep into wet soil. On irrigation, we use a 6200 press drill for seeding winter wheat which brings up a few



BENEFITS OF GROWING WINTER WHEAT:

EQUIPMENT & LABOUR EFFICIENCIES

By using seed drills, combines and labour outside of their traditional busy times, there is an opportunity for lower demands on equipment and operators.

DIRECT SEEDING

Leaving your stubble helps save your soil from wind and water erosion.

MOISTURE UTILIZATION

What better way to take advantage of snow-melt moisture than to have your crop already in the ground. Winter cereals begin growing very early in the spring and can use the early spring snow-melt moisture.

EARLIER CASH FLOWS

Winter cereals are harvested earlier than other spring cereals and can therefore be marketed earlier, creating some much needed cash flow on the farm in early harvest.

lumps that help to curb erosion until the crop establishes. Disc drills or press drills work best to avoid dragging the potato vines all over. We used to spread about 70 lbs (actual) of nitrogen with 30 lbs of potassium in the fall and 30 lbs of N in the spring. We were always worried about putting too much nitrogen down in the fall on irrigated crops and having lodging problems. It's a balance. The last two years we've just put down 100 lbs of actual N on potato land and it's worked out well. We also fertigate another 30 lbs of nitrogen at the end of May or early June every year to keep our protein levels up."

Cory likes to have the option to bale the straw off his irrigated land. "Winter wheat averages higher yields of clean straw compared to spring crops which gives us more revenue when we bale," he says. "A quarter of land that would normally yield 350 round bales of hard red spring straw or durum straw would yield 450 bales of winter wheat straw under irrigation."

"The new varieties have also shown a dramatic improvement in winter hardiness, yield and disease resistance," says Cory. "We used to worry about wheat streak mosaic virus. If we seeded earlier, we risked carrying the disease over into the crop. Now we grow Radiant. It's a new variety that is resistant to wheat streak mosaic virus and that's a big benefit."

Winter Wheat on Dryland

Once the Nelson's were comfortable growing winter wheat on irrigated land, they started seeding it on dryland. "The last five years we've been growing winter wheat on dryland pea or canola stubble with an average yield of 50 bushels/acre, says Cory. "The greatest challenge for me in growing winter wheat on dryland is having enough moisture in the fall to germinate the crop. If I have good moisture or if there is rain in the forecast, I will seed winter wheat on dryland. If I don't get rain at the end of August or mid-September, I reduce the number of dryland acres I seed to winter wheat."

Shallow seeding of winter wheat is key to successfully growing the crop. "On the dryland, I seed around 70 lbs/acre of winter wheat at 3/4-1 inch deep into pea or canola stubble," Cory explains. "I've found that 2-3 tenths of an inch of rain is enough moisture to germinate the crop. I put 25 lbs of Nitrogen down with my disc drill and broadcast another 30 lbs of N in the spring."



"Winter wheat competes aggressively against kochia, Russian thistle and wild oats which clean up the field for the following crop," says Cory. "I seed peas, canola or chickpea on my dryland winter wheat stubble which provide a break from cereals in the rotation. These crops also take advantage of extra moisture captured by the winter wheat stubble. We switched over to seeding with a Case SDX30 zero-till single disc air drill and have no problem seeding into winter wheat residue. I can seed peas and roll them and the anchored winter wheat stubble keeps the soil from blowing away."

"The main advantages of seeding winter wheat on dryland are that we use no wild oat spray and we get higher yields than spring wheat," says Cory. "The other advantage on dryland is that winter wheat doesn't suffer the same losses as spring wheat from sawfly. We can have a really bad sawfly problem on the dryland, so for us growing winter wheat is a real benefit."

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