

Winter Wheat planning: Early spring diagnosis determines next steps
by Bryan Osborne, for Ducks Unlimited Canada

The odds of growing a great crop of Winter Wheat can be greatly enhanced with an accurate diagnosis of overall plant health as the crop begins to emerge from the winter dormancy period. Late March or early April is usually an ideal time for producers to dig down and assess their Winter Wheat; the findings will signal what could or should be done next.

In recent years, Winter Cereals Canada (WCC) has worked with the provincial agriculture departments of the Prairie provinces to provide valuable crop diagnostic support. The primary audience of these “crop diagnostic schools” are the people who provide valuable advice to Winter Wheat producers across the Prairies.

Bob Linnell is WCC’s executive manager. “After the tough, wet harvest season we had across much of the Prairies last year, many producers have been asking what they could or should be doing to reduce their risks and spread out their harvest workload. Winter wheat is a great option most any year.”

The Prairie Winter Wheat crop has been growing steadily, reaching 700,000 acres in 2003/04. However, delayed harvesting and poor seeding conditions for Winter Wheat last fall have reduced this year’s numbers to 410,000 acres. The greatest declines occurred in Manitoba and Saskatchewan, with Alberta remaining stable. “With a normal fall, Prairie Winter Wheat numbers would have hit one million acres,” says Linnell.

John Heard is a soil fertility specialist with Manitoba Agriculture, Food and Rural Initiatives (MAFRI) and has been helping to coordinate spring Winter Wheat diagnostic schools since 2000. “We started the schools as a way to help folks “self-assess” their (or their customers’) Winter Wheat crop. We knew that many producers were hesitant to invest much to support their Winter Wheat with a nitrogen application – until they could see that it had made it through the winter,” explains Heard.

Winter Wheat responds very well to nitrogen with one hundred bushel crops attainable. However, before adding this costly input, producers need to know that the crop is still viable. Manitoba Winter Wheat diagnostic schools deliver that information using extension experts, crop insurance staff, and agronomic industry personnel.

Participants at Manitoba’s diagnostic schools cover the following areas:

Winter survival/winter injury: participants are invited to bring in sample plants for assessment. Healthy plants, if kept moist and warm, will produce new white roots in a few days. MAFRI collects soil temperature data at sample locations throughout the winter to better understand what stress the plant’s crown has been exposed to during the winter period.

Snow trapping potential of previous crop stubble: Snow cover is critical in insulating the dormant plants during the winter cold. Tall, thick stubble traps snow that will protect the health and vigour of the Winter Wheat plant's crown, from which all spring re-growth occurs. Zero-till is key to Winter Wheat production on the Prairies.

Soil Fertility: Winter Wheat responds well to nitrogen, but the ideal nutrient form, application rates, timing, and placement are all key variables to consider.

Weed Identification: Winter wheat's early spring growth makes it a competitive crop that rarely requires a spring herbicide treatment e.g. for wild oats. The overall health of the both individual plants and the entire plant stand are important factors in deciding to spray or let the crop compete, which it does well.

Plant Pathology: Wheat Streak Mosaic is an emerging disease problem which can affect Winter Wheat. Early detection can help determine best treatment options, if any.

According to Heard, for many new producers, growing Winter Wheat may also be their first foray into zero-till too. "It's very important that Certified Crop Advisers and others are able to determine where a Winter Wheat crop is at, soon after the snow melts. If a crop is indeed gone, it will be time for the grower to make other plans."

Losing a Winter Wheat crop over the winter is pretty rare however, although the inexperienced or untrained eye may be too quick to write off the crop. Newer producers are reminded not to re-seed or give up on their Winter Wheat without undertaking a thorough spring inspection, even if it means bringing in some help.

Winter Wheat has a tremendous ability to produce "tillers" (new shoots growing off the main stem). Winter Wheat's ability to compensate for plant stresses by aggressively tillering can offer it better survival odds in the unpredictable Prairie environment. "A very dry spring, with little snow melt can still hurt the crop" says Ken Gross, Manitoba's senior agrologist for Ducks Unlimited Canada. "However, in most years you will get enough moisture for crop success."

Since it is already in the ground and growing in the spring, Winter Wheat can take advantage of moisture available from the winter melt, and has a chance to get a jump on wild oats and other weeds while other spring-planted crops are just getting started.

"I stopped trying to predict Winter Wheat yields based on what the crop looks like in the spring; it's too difficult to tell what will happen," says Gross. "Even a few inches of rain at the right time – and what looked like a write-off can end up producing a 60-80 bushel crop. The crop has a very impressive ability to recover from adverse conditions. That's one of the reasons it typically yields 25% more than spring wheat," explains Gross.

Bob Linnell notes the growing support provided for Winter Wheat – from industry, government, research, and the wildlife conservation sector. "There is a multifaceted approach supporting Winter Wheat production and marketing across the Prairies,

resulting in better varieties, higher yields, and improved disease resistance. The Canadian Wheat Board is also helping with milling quality products, while the feed sector and ethanol production remain major marketing options for farmers.”

Regardless of what spring crop is being considered (for stubble cover), Winter Wheat fall seeding advice for producers is the same. Seed early, seed shallow, and plan ahead. More than likely, the results will be good. For more information, producers may wish to contact their local Ag. Rep., Certified Crop Adviser, Winter Cereals Canada, or Ducks Unlimited Canada.
