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Management Tips for Winter Wheat

by Murray Van Zeggelaar, CCA

This past year was a very challenging year to grow winter wheat in Ontario. A very wet fall of 2008, coupled with high input costs led many growers to make decisions that they would normally not make in their management of winter wheat. Listed below are eight management strategies to give your wheat crop the best possible chance for excellent winter survival and maximum yields.

Crop Rotation

Winter wheat is best planted after a broadleaf crop such as soybeans, dry beans, peas, etc. Corn is thought to be a source of fusarium inoculum for a following wheat crop.

Variety Selection

Variety selection should be based on soil type, straw height, disease resistance, standability, and of course, yield potential. Be especially careful of tall varieties on high fertility soils that can result in poor standability. Variety selection can also be influenced by marketing factors such as IP programs and other premiums offered. In all cases, certified seed should be used to ensure variety purity, maximum vigour and germination.

Starter Fertilizer

The use of a high phosphorus starter fertilizer has shown to be of great benefit in winter wheat production. Starter fertilizers have been proven to increase grain yields by as much as 9-10 bushels per acre. Starter fertilizers should be seed-placed or band applied for maximum benefit. Also ensure that potassium levels in your soil are of adequate levels based on yield goals before you plant.

Planting Date

Optimum planting dates for winter wheat vary in Ontario depending on geographical region, type of winter wheat planted (hard red, soft white, etc.) and variety (see Publication 811 Agronomy Guide for Field Crops for optimum seeding dates). Generally speaking, planting earlier results in plants with better root systems that tend to over-winter better, although planting wheat more than 10 days before the optimum date can increase the risk of Hessian Fly and Barley Yellow Dwarf Virus (BYVD) injury. Check with your Certified Crop Adviser for the optimum planting date in your area.

Seed Treatment

Always ensure seed is treated with a good quality seed treatment that controls the major diseases in your growing area and on your farm. Crop notes from previous years are the best source for this information. Seed treatments not only have the potential to increase germination rates but also help your crop get off to a healthier start and better winter survival.

Seeding Population

Most seed companies now provide seed counts on the seed packaging to aid in calculating planting rates. The majority of varieties should be seeded at 1.4 – 1.8 million seeds per acre. This will vary depending on variety, soil type and planting date. Again, consult your Certified Crop Adviser for optimum seeding rates.

Seeding Depth

Winter wheat should be uniformly planted at approximately a 1" depth. More importantly, always plant into moisture. This will allow for optimum germination and establishment in the fall. Plant too deep and you run the risk of uneven germination and lower than optimum population. Plant too shallow and you end up with a shallow rooted crop, which is very vulnerable to winter kill and frost heaving.

Tillage

Although winter wheat is well suited for no-till planting, there may be situations where some tillage is warranted, especially in cases where fields have been harvested in wet conditions. Generally speaking, when planting is done towards the latter part of the optimum planting window, the benefits of getting the wheat planted and established far outweigh the benefits of tillage.

Wheat has become a very important cash crop in the last few years, providing excellent returns when managed properly. There are many factors that can affect the performance of winter wheat such as winter-kill, fusarium, sprouting and others beyond the control of the grower. However, by following the guidelines above, at least you can get your crop off to a healthy start. A little planning with a Certified Crop Adviser can go a long way in making the right decisions for your winter wheat crop.

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This industry driven program helps ensure that Ontario crop producers are well served by those providing their crop production advice. This article was written by one of those CCA's.