



Phone: 800-352-5247 · www.alseed.com



**Hard Red
Winter Wheat**
(*Triticum aestivum* L.)

Description

- Wheat is an annual cereal grain.
- 11,000 to 18,000 seeds per pound
- 60 pounds per bushel
- HRWW can yield 50 - 90 bushels/acre

Management considerations

- Direct seeding winter wheat into standing crop stubble (other than corn) is recommended in order to retain snow during the winter. Snow protects the crown of winter wheat from temperatures that are common during the winter in Minnesota and maintains a cooler soil environment so the plant doesn't break dormancy as early in the spring or during a mid-winter thaw.
- Seeding into spring wheat stubble increases the risk of residue-born diseases.
- Avoid planting winter wheat on corn ground if at all possible.
- If you are going to follow sweet corn or corn silage, work the soil as black as possible to reduce the likelihood of Scab or FHB.
- Watch chemical restrictions.

Optimum Planting Dates

- Optimum dates for direct seeding winter wheat into standing stubble in Minnesota:

Location	Date
South of I-90	September 20 – October 10
Between I-90 and I-94	September 10 – September 30
North of I-90	September 1 – September 15

- Winter wheat requires a period of cold acclimation and vernalization in order to survive freezing temperatures and produce seed in the spring.
- A delay in planting past the optimum seeding date increases the risk for winter kill and can reduce grain yield since the crowns will not be as well developed and the plant will have had less opportunity to store nutrients.
- Seeding too early can result in excessive growth in the fall making plants more vulnerable to winter kill and creates a green bridge for a number of winter wheat pests.

Seeding Recommendations

- **90 – 120 lbs. per acre** will generally provide a good stand.
- The optimum stand of winter wheat is 900,000 to 1,000,000 plants per acre. The optimum stand is less than spring wheat since the crop will have more opportunity to tiller in the early spring. Increase the desired stand to 1,100,000 plants per acre when planting is delayed.
- **Drill about 1 to 2 inches deep**, depending on soil moisture and soil texture. A grain drill with press wheels is the best because it places the seed at a uniform depth and gives good soil-seed contact. Broadcasting wastes seed and often results in uneven stands.

Fertilization *(Please contact your fertilizer professional for your specific needs):*

- In contrast to spring wheat, split applications of Nitrogen should be used for winter wheat production. Thirty to forty lbs. of N per acre should be broadcast and incorporated just prior to planting with another 40 to 50 lbs. top dressed in early spring.
- Soil test to make sure there is adequate P & K. (P & K help reduce winter kill.)

Weed and Disease Control *(This is not intended as a recommendation or endorsement of any specific product but as a list of possible controls. Please contact your chemical professional for your specific needs and always read and follow label directions):*

- In the spring, apply 4 oz. of Headline (or another fungicide) with 2,4-D when the wheat is four inches tall. Check with your chemical advisor for rates and timing. A second fungicide application may be needed in wet years.
- T-22 is a seed-applied bio-fungicide approved for wheat that provides season long protection from Pythium, Rhizoctonia, and Fusarium fungi (OMRI listed).

Winter Kill

- Some winter kill should be expected in Minnesota. Wait until the plants break dormancy and fields begin to green up before making any decision on replanting. Roots are generally less winter hardy than crowns and regrowth may be very slow, even if roots and shoots appear dead. It may take until the end of April before the degree of winter kill can be determined. Stands of 17 plants/sq. ft. can still produce near maximum grain yields.
- If large areas are lost, consider destroying the winter wheat and planting spring wheat in those areas. Avoid inter-seeding winter wheat and spring wheat as this creates a mixture of contrasting wheat classes which can result in marketing problems.