

Assessing Winter Cereal Survival

The snow is off fields for the most part, and it is time to think about how well winter cereal crops survived the winter. Winter wheat will break dormancy once temperatures are consistently above 0°C, but at this point in the spring there hasn't been a string of warm days and nights and winter cereals are expected to be dormant at this time. Since it's too early to walk fields to assess winter survival, there are other methods that can be used to see how well winter cereals have fared the winter.

1) Sod extraction method

- Extract plants in several areas of a field with a shovel, keeping some soil attached
- Bring plants inside and keep the soil moist for several days
- In 5-7 days assess the crowns for new root growth
- If there is no new root growth the plant has not survived

2) The bag test – Developed by Ducks Unlimited in North Dakota

- Carefully dig up winter wheat seedlings from the field
- Rinse the soil off seedlings, and clip roots below the crown and stems one inch above the crown
- Place the crown in a plastic bag puffed out with air and seal the bag
- Keep the bag at room temperature and repeat rinsing and adding air every two days
- If there is no new growth after six days, consider the plant dead

3) Wait it out - Wait for the crop to break dormancy and develop new roots. Timing depends on spring temperatures, but this could take until mid-May in some years. To assess survival, plants will need to be dug up. Brown leaves do not necessarily indicate winter injury, and green overwintering leaves are not a sure sign that the crop has survived.

- Dig up some plants
- Rinse the roots with water and examine the crown for the development of new white roots
- If new roots are developing, and the crown appears white and healthy the plant is likely in good condition

Regardless of how early winter wheat survival looks, plant stands should be assessed once dormancy has broken and regrowth has started.

For more information on winter wheat production:

Spring germinating winter wheat - <https://www.manitoba.ca/agriculture/crops/production/spring-germinating-winter-wheat.html>

Concerned about a poor stand of winter wheat? <https://www.gov.mb.ca/agriculture/crops/crop-management/concerned-about-winter-wheat-stand.html>

Fertilizing winter wheat - <https://www.gov.mb.ca/agriculture/crops/production/fertilizing-winter-wheat.html>