

ASSESSING DAMAGE FROM A LATE SPRING FROSTS

The severity of a June frost is highly dependent on a number of factors, including crop type, crop stage, ground cover, soil moisture, preceding weather, and duration and severity of freezing temperatures. Where one field may escape significant damage, a field just across the road, with a different crop, a different stage or different farming practices might have a more serious impact.

Farmers and agronomists should evaluate crop stands 12 to 24 hours after suspected frost events – looking for symptoms of leaf wilting, dark and watery leaves, and condition of the growth point of the plant. Decisions on reseeding or stand evaluation should wait 3 to 5 days following the frost event, to allow time for regrowth to occur under good conditions. Visit <https://www.gov.mb.ca/agriculture/crops/production/spring-frost-damage-bulletin.html> for more information.

What to do after a frost has occurred?

1. Evaluate damaged fields 12 to 24 hours after the frost event
2. Wait 3 to 5 days to re-evaluate damaged fields for signs of regrowth from growing points or nodes
 - Should no re-growth occur, contact your crop insurance adjuster for further inspection
 - If growth points are undamaged, wait until crop has put on new regrowth and stress levels are reduced before applying pesticides that could set the crop back further.

What level of damage can I expect in my crop?

This really depends on the length and severity of the frost, as well as the crop stage. Most canola in Manitoba is at the cotyledon to 4 leaf stage, where light frosts (no colder than -2°C, for no more than 2 hours) can be tolerated, but severe frosts can kill the growing point. Reseeding might need to be considered if regrowth is not adequate or surviving plant stand is less than 4 plants per square foot.

Cereal crops can tolerate frosts down to -6°C and still recover, given that the crop is still smaller than the 5-leaf stage, or V5 in corn. Wilted and chlorotic leaves will occur, but the growth point is still protected below the soil surface.

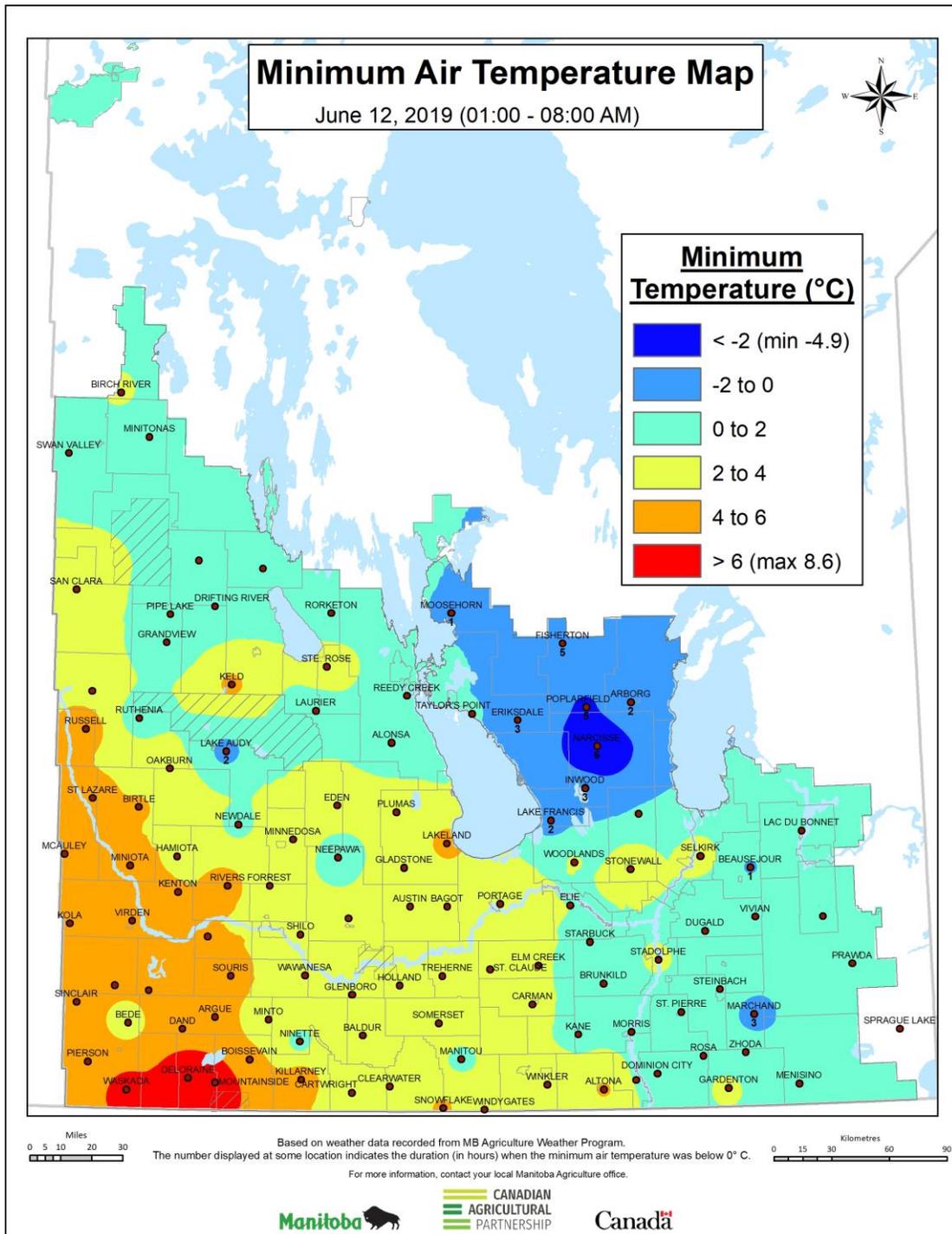
Soybeans and edible beans are of greater concern. Soybeans can tolerate temperatures as low as -2.8°C for a few hours up to the cotyledon stage. If the crop is more advanced, there is greater chance of the growing point being damaged. Soybeans can compensate and may not need to be replanted should the damage be light.

Alfalfa - The crucial advantage perennial crops have over annuals are the crown and root reserves. Although growing tip damage may occur, the plant will always have the capability of sending out new growing points, as long as the crown is not damaged. Temperatures needed to affect alfalfa crowns vary depending on slope position, amount and type (“wet or dry”) of snow cover, soil temperature, soil moisture, companion crop, and wind. Most studies estimate that alfalfa crown damage may become an issue when

air temperatures reach -5C for more than 4 hours. Stand assessment should take place 3 to 5 days after the frost. See [Assessing the Frost and Flood Damage in Your Alfalfa](#) webpage on Manitoba Agriculture website.

What areas of the province were affected?

Areas in the northern Interlake, around Narcisse, Fisherton, and Poplarfield had the coolest temperatures and greatest duration of frost, and would be most severely affected. Beausejour and Marchand in the Eastern region had a light frost as well.



Is it too late to reseed?

Not yet – but be aware of the length of growing season required by the reseeded crop, as well as the crop insurance coverage deadlines for your region. For the affected regions in MASC Risk Areas 14 and 15, the extended seeding coverage deadline ranges from June 11-15 for canola and Proso millet, and June 16-20 for field peas. Shorter season cereals may be a better option, like feed barley.