



## CropLinks June 5, 2018

### When to Start Assessing the Damage

After the frost event of June 5th many farmers are wondering where they stand. It will take 2-4 days for the extent of the damage to fully show itself. This is dependent on the extent of the damage and the weather after the frost event.

**Corn:** Although experiencing and already showing significant tissue damage, the growing point of even the most advanced corn is still below ground and therefore the growing point is undamaged. In dry sandy soils, under extreme freezes, the low temperature can move down to the growing point. It will be important to assess the growing point in the next few days. Growing points should be firm, yellow or light green in color. Late yesterday, (June 4) damage on corn crops ranged from complete plants being burnt down to the soil level to only one or two plants in 17.5 feet expressing only light leaf damage. I have included some pictures below of what to look for when assessing corn damage from OMAFRA written by Greg Stewart.

**Soybeans:** Everyone by now probably has a lesson in soybean anatomy and know that the growing point on a soybean plant is above ground from the time the soybean emerges. Soybeans across the province ranged in development from “my beans are still in the bag” or just planted to 10% emerged and first trifoliolate. We’ll concentrate on the latter! If a few of your soybeans were just emerging you are probably in pretty good shape. You will know quickly as the rest of the soybeans quickly emerge from the soil and fill in the stand. Soybeans can have significant stand loss but still yield very well.

Soybeans that are well advanced are where you want to concentrate your attention. It will take some time for soybeans to express the frost damage and show any signs of regrowth. When the uppermost growing point is frozen, the soybean plant has the ability to regrow from buds at the axis of the stem and the cotyledons. In these cases replanting will not be required. When the damage extends below the cotyledons, regrowth may not be possible and replanting will be required. Most of the soybean plants I looked at yesterday (June 4) did not express the extent of the frost damage; only showing curled leaves.

It is important that if you get into a replant soybean situation to obtain the proper short season variety. Also don’t forget about the inoculant! And proper planting depth; we will be most likely into drier soil now. Moisture will be critical for even, quick emergence.

See the pictures below for more detail:



Frost damage to a soybean plant that has affected the upper growing point and unifoliate leaves. The stem and cotyledons are in good shape. New growth will come from buds in the leaf axils.



Frost damage is more severe to both the unifoliate and cotyledons but the stem is still healthy and regrowth may be produced from the buds that exist in the axils where the cotyledons meet the stem.



Frost damage is severe in both the unifoliate and the cotyledons and in the stem below the cotyledon attachment. Regrowth will not be possible in this plant.



**Winter Wheat:** Winter wheat was entering a very critical reproductive phase and will most likely show some yield loss. Later winter wheat that is still jointing or very early boot will likely be fine. Wheat with emerging heads or late boot can only take  $-2\text{ }^{\circ}\text{C}$ . In the coming days look for white or tan sections of the head that have aborted sections. This will be

important when assessing whether or not to spray for fusarium.

Growth Stage	Critical temperature	Type of damage
boot	-2 c	Floret sterility, spike trapped in boot, damage to stem and leaves
heading	-1 c	Floret sterility, white awns or heads, damage to lower stem and leaf discoloration

CropLinks and other notices will be digital in the future. If you would prefer to have them come to a different e-mail address please contact Sonny.

**Gordon (Sonny) Murray**

Field Crops Specialist

Perennia Food and Agriculture Inc.

902-670-4892

[smurray@perennia.ca](mailto:smurray@perennia.ca)