

Is Corn Susceptible to Spring Frosts?

Corn in the V5 stage (5 leaves with collars showing) or less will recover from light frosts because the growing point is still below the soil surface. Symptoms of frost damage will start to show up about 1 to 2 days after a frost. Symptoms are water soaked leaves (see Figure 1) that eventually turn brown and necrotic. Frost will often kill young corn leaves but plants, even with extensive leaf damage, will likely recover if the growing point was not injured. The death of leaf tissue above the growing point has only a small effect on corn growth and yield at early stages of development.

While extremely rare, if air temperatures drop to temperatures of -2°C or less for more than a few hours, the growing point region of a young corn plant can be injured or killed even if it is still below the soil surface.



Figure 1: Frost Damaged Corn. Photo by Pam de Rocquigny (2009)

To assess corn plants, look at the growing point approximately 3 to 5 days after the frost occurred. By this time, surviving corn plants should be showing new leaf tissue expanding from the whorls (see Figure 2).



Figure 2: Frost Damaged Corn, 6 Days After Frost Event. Photo by Pam de Rocquigny (2009)

Note, it is not unusual for the new leaves to get 'caught up' in the dead leaf tissue. You can also check the growing point, which can be found by pulling up the entire corn plant, including roots, and splitting the entire plant lengthwise. If the growing point is white or creamy in appearance injury didn't occur. However, damaged tissue in the growing point region will be discolored and soft or "water-soaked". There will also be lack of new regrowth from the whorl.

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