

Cori Lee, Agronomy Sciences Intern

KEY POINTS

- Brittle snap or green snap refers to breakage of corn stalks by strong winds, most often occurring during periods of rapid vegetative growth.
- There are two periods when corn is most susceptible to brittle snap – V5 to V8, when the growing point is just advancing above the soil line, and V12 to R1, or two weeks prior to tasseling until silking.
- Any conditions which promote rapid growth may also increase susceptibility to brittle snap damage. It is often the most productive fields that incur damage.

CONTRIBUTING FACTORS

- Brittle snap refers to breakage of corn stalks by violent winds and is reported most frequently in the Plains and Northern Plains areas of the U.S., where high winds are more common.
- During vegetative growth, rapidly elongating internodes can be brittle and susceptible to breakage.
- Many factors affect the severity of brittle snap injury, including growing conditions, field geography, crop management practices, soil type, and hybrid genetics.

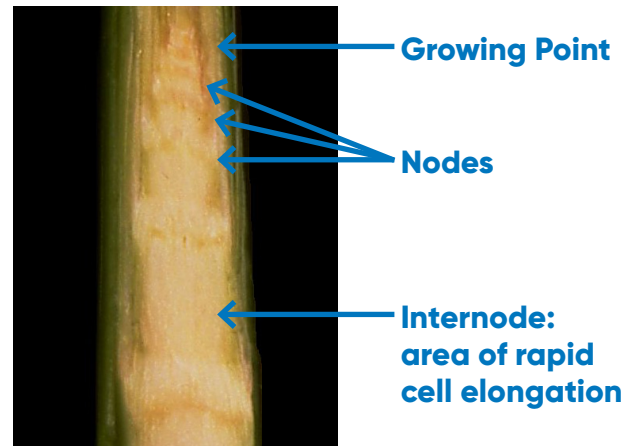
INJURY AT V5 TO V8

- A corn plant at V5 is entering a period of rapid growth. Stalk growth occurs by elongation of internode cells, which increases the rigidity of the stalk. Cell walls are very fragile at this stage.
- At the V5 to V8 stage, many nodes and internodes are stacked together in a small area (see image at top right). This dense concentration may make the plants less flexible and more susceptible to breakage.
- Brittle snap breakage at V5 to V8 occurs below the growing point, at a stalk node at or near the soil surface. Snapped plants will not recover, nor contribute appreciably to yield.



Figure 1. Brittle snap observed at V5 to V8 often follows a surge in corn growth and development stimulated by favorable rainfall and temperature.

Figure 2. Dissected corn plant showing the developing structures inside the stalk, including the growing point, nodes and internode area.



INJURY AT V12 TO R1

- A key factor which increases the incidence of brittle snap from V12 to tasseling is the enlargement in leaf surface area and plant height, which increases wind resistance during a period of potentially severe storms and wind events.
- Snapped plants often have visible ear shoots on the stalk shortly after the wind damage event. However, the reduced leaf surface area usually results in limited grain production.
- The most common sites for breakage at this stage are at the nodes – immediately below, at or above the primary ear node.
- Upon reaching mature height, the risk of brittle snap diminishes as cell walls are strengthened by the deposition of lignin and other structural materials.



The foregoing is provided for informational use only. Please contact your Corteva sales professional for information and suggestions specific to your operation. Product performance is variable and depends on many factors such as moisture and heat stress, soil type, management practices and environmental stress as well as disease and pest pressures. Individual results may vary. Products are provided subject to the terms and conditions of purchase which are part of the labeling and purchase documents. CF220708