Stalk integrity

Impacts on harvest and yields

THREAT

Poor stalk integrity can lead to lodged corn, harvest issues, and reduced yields.

Lodged corn impacts the speed of harvest and can impact grain quality; if stalks are lying on the ground, they are subject to various moulds and may not be able to be harvested. •



IDENTIFICATION

To identify stalk rot in weak stalks, cut the stalk in half and look for discolouration and "hollow" areas. Other signs of stalk rot can be seen as discoloured leaves that turn brown or gray before senescence.

THE THRESHOLD

If less than 10 per cent of plants do not return to vertical or are crushed, it is recommended to harvest those fields first to limit the chance of plants lodging



COMMON STALK ROTS

- Anthracnose stalk rot
- Diplodia stalk rot

before harvest.

- Fusarium stalk rot
- Gibberella crown rot and stalk rot

POOR STALK INTEGRITY

As plants begin to dry down, perform a push or pinch test.

Push test – Walk through the field, randomly select a minimum of 100 plants, and push the plant tops away, approximately 30 degrees from upright.

Pinch test – Pinch the internodes of the lower stalk between the thumb and index finger. If the plants do not move back upright, or the stalk is crushed when pinched, the stalk may have stalk rot.

FAVOURABLE CONDITIONS

Stock rot can occur with good early-season growing conditions followed by stress after pollination. Stressors include nutrient deficiencies, high populations, leaf diseases, hail damage, high heat, drought, and prolonged cool weather.

CONTROL

- Select corn hybrids with strong ratings for stalk strength
- Crop rotation
- Fungicide application, if warranted
- Proper drainage
- Proper crop nutrient balance and fertility

WHAT TO DO TODAY

Harvest fields that show potential for low stalk integrity first to prevent the losses associated with lodging.

Information sources: • Crop Protection Network (https://cropprotectionnetwork.org)

Visit www.gfo.ca/agronomy to download. Version: 11-16-2023.

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