CAUSAL ORGANISM
Fungus: *Fusarium verticillioides* = *F. moniliforme* (Gibberella fujikuroi)

IMPORTANCE
Damage is caused by premature plant death, lodging and interference with translocation of water and nutrients during grain filling, leading to poor yields. Yield loss data for most stalk rots is difficult to ascertain. However, extensive losses are possible under severe disease infestation and in seasons where stresses prevail.

HOST RANGE

SYMPTOMS
Symptoms of *Fusarium* stalk rot are not easily distinguished from those of Gibberella stalk rot and other stalk rot diseases. Rot normally begins soon after pollination and becomes more severe as the plant matures.

The leaves turn from a healthy green colour to a dull green. Wilted plants remain standing and dry, small, dark brown lesions develop on the lowest internodes. When split open, the stalks may reveal a whitish-pink to salmon pink pith discoloration often confused with the red colour of Gibberella stalk rot. Premature senescence and lodging due to the disintegration and shredding of the internal stalk pith may occur; when squeezed between the thumb and index finger at the lower nodes, the stalk often collapses.

DISEASE INFORMATION
The fungus survives on crop residues in the soil or on the surface. Under favourable conditions, it may infect maize stalks either directly or through wounds caused by hail or insects. Spores can be splash dispersed onto leaves and washed down the leaf into the sheath and infect at the nodes. The fungus is commonly seedborne, but this source of inoculum is believed to be less important than air- and soilborne inoculum.

*F. verticillioides* is most common in warm, dry areas. *Fusarium* root and stalk rots typically occur in complexes with other root and stalk rots such as Gibberella, Diplodia and Colletotrichum.

**COMMON NAMES**
Stalk rot of maize; maize stalk rot; stem and ear rot of sweet corn

**Figure 1. Pink internal discoloration and pith disintegration.**

CONTROL

**Cultural control:**
- Hybrids resistant to other stalk rot diseases are also resistant to *Fusarium* stalk rot.
- Cultural practices that lessen plant stress can help reduce the incidence of stalk rot. Common stresses include: high nitrogen, low potassium fertility, high moisture in the mid to late season after a dry early season, moisture stress early in the season and during grain fill, high leaf disease incidence. Physical damage that creates wounds allowing the pathogen to enter such as insect damage or hail storms may also predispose maize plants to stalk rot.
- Where possible, harvest early to avoid yield loss due to lodging.

**Chemical control:**
- There are no fungicides currently available for managing *Fusarium* stalk rot. However, fungicide applications may be beneficial in lessening stalk rot severity if leaf diseases reach economic threshold levels due to the stress they place on the plant.