# Headblight of Maize

*Gibberella zeae* (telemorph), *Fusarium graminearum* (anamorph) Gibberella ear rot, Gibberella stalk rot, *Fusarium* head blight (FHB)

## Prevention

- Headblight is a disease caused by a fungus which can infect the stalks and ears of maize. It can survive on plant debris and in soil for long periods of time.
- Use clean seed from a certified provider since the disease can be seedborn.
- Use resistant or tolerant varieties.
- Balanced soil fertility.
- Do not plant maize in fields in which maize or wheat was grown the previous year and showed symptoms of *Fusarium* head blight (premature bleaching of spikelets) - this is caused by the same pathogen.
- Reduce plant stress by planting the recommended crop densities (for maize, 75-90 cm between rows and 25-50 cm within the row).
- The fungi often enter via injuries caused by insects; control insects such as stem and ear borer.
- Crop rotation with non-host crops (e.g. soybeans) and tillage reduce inoculum in soil.
- Store grain at low moisture (below 15%) to reduce the incidence of the disease.

## Monitoring

- If conditions are favourable for the development of the disease (i.e. warm and wet), monitor plants randomly in the field, particularly during the first 21 days after silking.
- It is easiest to identify the symptoms just before harvest when the ears are intact.
- **Stalk rot:**
  - Plants wilt and leaves turn dull greyish-green.
  - The lower internode turns tan to dark-brown while its internal pith disintegrates, softens and shows a pink to reddish discoloration.
  - Small, round, black specks can be observed on the lower stalk surfaces near the nodes.
  - To monitor stalk rot, pinch the plant at one of the lowest internodes and if the stalks crush easily by hand, their internal pith has been affected by stalk rot.
- **Ear rot:**
  - Initial symptom appears as a white mould-like growth on the ear tips gradually moving towards the base of the ear.
  - Infected kernels turn to a distinctive reddish-pink colour.
  - Early infection can result in completely rotten ears with the husks adhering tightly to the ear.
  - If more than 10% of the plants show symptoms, consider taking control measures.

## Direct Control

- In case of early detection of the disease, remove and destroy infected plants to reduce the amount of disease inoculum in subsequent season.
- Under severe infection, harvest early at higher moisture, dry the grain and destroy crop residues.
- Do not feed residues to livestock since infected maize can be toxic.

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**Note:** Pesticides may be available to control this pest. Please check with the Ministry of Agriculture in your country to find out which pesticides are registered in your country and the local restrictions for their use.