



# Information Sheet

## 9.8 Pokkah boeng

### Importance

Pokkah boeng (a Javanese term for twisted top) is caused by a complex of common *Fusarium* species. It is a common and generally mild disease, the symptoms of which can be seen on most South African varieties. However, when symptoms are severe, substantial crop loss can be expected.

### Symptoms and effects on yield

- Mild (cosmetic) symptoms include chlorotic (white) markings (Figure 1), often towards the base of young leaves. As the affected leaves mature, irregular reddish stripes, flecks and holes may develop within the chlorotic area. The leaf may appear burnt in some areas (Figure 2). Affected leaves tend to be narrow at the base. Plants showing mild leaf symptoms usually grow away from the symptoms and no yield loss is expected. The progression of symptoms beyond this stage is dependent on the susceptibility of the variety and climatic conditions.
- Young leaves infected in the spindle, may become wrinkled and twisted (Figure 2) and may be stunted (Figure 3). Infection may progress from the spindle to the growing point and into the stalk causing it to bend and distort (Figure 4). Plants showing these symptoms usually grow away from the symptoms and yield loss is limited.
- In severe cases (Figures 5 and 6), fissures or 'knife cuts' may develop across the stalk, sometimes causing it to break. The growing point may also be killed resulting in side-shooting and stalk die-back. Substantial yield loss can be expected when these symptoms are widespread in a field.
- Some herbicides and growth regulators can cause similar symptoms. These symptoms will usually develop along the edges of the field or in a regular pattern along cane rows within the field where accidental chemical splash or drift has occurred.



▲ Figures 1-2: Mild pokkah boeng symptoms.



▲ Figures 3-4: Moderate pokkah boeng symptoms.



▲ Figures 5-6: Severe pokkah boeng symptoms.

## Spread

---

- Wind-blown spores that settle or are washed down into the spindle.
- Symptoms are most common in summer during periods of rapid cane growth.

## Varietal susceptibility

---

- Most gazetted South African varieties are tolerant but may show a range of symptoms. Mild pokkah boeng symptoms are frequently observed on N48 in summer. Stalks of N41 may become distorted but stalk death is not common. Leaf and stalk symptoms were widespread in some fields of N53 in Mpumalanga and Amatikulu in 2019. N64 developed severe pokkah boeng symptoms in some areas shortly after release.

## Management

---

Little can be done to prevent pokkah boeng other than planting tolerant varieties. When highly susceptible varieties are identified during selection in the SASRI Plant Breeding programme, they are discarded. Some varieties e.g. N15 and N34 were found to be highly susceptible and were withdrawn shortly after release.

Sharon McFarlane (Senior Pathologist)

March 2022

---

All copyright and other intellectual property rights subsisting in this work, including without limitation all text, images and graphics contained in this work (collectively, the "Contents") are owned by the South African Sugar Association ("the Owner"). Neither this work nor any of its Contents may be shared, modified or copied in whole or part in any form, or be used to create any derivative work without the owner's prior written permission. Whilst every effort has been made to ensure that the information contained in this work is accurate, the owner makes no representation, warranty or guarantee relating to the information contained in this work. The use of this work is at your own risk and neither the Owner nor its consultants or staff can be held liable for any loss or damage, whether direct or indirect, caused by the reliance on the information contained in this work. The use of proprietary names should not be considered as an endorsement for their use.