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DISEASES

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BEST TIME FOR DISEASES

DISEASE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
SMUT	Dark	Dark	Dark	Light	Light	Light	Light	Light	Light	Light	Light	Light
MOSAIC	Dark	Dark	Dark	Light	Light	Light	Light	Light	Light	Light	Light	Light
RUST - BROWN	Light	Light	Light	Dark	Dark	Dark	Light	Light	Dark	Dark	Light	Light
RUST - TAWNY	Light	Light	Light	Dark	Dark	Dark	Light	Light	Dark	Dark	Light	Light
RUST - ORANGE	Dark	Dark	Dark	Dark	Light	Light	Light	Light	Light	Light	Light	Light
POKKAH BOENG	Dark	Dark	Light	Light	Light	Light	Light	Light	Light	Light	Dark	Dark
YELLOW LEAF	Light	Light	Light	Light	Dark	Dark	Dark	Dark	Light	Light	Light	Light
SOUR ROT	Light	Light	Light	Light	Light	Light	Light	Dark	Dark	Light	Light	Light
RED ROT	Light	Light	Light	Dark	Dark	Dark	Dark	Light	Light	Light	Light	Light
MSV	Dark	Dark	Dark	Light	Light	Light	Light	Light	Light	Dark	Dark	Dark
GUMMING	Dark	Dark	Dark	Light	Light	Light	Light	Light	Light	Dark	Dark	Dark
LEAF SCALD	Dark	Dark	Dark	Light	Light	Light	Light	Light	Light	Dark	Dark	Dark
EYE SPOT	Light	Light	Light	Dark	Dark	Dark	Light	Light	Light	Light	Light	Light
PINEAPPLE SETT ROT	Light	Light	Light	Dark	Dark	Dark	Light	Light	Light	Dark	Dark	Dark

Note: Diseases can be seen throughout the year so always be alert and report what you see!

SUGARCANE SMUT



Incipient whip
Elongated stalk,
no whip visible



Infected stool



Emerging whip

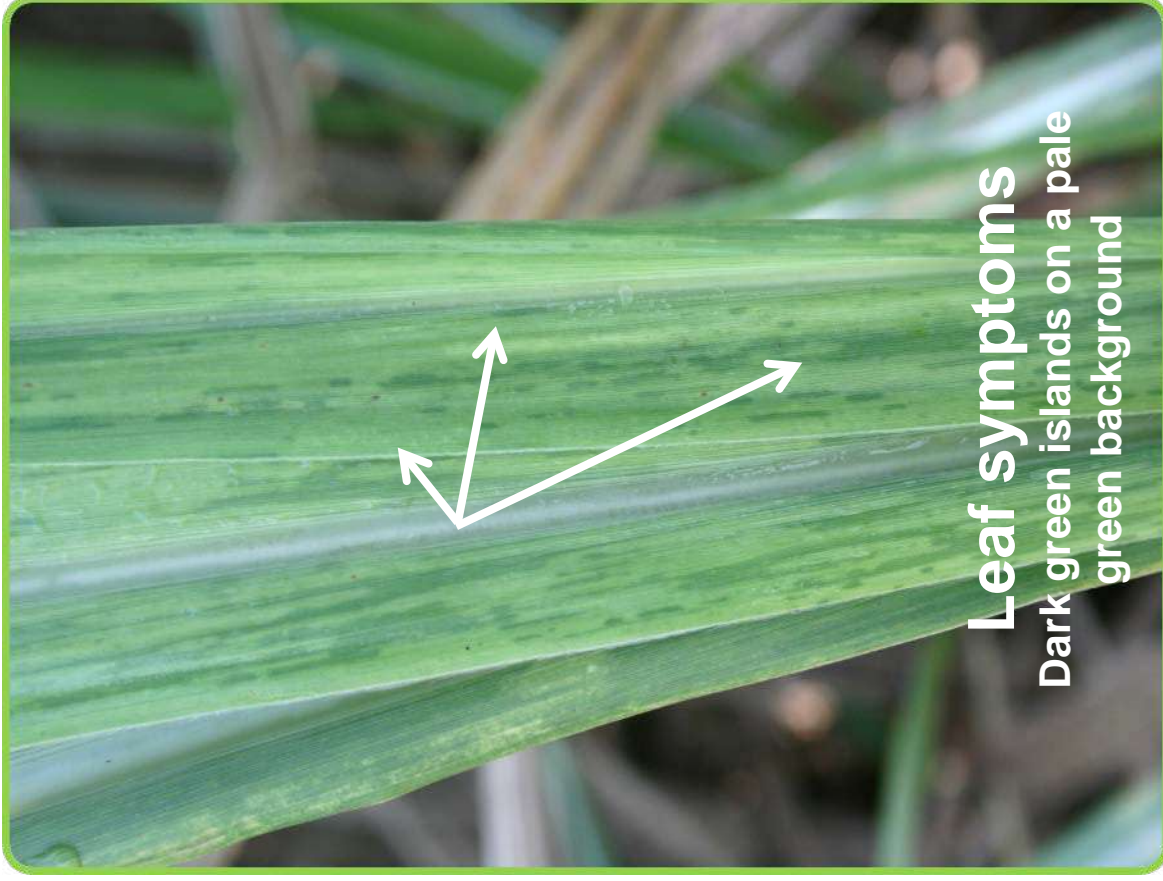


Mature whip

MOSAIC



Infected stool

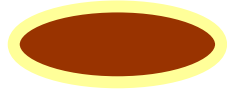
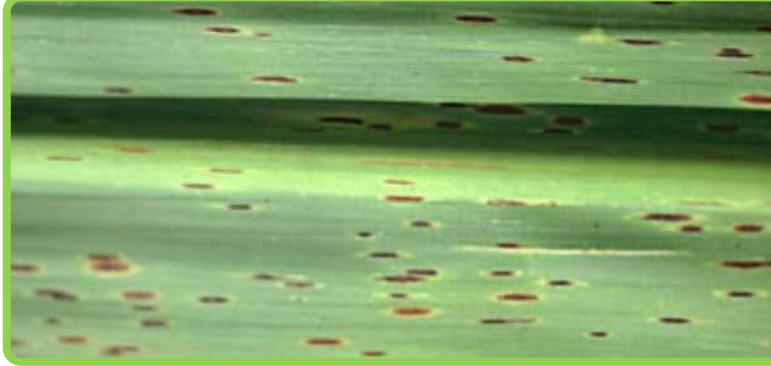


Leaf symptoms
Dark green islands on a pale
green background

COMMON LEAF SYMPTOMS



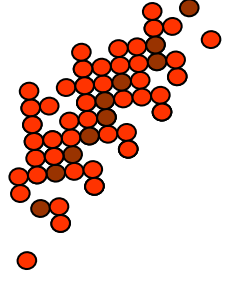
Rust



**Brown
spot**



**Ring
spot**



**Mites /
Aphids**



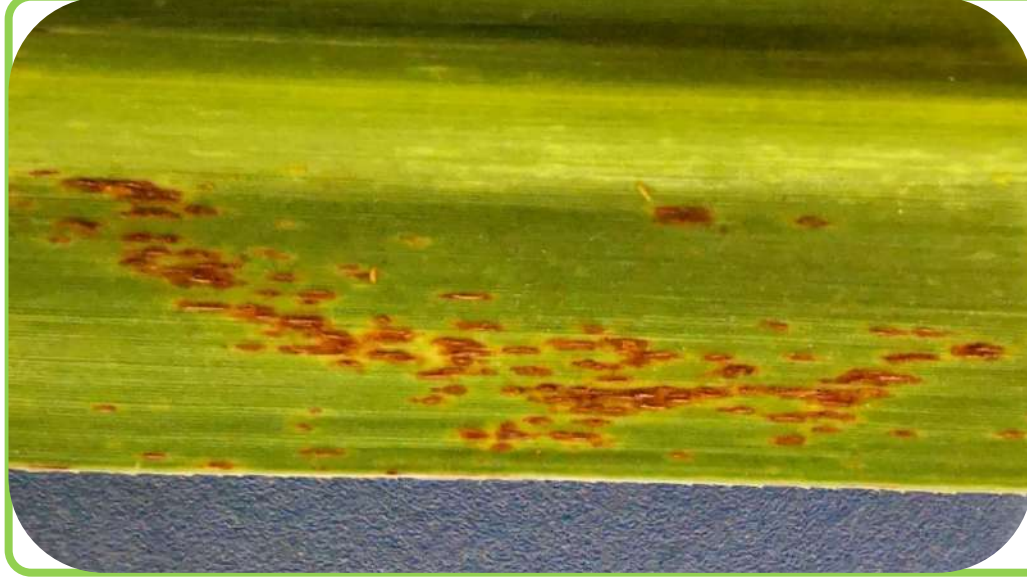
SUGARCANE RUST



Brown rust



Tawny rust



Orange rust

SUGARCANE RUST



Brown rust



Tawny rust



Orange rust

Brown rust

Lesions (marks) on leaf:

- cinnamon brown to dark brown
- up to 20 mm long
- more severe towards leaf tip

Spores:

- brown when fresh
- usually only on the lower leaf surface

Favoured by cool, moist weather
Common in autumn and spring

Tends to occur on young crops
(< 6 months)

Tawny rust

Lesions (marks) on leaf:

- orange to reddish-brown
- similar in size to brown rust
- more severe towards leaf tip

Spores:

- orange when fresh, profuse
- also occur on upper leaf surface

Favoured by cool, moist weather
Common in autumn and spring

Has been observed on cane of
all ages

Orange rust

Lesions (marks) on leaf:

- orange to reddish brown
- up to 4 mm long
- more severe towards leaf base

Spores:

- orange when fresh
- usually only on the lower leaf surface

Favoured by humid, warm
conditions
Common from January to May

Has been observed on cane of
all ages

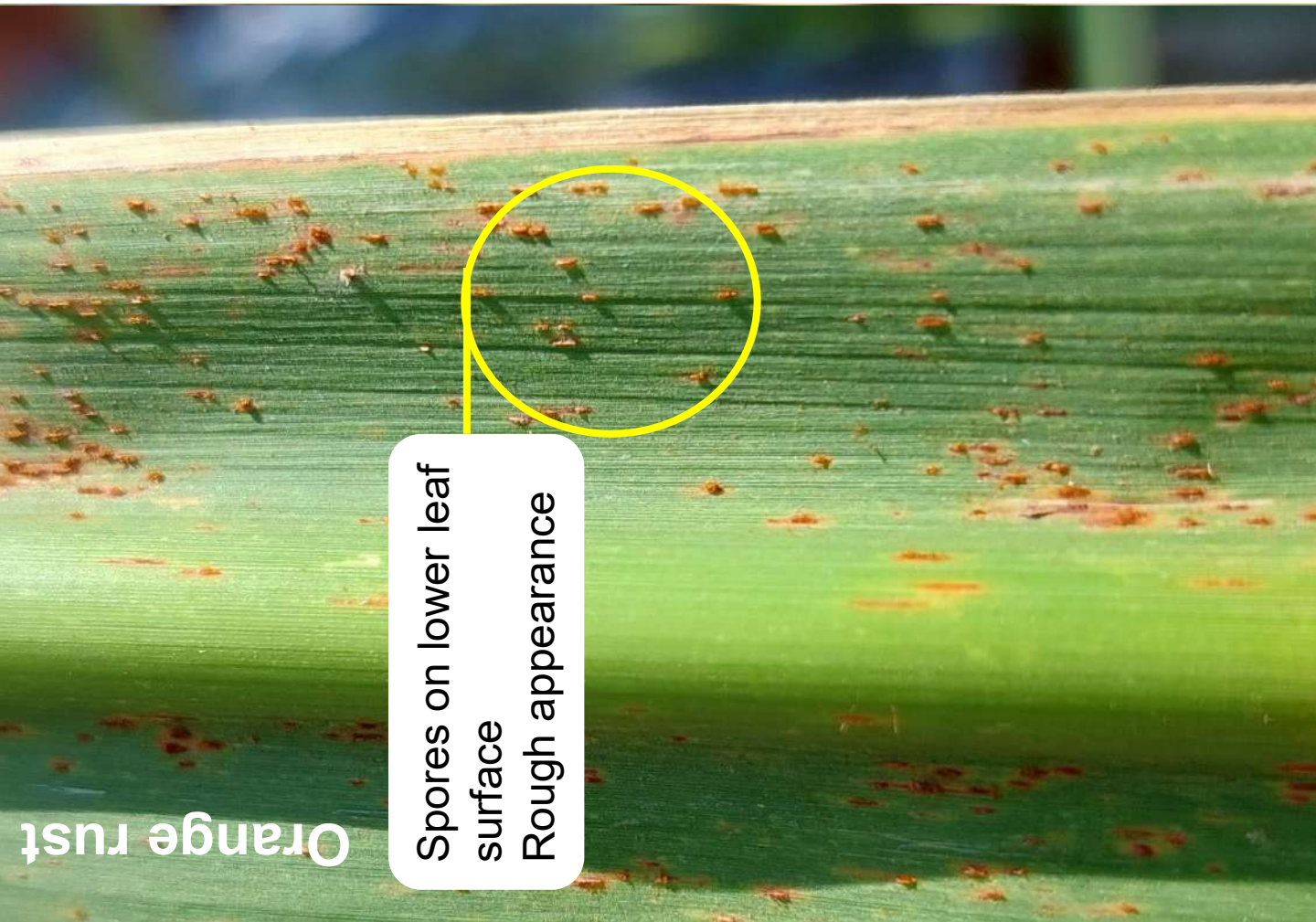
CONFUSING SYMPTOMS!





Upper and lower
leaf surface smooth

Yellow sugarcane aphid (YSA) damage



Spores on lower leaf
surface
Rough appearance

Orange rust

New 2024

BROWN RUST



TAWNY RUST

New 2024



Lower leaf surface



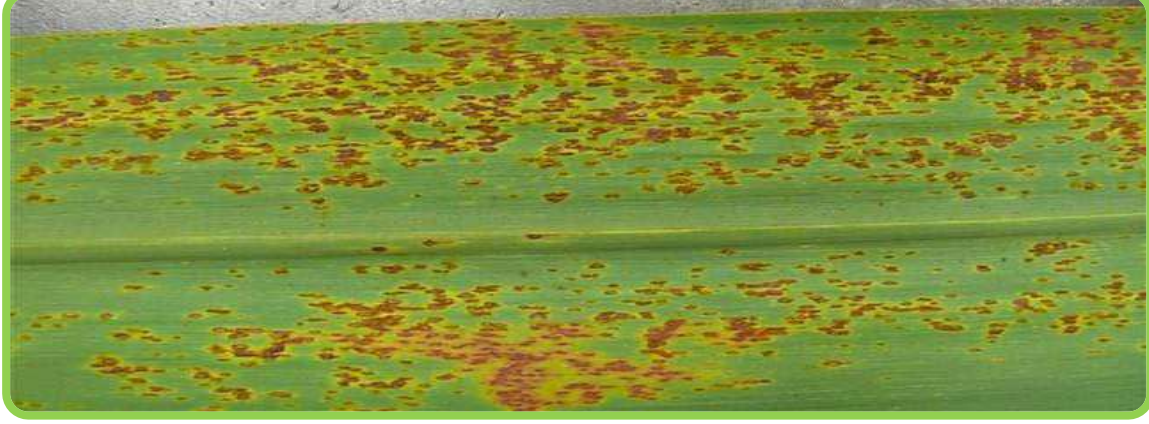
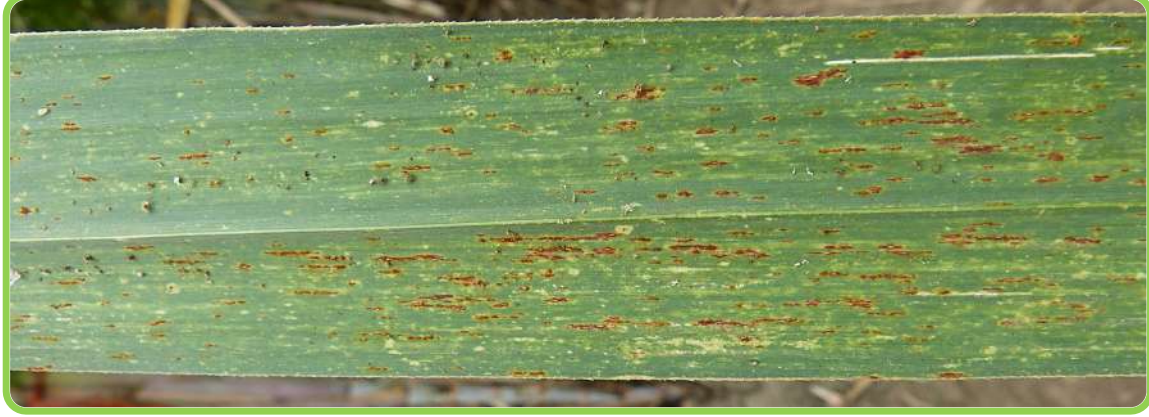
Upper leaf surface



Upper leaf surface

ORANGE RUST

Updated 2024



RUST SEVERITY CHART



Mild



Moderate



Severe

POKKAH BOENG



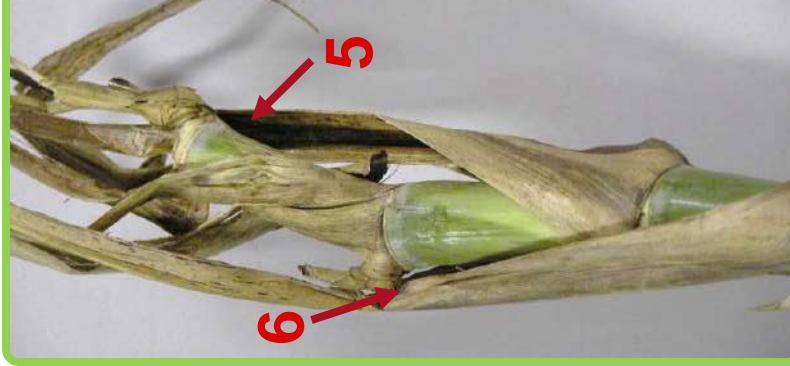
Mild / Cosmetic

- Leaf bleaching (1)
- Leaf wrinkling (2)



Moderate

- Bent / deformed stalks (3)
- Spindle die-back (top rot) (4)
- Growing point not affected



Severe

- Growing point killed (5)
- Side shooting (6)
- 'Knife cuts' across stalk (7)
- Stalk death



STALK AND SETT ROTS



**Pineapple
sett rot**

Infests setts at planting



Sour rot

Usually has a strong sour smell



Fusarium

Commonly associated with borer damage



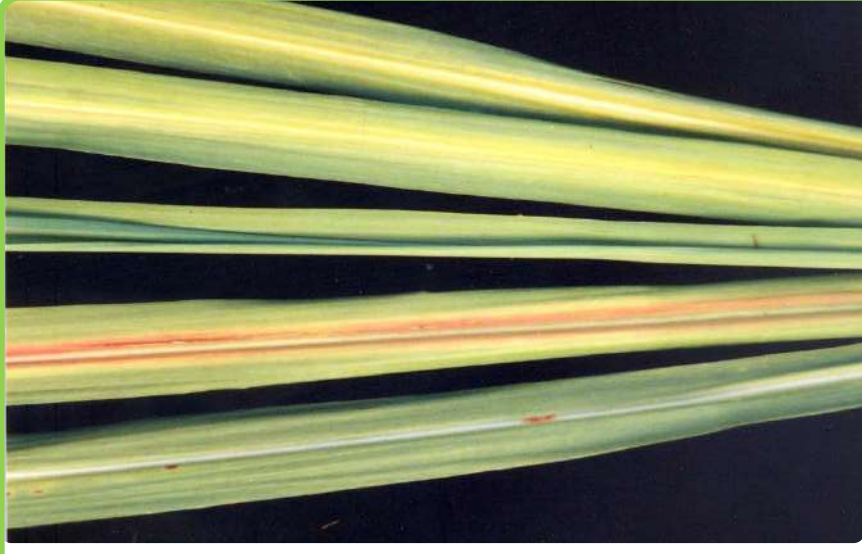
Red rot



MAIZE STREAK VIRUS



YELLOW LEAF SYNDROME



GUMMING



White leaves

One to all leaves can be affected

The whole leaf can turn white

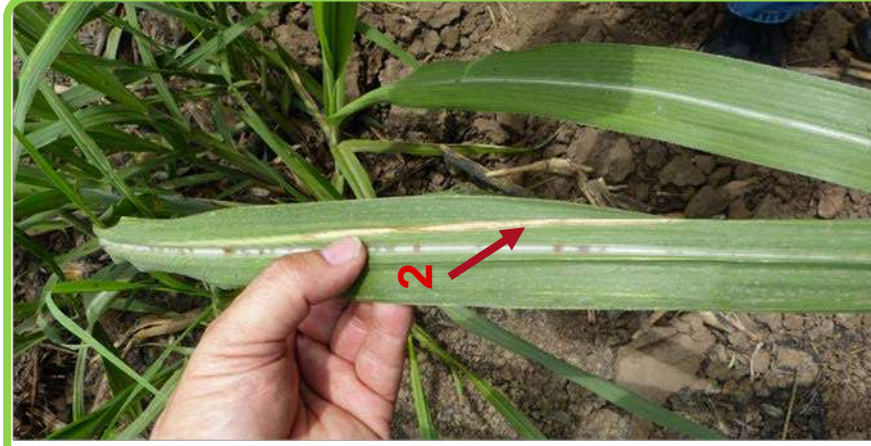
Symptoms can be seen on cane of any age



Red flecks

Develop within the white area of the leaf

LEAF SCALD



White striping on leaves

Stripes develop from edge of leaf to midrib
White, thin, sharp edges early on (1)
Become wider over time, margins wavy (2)

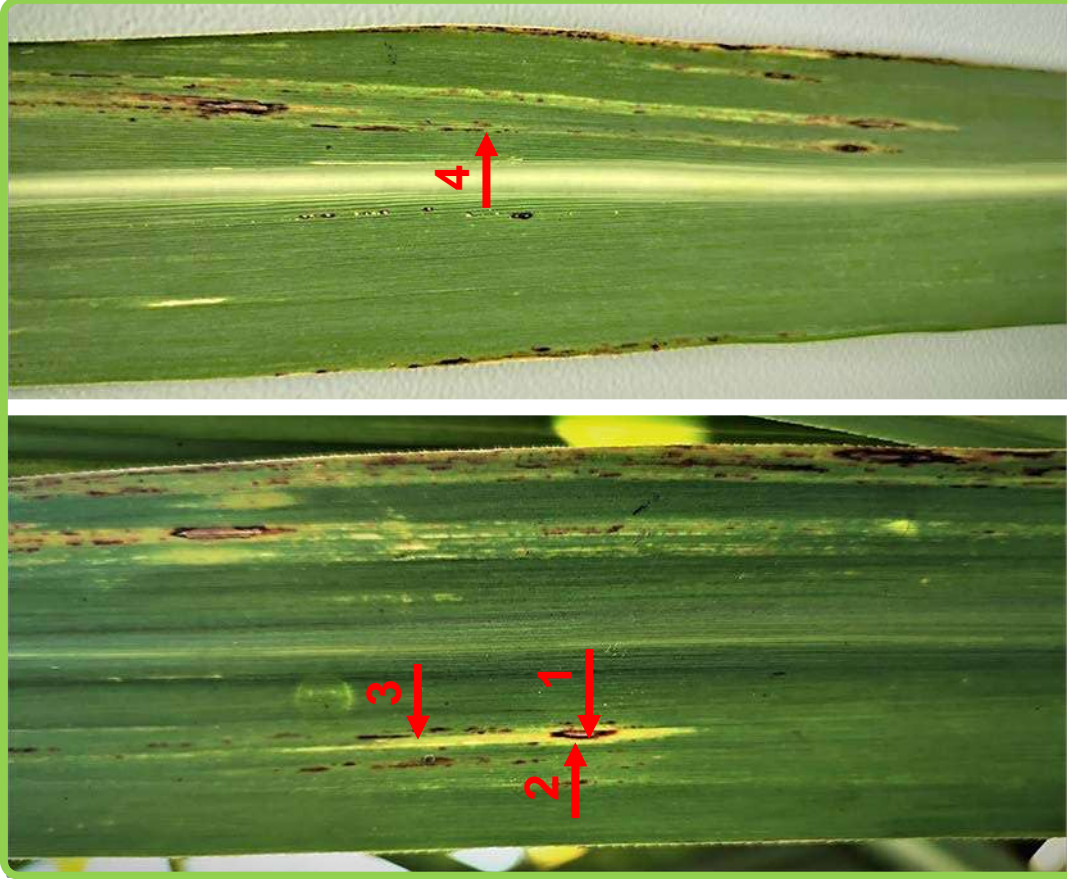


Inward curling,
drying leaves,
side-shooting



Dead stools

EYE SPOT



Severe eye spot symptoms

RSD



Select stalks from the short, sick / weak looking stools for RSD samples

RUST SAMPLES

Send leaf samples down to Mt Edgecombe if you are not sure:

- what type of rust is infecting a field;
- if it is rust or yellow sugarcane (YSA) damage.

How to take a rust sample

1. Choose 3 leaves with the freshest symptoms.



2. Cut a 20 cm section from each leaf from an area that has the best, freshest symptoms.

3. As soon as the sections have been cut, put them in a brown paper bag.

4. Using a ball point pen, label the paper bag (grower name, farm name, field no., variety, date).

5. In the comment section in Survey123, note that a rust sample has been taken.

6. Place the paper bag back in the ziplock bag, try and get rid of as much air as possible from the ziplock and seal well.

7. Put the bags in the fridge as soon as you get to the office.

8. Send the bags to Mt Edgecombe as soon as possible – the leaves will stay fresh for up to 5 days if they are collected and stored correctly.

NUMBER OF SITES TO INSPECT
SMUT, MOSAIC, OFF-TYPES

Area of field (hectares)	No. 50 m sites Commercial fields	No. 50 m sites Approved Seedcane Intensive surveys (100 stool sites)
0 - 1	5	15
1 - 2	10	30
2 - 4	15	45
4 - 6	20	60
6 - 10	25	75
10 - 20	30	90
20 – 40	40	120



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