



## SMUT AWARENESS

### Background

Fiji and PNG are the only two sugar producing countries that are known not to have sugarcane smut. This is a very serious disease and production losses can be anything between 30 – 100%.

The disease is known to have spread around the globe around 1970s and 1980s. In the early years of spread, Australia a major sugar producer, was also free from smut disease. However in the last ten years the disease has been prevalent initially in Western Australia and in more recent years in Queensland.

Fiji needs to prepare itself for this disease as it spells disaster for the industry. The objective of this fact sheet is to inform and familiarise the growers about the symptoms of smut.

### Symptoms

As expected when the plants are infected with smut it would be stunted and stalks are thinner than usual, canopy has a grass-like appearance and a whip-like structure appearing from the growing point of sugarcane plant.

The whip is covered by thin membrane. Once this membrane is broken the spores are blown or fall on the field. These whips are formed on the shoots due to infected cane setts and from fields that are contaminated with smut spore.

### Organism causing smut

The fungus, *Ustilago scitaminea* infects buds of sugarcane on stalks or germinating buds on the setts in the field. The fungus seems to grow at the point of most active growth of plant. The fungus can survive in cane till the plant is alive.



### Yield loss

In many countries it has been shown that yield loss in susceptible varieties can be very substantial. This happens to such an extent that cane crop will die making ratoon totally uneconomical, thus needing plough out and replant.

....be vigilant of the signs and symptoms of smut....

## Transmission of disease

Smut is mainly spread by dispersal of spores by wind or by planting infected or contaminated plants. The Australian studies show that spread by wind is normally for distances less than 25 meters.

However during cyclones spores can travel very long distances. People and machinery can be the other major area of transmission of spores. It is understood that spores can survive up to two months in moist conditions and longer in dry conditions.



## Minimise introduction of smut

If any individual visits smut infected farms overseas he/she need to wash all clothes and clean and disinfect shoes, cameras or any other items taken into the farm.

All second hand machinery imported from Australia need to be cleaned after

its last use. The Sugar Research Institute of Fiji is to be informed and arrangement would be made for an inspector in Australia to provide clearance certificate. The cost for inspection must be borne by the buyer of the equipment.



## Symptoms observed

In the event a grower observes any of the symptoms shown in the fact sheet than he/she needs to urgently inform the Sugar Research Institute of Fiji on the number stated at the bottom of this fact sheet.



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*SRIF is a nonprofit organization that encourages use of responsible agriculture production systems. Our actions are to make members good growers by....*

*.... helping them to stay on cane farms  
.....assisting them to lower cost of production  
.....promoting them to increase productivity  
.....supporting them to be profitable.  
.....working toward sustainable farming systems*

**Photos courtesy of BSES Australia**