

A rare cane disease has exploded in crops of Q124. BSES senior pathologist Dr Rob Magarey reports on the orange rust outbreak, which comes 'hard on the heels' of low world sugar prices.

Orange rust causes concern in Q124

Orange rust, a disease occurring in Queensland since the turn of last century, has caused little damage to sugarcane crops in the past, apart from that caused by a few minor outbreaks in the early 1900s. Closely related to the better known common rust (caused by *Puccinia melanocephala*), orange rust (caused by *Puccinia kuehni*) has been rarely seen. However, in January, growers began reporting to BSES that after walking through cane crops, a strange orange colouring covered their shirts. BSES's follow up investigations showed that the cause was orange rust.

The disease results from infection of the cane leaves by the causal fungus. As the fungus colonises the leaf, it ruptures the leaf surface and produces masses of orange coloured spores (which accounts for the orange colouring on growers' shirts after brushing past the leaves). When conditions favour the disease, much of the leaf surface is affected and this gives the crop an orange-yellow appearance, leading to reduced growth.

Orange rust can be distinguished from common rust by its orange colouring (common rust brings about a brown colouring of the leaf), its appearance during the summer-autumn period (common rust appears in spring-summer) and the clumped pattern of infection on affected leaves (common rust has a more even distribution).

Where is it occurring?

The disease is widespread throughout Queensland sugarcane growing regions wherever crops of Q124 are grown — including the upper Atherton Tableland area.

What varieties are affected?

The disease is so far confined largely, but not exclusively, to Q124.

How severe the disease will become in current crops of Q124 is unknown and observations made by BSES and Cane Protection and Productivity Board staff this year will help to improve our knowledge of its effects. Some disease has been seen in a few other varieties, but generally at minor levels.

Why is it occurring now?

A commonly asked question is why has it occurred now? The answer has two parts:

- large areas of the susceptible Q124 have been planted in the past 10 years, allowing the build up of the disease from a small initial level; and
- there appears to have been a change in strain of the pathogen — the previous strain did not infect Q124.

What can we do about it?

BSES has planned several activities to deal with the situation. Our first task is to confirm which varieties are affected. Variety trials in each district are being screened and susceptible and

resistant varieties identified. Should the disease progress further in Q124, recommendations concerning other varieties will be based on sound observations.

Affected crops are also being monitored to gain better information about the effect of weather conditions on disease occurrence. This information will enable BSES to predict when and where the disease will occur.

Growers should not stop planting Q124 yet; it is important sound decisions are made based on good observations. BSES will be there to gather the information necessary and provide it to those affected by this outbreak. The occurrence of orange rust is a timely reminder that outbreaks of pests and diseases may suddenly occur with negative consequences. It is important that the industry retain the ability to respond to these situations in order to minimise economic losses to growers.

For further information about orange rust contact Rob Magarey at BSES Tully on ph 07 4068 1488.

Orange rust taskforce p 12



Main photograph: Extension officer Brad Hussey, BSES Mackay, inspects crop infected with orange rust. **Insert:** Orange rust in Q124.