

Industry update - 27 August 2013

Scientific Reference Panel now on board

The *Solving Yellow Canopy Syndrome* research project – funded by the Sugar Research Development Corporation, The Department of Agriculture, Fisheries and Forestry Queensland and BSES Limited – is supported by an independent Scientific Reference Panel that is responsible for providing scientific opinion on the direction of the project.

The panel has recently been appointed and includes:

- Professor John Lovett, Plant Biosecurity Cooperative Research Centre (PBCRC)
- Dr Andre Drenth, The University of Queensland
- Dr Geoff Inman-Bamber, Crop Science Consulting

Last week the panel travelled to the Burdekin and Herbert cane-growing regions to assess first-hand YCS in the field.

They also met with the SRA project team and industry representatives.

From their first inspections the panel confirms the view of SRA staff – that the condition is complex and is not yet fully understood.

The panel reviewed all aspects of the project and endorsed the general directions being taken.

They will soon recommend on any adjustments to the project. We will report on these adjustments in the next update.

What we are seeing in crops with this condition

During our inspections last week the SRA team and the panel found that:

- Symptoms of YCS were observed in both plant and ratoon crops.
- Symptoms were seen in advanced and younger crops.
- Varieties may differ in susceptibility to YCS but the symptoms were seen in varieties old and new, and in 'noble' cane.
- Affected crops were observed on heavy and light soil types.
- Symptoms may appear in one row but not in neighbouring rows. Monitoring is needed to determine whether the condition spreads over time.
- Root systems may show an absence of vigorous, white roots.

- Leaf blades, typically, develop ‘burning’ along one side – probably the side which unrolls first as the leaf develops.
- Leaves and other parts of the plant may show red and purple colouration.
- Similar symptoms were observed in several other grass species.

Update on the Solving Yellow Canopy Syndrome research project

With our project partners – **Burdekin Productivity Services Limited (BPS)**, **Herbert Cane Productivity Services Limited (HCPSL)** and the **Department of Agriculture, Fisheries and Forestry, Queensland** – we have made good progress in ruling out some possible causes and setting up new trials to learn more.

Two new trials now underway

Trial one: Planting material and the impact of stress

Based at our Burdekin facility, this recently planted trial seeks to understand how water stress and Imidacloprid treatments impact on clean and affected cane.

Trial two: Imidacloprid

Field trials have been established in the Herbert cane-growing region – in collaboration with **HCPSL** – to investigate the effects of Imidacloprid on YCS expression and severity.

Transmission via planting material trial

A trial was set up – under optimal conditions – to see if YCS could be transmitted via planting material.

After 10 weeks we did not see YCS symptoms expressed in young cane, even when the plant source was severely affected. Germination was impaired, however, with reductions of up to 20 per cent when severely YCS-affected plant source was used.

A water stress treatment has now been introduced to the trial. After a few weeks of this treatment we have seen some typical stress-related yellowing – but nothing resembling YCS symptoms.

We will continue to monitor this trial to see how the cane progresses under these conditions.

Observation trials

With BPS and HCPSL, we have identified and begun establishing the sites where we will monitor and track the development of YCS in two successive crops.

Soil sampling has started and data is being collected to assist with mapping and cataloguing site history and inputs.

BPS and HCPSL are also helping us assess the industry impacts of YCS on this year's yield and sugar. This data is being collected and YCS-affected blocks are being monitored through to the mill.

Next steps

The first edition of our new extension-focused newsletter *CaneConnection* will be sent to the whole-of-industry in the next few weeks.

An information sheet which can help growers identify YCS and compare it against other conditions will be included.

By educating our industry on what to look for we can ensure that YCS is identified accurately and can then be monitored.