

## **PhD Industry Scholarship - Advancing techniques for diagnosis of yellow canopy syndrome**

Yellow canopy syndrome (YCS) is an as-yet unresolved syndrome that is spreading through the sugarcane industry. First recognised in far north Queensland in 2012, it has now been detected in all Queensland sugarcane-growing regions. The cause is currently unknown of the syndrome is as yet not clearly defined but the role of insects is being examined.

A rapid molecular method would allow more detailed evaluation of the insect fauna at the species level, particularly for insect groups which are prevalent when YCS occurs. It would also allow a detailed study of the population dynamics of targeted insects, both within canefields and within field borders.

If the causal agent could be identified, controlled experiments would then allow the development of appropriate in-field molecular diagnostics for the insect involved. Alternatively, or in combination, symptom expression could be detected at an early stage before symptoms become apparent at ground level using remote sensing technology.

**Sugar Research Australia in collaboration with the University of Southern Queensland and the University of Melbourne is seeking a PhD student to investigate potential causal agents of yellow canopy syndrome of sugarcane and examine foliar changes during YCS symptom expression, focusing on:**

- The in-field epidemiology and dynamics of both yellow canopy syndrome and likely causal agents at species level
- Development of a molecular diagnostic approach to characterise the insect species likely to be involved as causal agents
- Rapid in-field diagnostics for the causal agent and/or CS symptom expression

The student should have an interest in molecular biology, remote sensing or applied entomology.

The project will be based in Cairns, North Queensland

Further details can be obtained from:

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