

External review says smut crisis was handled well

BSES Limited, Australia's primary sugarcane research and development provider received recognition for the impressive pre-emptive work that has substantially reduced the impact of the current sugarcane smut epidemic on the \$1.5 billion dollar sugar industry.

Review panel members – Assoc. Prof Bob McIntosh of Sydney University, Prof Jeff Hoy of Louisiana State University and Dr Mac Hogarth AM – said that the BSES-CSIRO plant breeding response to the incursion of sugarcane smut had been rapid, comprehensive and entirely appropriate.

The smut incursion represented a potentially severe crisis for the sugar industry and the only solution to the problem was for the industry to adopt smut-resistant varieties.

Key industry, media and government representatives recently gathered in Brisbane to hear the results of the external review into the BSES-CSIRO response to the sugarcane smut crisis.

Barry Croft, BSES program leader biosecurity, told guests at the BSES Activate Industry breakfast that the SmutBuster program funded by the Sugar Research and Development Corporation and Queensland

Department of Primary Industries and Fisheries aims to breed new high yielding smut resistant varieties. The review panel backed the SmutBuster program and said it was well planned and innovative.

Smut now widespread

Sugarcane smut has spread to all sugarcane regions except NSW and Rocky Point, and BSES forecasts all farms in the Bundaberg, Mackay and Herbert districts will be infested by the end of 2009. Barry said smut incidence is increasing at seven to 10 times per year in infested fields and

growers are replanting with resistant varieties as quickly as possible to avoid serious yield losses.

BSES began screening varieties for smut resistance in Indonesia in 1998 and the 10-year program finished in 2008 with more than 2000 clones screened for smut resistance. Since 2000 the proportion of smut susceptible crosses in BSES breeding program has fallen from 80 per cent to less than 10 per cent.

Smut resistant varieties identified in Indonesia have been the basis of the industry response to the smut epidemic. The SmutBuster program aims to build on this work to ensure that the sugar industry can continue to improve productivity with new smut resistant varieties in coming years.

Identifying smut resistant varieties

The search is on for a time efficient and cost effective method of identifying smut resistant varieties. DNA markers for smut resistance have been identified but they only explain a small percentage of the variation. NIR offers a rapid method of screening buds for factors that confer resistance. The early work on the NIR model is promising and is undergoing further testing. ■



Sampling underway to find markers for identifying smut resistance.



Prof Bob McIntosh.



Prof Jeff Hoy.



Dr Mac Hogarth AM.