

Updated traits to maximise profitability along the value chain

An extensive consultation process involving an industry reference group has helped determine a new approach for selecting sugarcane varieties as part of the Sugar Research Australia (SRA) plant breeding program.

Over the last two years, SRA has been working with industry to review and modify the way different traits are weighted in the industry's sugarcane breeding program.

This involved working with a group of 12 people who were appointed by the Australian Sugar Industry Alliance (ASA) to work with SRA technologists and managers on a review of the weighting given to each trait.

SRA Executive Manager for Development, Dr Peter Allsopp, said that changing the weighting of traits in the breeding program was not a decision treated lightly.

'When we breed a new variety, we give each characteristic an economic weighting, such as for disease resistance, sugar content, or tonnes of cane per hectare. These weightings are then added together to help choose potential varieties,' Dr Allsopp said.

'The breeding objective is to maximise profitability from cane production for the entire industry. Varieties deliver that increase through different levels of different traits.'

New varieties undergo a rigorous selection procedure and SRA has been working with industry to ensure that breeding outputs reflect the main components of the production system through the economic weightings that are used in variety selection.

These weightings, based on grower and miller costs, have been updated and approved by the industry reference group.

Dr Allsopp said SRA had been through a collaborative and consultative process in reviewing the weightings of traits and the aim was to deliver optimum outcomes across the grower-miller value chain.

'Growers and millers have come together through this ASA group to consider the weightings of traits for the breeding program, and this group has now told SRA what they want implemented as part of these changes,' Dr Peter Allsopp, said.

'This group has told us that the breeding program must maximise profitability for the entire industry and, with this as their focus, they have endorsed specific changes to the weightings of traits.'

The review considered a range of changes that have occurred in the sugarcane production system since the last review almost 10 years ago, and also ensures that SRA plant breeders understand the specific needs of the local industry.

Variations of the new weightings are being adopted for the existing plant breeding regions (Northern, Herbert, Burdekin, Central, and Southern Queensland, with northern NSW yet to be finalised).

The review group met in June to discuss the outcomes of the review of the economic weightings of traits, with this information being communicated locally to the regions throughout August 2015.

Notable changes to the weightings are the inclusion of a ratoonability index and more emphasis on cane yield.

'This reflects the different production environment to the early 2000s, where now many mills have excess capacity and it makes economic sense to utilise that capacity,' Dr Allsopp said. 'The overall focus is on maximising profit to the industry.'

The SRA plant breeding program continues to be a core component of SRA's R&D investment and has the aim of delivering optimum outcomes for sugarcane growers and millers.

Plant breeding is expected to contribute to two of the industry's main goals: 36 million tonnes of cane per year, and cost reductions and profit increases.

The breeding program also seeks to find the balance between the needs and wants of both millers and growers in selecting for various traits being selected within new sugarcane varieties – it does that based on the economic value that a variety can deliver.