



In this eNewsletter we introduce enhancements that SRA is making to the plant breeding program, we have a look at the Aqua Till system and its potential for sugarcane, and we look at the results of a DAF survey into sugarcane farming practices.

Better sugarcane varieties for growers and millers – targeting two percent annual gain

Sugarcane growers and millers will be the beneficiaries of significant enhancements to the way Australian sugarcane varieties are created.

SRA is the lead organisation that develops new cane varieties and has just announced these new enhancements to its process for creating sugarcane varieties, which will target improved profitability for sugarcane growers and millers.

“SRA has set the ambitious goal of delivering a 2 percent improvement in annual genetic gain for new sugarcane varieties,” said SRA CEO, Mr Neil Fisher.

“To put that goal into context, the global average gain for wheat breeding is 1 percent per annum, and the global average for sugarcane is less than 1 percent.

“But we have set this 2 percent target based on feedback from the industry that new varieties must continue to offer meaningful improvements and improve profitability for our grower and miller investors.”

Mr Fisher said this process will be led by Key Focus Area Leader, Dr Jason Eglinton, who is one of Australia’s leading plant breeders and was recently appointed at SRA. Dr Eglinton reviewed the current breeding program and the SRA Board has endorsed his recommendations for a series of enhancements.

These include:

- Reducing the number of parent plants and crosses that are used to create new varieties. This will allow an increase in the size of high leverage (high value) populations of plants, but reduce the total number of populations;
- Decreasing the proportion of original seedlings with defective traits by using modern breeding tools such as molecular markers;
- Increasing variety trial precision;
- Applying earlier screening for smut and Pachymetra;
- More precisely select for sugar content by measuring sugarcane maturity;
- Piloting fast-track selection schemes including the use of tissue culture in place of traditional propagation;
- Using wild relatives of sugarcane to focus on challenging traits with the first target being ratoon crop performance;
- Improving the efficiency and effectiveness of research engagement and adoption; and

- Establishing lead indicators as the basis for performance measures and developing a dashboard appropriate for regular management and Board reporting.

Mr Fisher said that this represented a significant investment of an additional \$4 million over the next seven years, which reinforced the development of new commercial varieties as the single largest investment that SRA makes on behalf of investors.

“By setting the 2 percent goal, and defining a clear strategy to target that goal, we are laying the foundation for ongoing improvement in the breeding program, ultimately leading to a more sustainable Australian sugarcane industry and more profitable growers and millers.”

CaneClip: the Aqua Till in action in the Southern Region

The Aqua Till system uses high pressure water jets to slice through crop residue, and has already been trialled extensively in the grains industry. In this CaneClip, Southern Region Adoption Officer, James Ogden-Brown, has a look at its potential in the sugarcane farming system to cut through cane trash or apply insecticides and nutrients at depth. See the clip [here](#).

Spring CaneConnection now available

The spring edition of SRA’s magazine, CaneConnection, has now been sent to members and other industry stakeholders. In our spring edition we look at research matching front-end harvester components to ground speed, as well as automation of furrow irrigation in the Burdekin, and a long-term assessment of fallow crops in the Burdekin. You can also access the magazine and our other publications online [here](#).

Sugarcane survey demonstrates more growers adopting best practice

An annual Department of Agriculture and Fisheries (DAF) survey of sugarcane practice change demonstrates a marked increase in the number of growers adopting best management practice. DAF Coastal Farming Systems Team Leader Neil Halpin explained that the survey was conducted to provide data to help the department plan investment into future activities. Eighty-seven growers and eleven extension providers took part in the survey this year, across the Mackay/Whitsunday, Burdekin and Wet Tropics cane growing regions. There was a 16% increase in the number of growers making a change to improve their farming operations, or decision-making (from the previous survey in 2016). There was also an increase in the number of growers planning to make future changes to their operations – increasing from 9% of growers in 2015, to 27% in 2016 and now 52% in 2017.

The top four improvements that were highlighted in the survey are: calculating nitrogen fertiliser rates, fallow management, placement of nitrogen fertiliser, and increasing row width. The most common reason given by growers for making these changes was to improve farm profitability and to save time. “Growers commented that increased funding and improved finances would have made it easier to make changes, and a lack of funds continues to be the main factor preventing future changes. A lack of time and seasonal/weather issues also remained common barriers,” Mr Halpin said.

SRA Project Call – closing soon

A reminder that the SRA Project Call is closing for preliminary research proposals on October 9. The project call page of the SRA website has been updated to include a summary document of a recent irrigation forum held in Brisbane. Access the page [here](#).

Events

TropAg2017

TropAg2017 is the world's leading tropical agriculture event bringing together the best in research and innovation, across plant, animal and food sciences. It will be held in Brisbane from 20 - 22 November 2017. The sugarcane symposium will focus on the theme of constraints on production. Find out [more](#).