

September 2017

Strip trials assess varieties in commercial conditions

A series of strip trials across the Burdekin are providing additional information to sugarcane growers and millers on new and emerging sugarcane varieties.

The strip trials are run by Burdekin Productivity Services (BPS) and in 2017 there are 12 sites across the region, assessing a range of new, recently-released, and potential varieties in different conditions and soil types.

According to BPS Manager, Rob Milla, the purpose of the strip trials is to assess the varieties in commercial conditions to add value to the existing variety information across a range of soil types and farming systems.

For example, the trial in which Rob is pictured is assessing the new variety SRA8 along with the experimental variety KQ08-2180, in comparison to the existing varieties Q183[®] and Q240[®].



Burdekin Productivity Services Manager, **Rob Milla**, at one of the strip trials in August 2017.

The trials are in four row plots that run the full length of the paddock at a paddock scale, which provides a much larger assessment than the Final Assessment Trial (FAT) stage that is run by SRA.

"SRA is restricted by land and time, so the FATs only go to second ratoon and are at 10 metre plots," Mr Milla said.

"These strip trials are commercially planted and are harvested without the harvester having to stop for every plot as with the SRA FAT trials. This allows us to monitor performance in much more representative field conditions, conduct assessment over the full crop cycle, and provide growers and millers with more information on performance."

He said the results were largely comparable to the data provided from the FATs, which adds a layer of confidence to decisions around new variety selection.

Mr Milla said that the strip trials were also about striking the right balance between gathering more data on varieties, and also ensuring that emerging varieties could have sufficient quantities of planting material available for distribution to growers in subsequent years.

"When you have a new experimental variety, of course you only have a limited amount of sticks. So we are always considering whether we put more resources into trialling it in the paddock, or more sticks into propagating it so there is more available for planting, although with less data."

Other trials sites planted in previous years are assessing earlier varieties such as Q252[®], Q253[®], and Q240[®].

This information is used to assist variety selection decisions by the local Regional Variety Committee (RVC) each year.

Burdekin Variety Officer, Catherine Kettle, said the strip trials were a valuable addition to the local breeding program.

"The variety development process takes about 10 to 12 years and varieties go through an exhaustive process to determine their suitability against a range of traits," she said. "The strip trials are a way of taking that a step further to assess them in commercial conditions."

For more information on the SRA plant breeding program visit www.sugarresearch.com.au and visit the "Growers and Millers" section.



New central variety, SRA9.

Local Regional Variety Committees have approved two new sugarcane varieties for release in 2017

SRA9

The Central Regional Variety Committee (RVC) has approved for release the new variety SRA9 (QN81-289 x Q166^Φ), with the variety being maximum propagated for release in 2017.

SRA Leader for Crossing and Selection, Dr George Piperidis, said that SRA9 had performed well in final assessment trials (FATs) in 2002, 2007, and 2009, but it had been previously discarded in the Central regional due to concerns with smut.

“While it is rated intermediate to susceptible to smut, at this stage Mackay Area Productivity Services (MAPS) have not observed smut in SRA9 observation plots, even under high smut pressure,” Dr Piperidis said. “This is something that growers will need to be aware of and closely monitor.”

In trials, SRA9 had good tonnes of cane per hectare and is highly resistant to pachymetra, leaf scald, and mosaic virus. Flowering has not been observed and its fibre quality was within the parameters.



SRA plant breeding technician, **Mikayla Bowman**, examining the new central variety, SRA9.

SRA10



New northern variety, SRA10.

The Northern Regional Variety Committee has approved for limited release the new variety SRA10 (QN92-157 x QN91-3898).

SRA10 is recommended for limited release because it has shown a yield decline in second ratoon compared to the standards in the Northern 2012 series FATs, even though cane yield was equal to the mean of the standards used when averaged across plant to second ratoon. SRA is continuing to collect additional ratooning information from trials.

CCS was consistently higher (on average 0.5 units) than the mean of the standards in all FATs, and similar to Q250^Φ. SRA Meringa-based Plant Breeder Dr Felicity Atkin said the performance factors, TCH, and CCS were discussed at length at the 2017 Northern Regional Variety Committee (RVC) meeting.

“While the issue of declining TCH in the second ratoon crops of the 2012 series was a matter of concern, the above-average CCS was considered a good reason by the RVC to release SRA10, but initially only in limited quantities until more ratooning data becomes available,” she said. “While fibre content was 1 percent below Q208^Φ in trials, fibre quality tests were within the safe parameters for shear strength and impact resistance.”

SRA10 is resistant to leaf scald and intermediate to smut and Pachymetra root rot.



Left: Herbert grower **Orazio Marino** pictured during harvest of a block of Q238[®] that he estimated to be yielding between 100-110 tonne/ hectare.

“This year is looking like there is a bit more yield than we initially thought than when we first put the harvester in,” he said. “The growing season started on wet note and has gone from wet to dry to wet and dry again, but since April we’ve had near-ideal conditions.”

Right: Burdekin farmer **Joe Tama** said he was happy with how the season was progressing this year at his farm near Home Hill. He has grown a range of varieties in recent years, but said that current varieties that stand out for him are Q253[®], Q232[®] and Q208[®]. He said that he finds these varieties grow well in harsh conditions, which he has at his farm in relation to sodicity, clay soils, and irrigation efficiency due to soil and water constraints.



Assessing variety response to herbicides

By Tracy Hay, Adoption Officer, Varieties

Emilie Fillols and the SRA weeds team recently completed a phytotoxicity pot trial on seven new and recent SRA varieties: SRA1[®], SRA2[®], SRA3[®], SRA4[®], SRA5[®], SRA6[®], SRA7[®], and KQ228[®]. This work aims to evaluate variety response to various chemical applications at recommended rates. Chemicals assessed were ametryn, MSMA, asulam, metribuzin, metolachlor, and 2,4-D.

Results include:

SRA1[®] Brief foliar symptoms were observed using ametryn or MSMA. Stronger symptoms were observed using asulam. Asulam may affect growth.

SRA2[®] Brief foliar symptoms were observed using ametryn, MSMA or asulam. MSMA, metribuzin and ametryn may affect growth.

SRA3[®] Brief foliar symptoms were observed using MSMA. Stronger symptoms were observed using asulam. Asulam may impede growth.

SRA4[®] Brief foliar symptoms were observed using metolachlor or MSMA. Stronger symptoms were observed using asulam. Asulam could impede growth.

SRA5[®] Brief foliar symptoms were observed using ametryn, MSMA, asulam or 2,4-D.

SRA6[®] Brief foliar symptoms were observed using ametryn, metolachlor, metribuzin or MSMA. Stronger symptoms were observed using asulam. Metribuzin could impede growth.

SRA7[®] Brief foliar symptoms were observed using metolachlor, 2,4-D, MSMA or asulam. MSMA and asulam may impede growth.

KQ228[®] Brief foliar symptoms were observed using ametryn, metribuzin, asulam, 2,4-D or MSMA. Ametryn, metribuzin and asulam may impede growth.

A field trial has recently been planted to assess the potential effect on yield of asulam, metribuzin and MSMA sprayed on SRA1[®], SRA2[®], SRA3[®], SRA4[®], SRA6[®], SRA7[®] and KQ228[®]. As new phytotoxicity results become available they will be provided to growers in the SRA variety information sheets within QCANESelect™ under Herbicide Reaction.



Sunshine Coast farmer **Troy Apps** inspecting damage caused by the rainfall event associated with ex-Cyclone Debbie.

Sunshine Coast challenges remain – but industry looking ahead

It has been a hard road for Sunshine Coast cane growers over the last 15 years, but Troy Apps believes there are opportunities ahead for the local industry.

Cane growers in the region, like Troy, were dropped to their knees in 2003 with the closure of the Moreton Mill, and faced further setbacks with the demise of a venture that was hoped to use their cane as stockfeed for export markets.

According to Troy, who farms on the northern side of the Maroochy River not far from Coolumb, many farmers were carrying significant debt at the time and faced significant uncertainty.

For many of them further away from the expanding urban area on the coast, their land was zoned by the Sunshine Coast Regional Council as agricultural and could not be sub-divided. At the same time, most farms were too small to provide an income from grazing, or not suited to other crops because they were flood-prone or because of soil type or irrigation availability.

Now, 15 years later, Troy said that things have improved, but he conceded that they are still dependent on the cane price for their long-term future. It is a 160km plus journey by truck to the Maryborough Mill, owned by MSF Sugar.

“We have negotiated a freight deal where our costs at the moment are in the range of \$5 per tonne,” he said. “Looking ahead, it is hard to say what the future holds, but if the sugar price could stay above 16 cents per pound – but preferably above 18-20 cents per pound – then you can make a living out of it.”

“I feel pretty comfortable looking forward at the moment, but we are a small pocket of the industry here, so there continues to be that concern around critical mass.”

There are two main harvesters for the local crop, with one primary contractor. Troy estimated that there remained just over a dozen farmers on the Coast, growing more than 50,000 tonne per year.

Just like their counterparts up the road at Maryborough, it was a tough, dry summer on the Sunshine Coast, so they are not expecting a bin-buster. The conditions only changed extremely late in the growing season when the rain from Cyclone Debbie arrived.

“It was extremely dry leading up to then, and then the wind from Debbie broke some of the cane. The damage was nothing like up north of course, but the cane has suckered and side shot, so it is hard to say how our tonnage will be,” he said. “We are expecting to be down 10-15 percent, maybe 20 percent.”

He grows varieties including Q138, Q232[®], and is starting out with Q252[®], with most of the varieties being parallel to what is grown at Maryborough. He said SRA1[®] was being planted locally.

He said being in the Southern Region meant that they also looked for varieties with cold tolerance.

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