



SASRI Extension Specialist, William Gillespie, and Brad Pfeffer talk with growers in the Midlands area.

Lessons from South African approach to boosting farm productivity

The South African sugarcane industry has a diverse mix of farmers from small holders to large scale commercial growers with the largest growing around 4000 hectares. SRA Executive Manager Communications, Brad Pfeffer, travelled to South Africa to talk about their approach to communication and extension.

The Australian sugar industry has been given an insight into the successful communication and technology transfer techniques being used to expand production and increase productivity in South Africa.

SRA's Brad Pfeffer made the trip in April 2017 to learn more about communication tools used by the South African Sugarcane Research Institute (SASRI).

There are about 1400 commercial growers in South Africa, and 22,500 small scale farmers, about half of whom deliver to a mill each year from areas ranging from 0.5 hectare to 4ha.

Brad said the visit presented insights into how they communicated with these small-scale growers, as SASRI and their partners have developed novel techniques suited to these growers' needs.

For example, this diverse group includes people who do not speak English but speak Zulu, and growers who are illiterate, and also large groups (trusts) of people who own land.

This has resulted in the deployment of novel technology transfer methods and segmentation strategies.

"SRA communicates with our growers through major channels such as our magazines, our newsletter, field days and events, and also with the help of people like ABC Rural," Brad said. "That approach is similar in South Africa, but they also use other tools that are delivering substantial productivity gains for their growers and millers."

William Gillespie is an Extension Specialist with SASRI who has helped deliver improvements to the Midlands

over the last decade via work with local extension officers working with small scale farmers.

Improving productivity is not easy. "How do you explain volume and area to someone who does not know what a hectare is?" Mr Gillespie said.

"How do you help them calculate fertiliser rates? These were our challenges. So we have also found ways to help transfer technology to people who have not been to school and who speak a non-technical local language, and that means a lot of visual knowledge transfer and demonstration plots.

"We are focussed on building them up, where they can create beautiful homes and gardens, as we know that growers must be happy and making money."

Their extension approach is focussed foremost on the needs of the grower: what does she want? (The farmers are mostly women).

Through a coordinated extension program, they have greatly increased yields for these farmers over the last 10 years to match the commercial farms. This has resulted in tremendous economic development in the local community through sugarcane growing, and greatly increased mill viability.

Over the last 10 years, the number of growers in Mr Gillespie's extension area has increased from 264 growers to 383, with yields going from 51t/ha in 2004 to 78t/ha in 2014. In 2016, yields were 62t/ha due to the drought. Crops grown in this elevated region of the Midlands are generally two-year old.

Small holder farmers receive varieties that have been proven by commercial growers and they usually choose between two varieties from a demonstration plot. While commercial growers will have a mix of about five varieties, the small growers will only have one variety, so it is crucial that the variety decision is correct.

They use artists at shed or tree meetings to visually draw their extension messages and they use visual tools like mock rand (currency) notes to demonstrate profit and value.

For example, to demonstrate the lost value from burning cane in their area, they burnt the mock currency to demonstrate lost profits.

SASRI Knowledge Manager, Michelle Binedell said that belief in the research conditions was crucial for facilitating adoption – something in complete parallel with Australia.

"The growers want to see things in commercial conditions," Ms Binedell said. "They also want to understand things in their own way of communicating, and respond well when things are working for other farmers."

She said that SASRI was also working to better understand their audience and who the best person is to speak to regarding business decisions.

This is also the case at SRA, and Brad said that SRA was continuing to refine its approach with growers and millers to deliver better outcomes for them.

"SRA has eight miller members and about 2400 grower members," he said. "We know that some growers want to read the hard copy of the magazine, some read their emails on the tractor and use Facebook for farming news, and some will always tune in at midday for the Country Hour.

"There are similar barriers for adoption of new technology. The SRA grower survey in 2016 identified a range of barriers to adoption including happiness with current practices (53 percent), low availability of financial resources (29 percent), and other factors like small farm size or not being able to see the benefit.

"SRA is continuing to work on a number of innovative approaches to deliver information in a range of ways that suits diverse learning styles and personality types, by working in collaboration with prod services, millers, and the private sector.

"Talking with SASRI about some of these issues is helpful in generating ideas and innovation for SRA.

"I extend my utmost thanks to SASRI staff for sharing their observations and discussing these important areas of common interest."

For more information

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Brad Pfeffer travelled to South Africa as part of an SRA Travel and Learning Award. For more information on these awards, subscribe to the SRA eNewsletter via www.sugarresearch.com.au.



Above (clockwise from top left): A farm house and garden on a small farm in the Midlands – sugarcane has stimulated economic activity in the region and allowed people to improve their living conditions.

The farming landscape in the Midlands area.

Most of the sugarcane is hand-cut in South Africa.