

Soybeans boost cane production

IMPROVEMENTS in varieties and crop management are triggering an ongoing interest in soybeans at the beginning of the sugarcane cropping cycle, as well as delivering potential benefits to the subsequent cane crop.

The role of soybeans in the sugarcane crop cycle is continuing to expand, with the legume crop's popularity particularly strong in the cane-growing regions of northern NSW. Farming in the heart of Australia's largest soybean production region, NSW cane growers have jumped in 'boots and all' to a soybean fallow rotation, as have growers in other production regions along the coast.

Decade of improvements

A technical officer with the NSW Department of Primary Industries, Nathan Ensbey, says the growth has been driven by improvements in varieties and agronomy over the past 10 years, as well as a shift to soybean varieties that produce grain suitable for higher-value human consumption markets.

Nathan works at the Grafton NSW DPI research station with team leader Dr Natalie Moore and technical assistant Sam Blanch.

Their work covers the NSW component of the Australian Soybean Breeding Program, where they evaluate potential new varieties and conduct other research such as crop agronomy. This is a co-investment between the NSW DPI, the GRDC and CSIRO.

Key assessment factors

Big factors in their variety assessments include weathering tolerance (as the NSW harvest coincides with the wet season), rust resistance, yield, protein and issues such as lodging and pest resistance.

"We have seen a shift over the past five years, where the focus of soybean crops in the cane-growing cycle has moved towards getting the agronomy precise, selecting the right variety and building relationships with processors," Nathan says.

"We are also seeing new varieties that present more options for cane growers. For example, the late-season variety Hayman has high yield and high protein - it allows growers to plant in January and produce a viable crop for grain harvest. This has been well received by cane growers.

"We know that if you keep your soybean crop clean, with no weeds, and grow it well then it can reduce soil nematode numbers.

We've also had up to 90 kilograms of nitrogen per hectare left in the soil from a well-grown crop, although a poor crop may produce only half of that.

"So it's a great opportunity to keep weeds out and boost soil nitrogen levels."

At the research station, the agronomy work is looking at factors including nutrition, plant population and time of sowing.

A cane grower himself, Nathan is also part of a Grower Solutions program that works with local growers and agronomists to solve locally relevant issues.

This program is a co-investment by the NSW DPI, the GRDC and the Queensland Department of Agriculture and Fisheries and includes practices such as raised beds, controlled traffic, and even work that is looking at mill mud and ash within raised beds to improve grain production.

One of the recent successes of the Grower Solutions program

came with an on-farm demonstration comparing the variety Richmond to the familiar variety Asgrow A6785.

In the demonstration on grower Tim McMahon's property, Richmond yielded seven per cent higher than Asgrow A6785 (4.2 tonnes per hectare compared to 3.9), with potential for a premium price as well. In the premium pricing scenario, the improved gross margin was up to \$397 higher for Richmond.

Not just a break crop – cash as well!

North of the research station, Lawrence sugarcane farmer Bob Ensbey supplies the Harwood mill and says that he has seen a massive shift in the way growers approach their soybean crop, from it being simply a break crop to a cash crop in its own right.

"The soybean varieties are improving, with better standability and increased production per hectare," he says.

"Until 1990 we were a dairy farm here and basically grew soybeans for cow feed and round bale silage. But that has shifted now to a cash crop, with the side benefit being they are magnificent for the soil and the cane after it."

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NSW DPI technical officer Nathan Ensbey inspects variety trials as part of the Australian Soybean Breeding Program. (PHOTO: Cox Inall Communications)