

Greyback grubs are on the rebound

Bureau of Sugar Experiment Stations (now BSES Limited) senior entomologist Keith Chandler, Bundaberg reports that greyback canegrubs are on the rebound this year in the far north.

“There’s already been a lot of damage in cane in the Innisfail region, and growers in the Burdekin and Herbert are reporting increasing numbers,” says Keith. “This is to be expected – as a result of low prices, cane growers have not been spending on canegrub control treatments, so populations have been building.”

“With the increase in beetle flight numbers and a rise in sugar prices, it’s urgent that farmers restart their control programs.”

In the 2000–01 season, BSES estimated a loss of more than 1 million tonnes of cane – as a result of growers not controlling canegrubs during that period of low sugar prices.

Sugarcane has a great advantage over other field crops – its ability to keep ratooning and producing an economic yield for up to five years from one planting. But that potential can only be achieved with careful crop management from planting – including canegrub control.

Since the early days of sugar production in Australia, native canegrubs – the larvae of several species of cane beetle – have been a devastating pest, feeding on the roots and shoots of young plants and ratoon cane.



Untreated cane in the foreground, suSCon-treated cane at the rear of the block.

With a heavy infestation of canegrubs, roots are unable to draw sufficient moisture and nutrients for plant growth – leading to wilting and yellowing of leaves. In severe attacks, massive root damage can lead to tipping of the stool, and removal of the whole stool at harvest – impacting on subsequent ratoon crop yields.

Typically, canegrub damage results in uneven, lower-yielding crops – which can be so badly affected they require ploughing out and replanting.

Over the years, the sugar industry has used a variety of novel and not-so-environmentally-friendly methods to control canegrubs – including introduction of the notorious cane toad in 1935, and the use of persistent organochlorine insecticides such as BHC.

By the 1970s, researchers could see that alternative canegrub control methods were urgently needed to replace persistent organochlorines, which were progressively banned world-wide due to longterm environmental consequences. Their continued use would have resulted in an international trade ban on Australian sugar.

Slow release solution

Crop Care Australia National Business Manager for suSCon, Kerrie Mackay says that the company and its predecessors have worked closely with the sugar industry, researchers and product distributors for more than 25 years to develop an environmentally safe, long-term solution.

The outcome of that R&D program was a patented controlled-release range of products, with the first commercial release – suSCon Blue – in 1984.

“It was a major breakthrough,” explains Keith. “BSES has screened many chemicals that kill canegrubs – but in the usual formulations they do not persist for the necessary timeframe. Some also had the side effect of killing natural predators and parasites of the pest – a common downside of earlier chemicals.”

“The way the suSCon technology encapsulates the active ingredient in the granule reduces the likelihood of indiscriminate killing of predators and parasites.”

“It’s a far more controlled process – placing enough chemical in the ground to control the target species, but with the chemical bound securely in the granule, it’s less likely to be carried any distance by soil water.”

suSCon Blue was followed by another



Canegrubs, the damage they cause and suitable control methods have been a focus of BSES Ltd research for more than 25 years.

slow-release product for canegrub control, based on chlorpyrifos – suSConPlus (with a more biodegradable matrix and sulphur-coated for more effective grub control in soil conditions where chlorpyrifos degrades rapidly.)

More recently, the introduction of suSCon Maxi has been another advance, providing an alternative active ingredient imidacloprid.

For Keith Chandler and his colleagues, the R&D work to further develop the controlled-release suSCon products is continuing in collaboration with Crop Care.

Current projects are looking at:

- The potential to extend the number of years of effective control from sustained-control products;
- The potential for applying controlled-release products into ratoon cane;
- Increasing our understanding of the action of the chemicals on the grubs and the soil, including different grub susceptibility;
- Refining farmers’ application techniques – how to best place the product into the ground and how to adapt them to new farming systems such as wider row spacings; and,
- How to provide farmers with the ‘best bang for their bucks’ – getting best value from the product they’re using.

Contact Kerrie Mackay, National Business Manager – Horticulture and suSCon, Ph: 07 3909 2008; Mob: 0413 458 069; E: Kerrie.mackay@cropcare.com.au