Bugs for Bugs Update

Spring 2019

Bugs for buds – safe solutions for pests of medicinal cannabis

Producing medicinal-grade cannabis requires an expert approach. This crop is host to plenty of tricky pests but the imperative to deliver a contaminant-free product rules out the use of synthetic pesticides. Good bugs are a safe alternative to pesticides and medicinal cannabis growers worldwide are learning to employ biological control with great success.

Bugs for Bugs is well equipped to help Australia's emerging medicinal cannabis industry meet the demand for high quality pesticide-free product. We have been producing beneficial insects and mites for almost 40 years and we have an impressive suite of natural enemies for key cannabis pests.

Recently we formed a partnership with Biobest, an international biological control company with a presence in 65 countries. Biobest has extensive experience servicing the burgeoning medicinal cannabis industries in Europe, Canada and the USA and they have many valuable insights to share.

Amanda Brown, Biological Crop Protection Specialist at Biobest Canada, explains that "In the beginning growers saw biocontrol as a last resort but together we quickly learned that a preventative program was the only reliable way to keep the plants clean."

Back home, Bugs for Bugs is busy working with pioneers in the medicinal cannabis industry to develop packages that offer practical solutions for Australian growers.

Early adopters are using a variety of Bugs for Bugs products to combat thrips, aphids, caterpillars, whitefly and spider mites.

Spotted ladybird larva feeding on aphids in a medicinal cannabis crop (Canndeo Bundaberg)

Parasitised Heliothis egg

2PH Farms: from "chemical junkies" to IPM success

Citrus IPM is where it all started here at Bugs for Bugs and in this edition of our newsletter we'd like to feature one of Australia's most progressive citrus growers.

Craig Pressler manages 2PH Farms, the largest citrus orchard in Australia. Based in Central Queensland they operate over 1200 Ha of citrus and around 240 Ha of grapes.

In Craig's words "In the 90's we were chemical junkies, but over time the results got worse. At first our solution was to spray more but the more we sprayed the poorer the results. Our quality gradually decreased. We called in Bugs for Bugs and decided to go cold turkey. The first year of IPM was challenging but bit by bit we managed to turn the ship around."

Today 2PH Farms are recognised worldwide as premium citrus growers who command top price for their product. Bugs for Bugs continues to work with Craig and his team. Each season Bugs for Bugs supply cryptolaemus ladybird beetles to help with control of mealybugs and the orchards rely heavily on our systems approach for fruit fly management.

Craig Pressler in his high-tech citrus nursery

Biologicals beat Heliothis: soft solutions for a hard pest

It just so happens that AgBiTech, the manufacturers of ViVUS Max are based over the road from the Bugs for Bugs' Toowoomba branch. They are welcome neighbours. ViVUS Max is a formulation of NPV (a specific virus that attacks Heliothis caterpillars). This is another form of biological control (with microbials rather than macrobials) and the good news is that ViVUS Max is completely compatible with our Trichogramma wasps.

This 'dreamteam' makes an ideal combination to deliver a one-two punch to Heliothis. Trichogramma target the egg stage and any escapees that hatch to become caterpillars can be picked up by ViVUS Max.

Many of the current suite of effective chemicals that target moth and caterpillar pests are already under threat due to the development of resistance. Every time you do the job with biological control you reduce the pressure on resistance development. This helps to conserve these valuable tools for when you really need them.

Heliothis grubs killed by NPV virus in sorghum

Montdorensis predatory mite

The banana industry is **ripe for change**

We all love bananas, but it turns out that a bunch of tricky pests like them too… The banana industry is looking for alternatives to chemicals when it comes to fighting off the weevils, thrips, mites and caterpillars that compete with us for a taste of this much-loved crop. Banana growers tend to find themselves chasing their tails. Many of the chemicals they currently rely on cause secondary pest flare and lock them into yet more spraying.

"This is an industry that is ripe for change" explains Bugs for Bugs director and entomologist Dan Papacek. Dan was invited to present on IPM alternatives at the Banana Congress held on the Gold Coast in May. "We have several tools to offer the banana industry and feedback from growers and researchers trialling our products has been very positive."

We are working with Matt Weinert, banana industry development officer at NSW DPI, to develop a viable mass trapping strategy for banana weevil borer (BWB) using our BWB trap. While mass trapping (attract and kill) isn't a quick fix, it yields incremental gains over time and can be an effective alternative to harsh chemicals.

Meanwhile growers in WA report excellent results using our trichogramma wasps for control of moth and caterpillar pests.

Strategic releases of californicus predatory mites are also proving valuable, as leading Qld grower Peter Inderbitzen explains. "We've been using predatory mites since 2015. We're happy with them. They've helped us reduce our pesticide use and we'll keep on using them."

Banana weevil borer

Montdorensis perform well in Canadian trials

A recent paper by a Canadian research team (Labbe, Gagnier and Shipp) has been published in the journal of Environmental Entomology (March 2019). They looked at populations of montdorensis and three other species of predatory mites exposed to simulated winter and summer climatic conditions. Under both regimes montdorensis consumed similar numbers of thrips and laid a similar number of eggs showing that they are able to adapt well to a range of climatic conditions.

Additionally a series of greenhouse cage trials indicated that montdorensis performed equal to or better than the other species that were tested in terms of thrips predation.

According to this research team "montdorensis is a good thrips predator, and provides rationale for the development of this species as a new agent for greenhouse pest management in an expanded temperate area of the world'.

If you are interested to acquire a copy of this publication send an email message with your request to info@bugsforbugs.com.au

Matt Weinert, banana industry development officer, NSW DPI

Lacewings now available in larger pack size

Lacewings are useful all-round generalist predators and they are becoming increasingly popular overseas. European growers and consultants report excellent results using lacewings at higher release rates, treating them like a biological insecticide.

To help Australian growers trial this approach we have made our lacewings available in larger, more cost-effective packs. You can now order lacewing eggs in packs of 100, 500 or 2,000.

Order your **sticky traps** now

Our sticky traps are simple, effective and very convenient. They are also bio-degradable which makes them easy to dispose of after they have done their job.

Do your bit for the environment and switch to Bugs for Bugs sticky traps today.

Staff profile: **Dr Rohini Devkota**

Dr. Rohini Devkota started working at Bugs for Bugs after completing his studies in environmental science at the University of Southern Queensland in 2015. He immediately showed a passion and aptitude for rearing predatory mites, starting his work with us at our Mundubbera facility. Later Rohini and his family moved with us when we established our new Toowoomba branch.

After 4 years of commitment and dedication Rohini has made himself an invaluable member of our hard-working team. During this time Bugs for Bugs assisted Rohini and his family (originally from Nepal) to become Australian residents. They are now in the process of building their own home in Toowoomba.

Rearing large numbers of predatory mites to be available at critical times of the year requires a an organised approach and attention to detail as well as a 'feel' for the culture. Rohini believes strongly in Bugs for Bugs and is passionate about his contribution to reducing the need for pesticides in a range of crops on the Australian horticultural scene.

Explore our website

Our website is a wealth of knowledge and information about sustainable pest management. View our product range, browse our 'what's your pest' section and much more.

www.bugsforbugs.com.au

We would love to hear from you

We are constantly trying to improve our products and services. Please keep in touch and share your feedback with us. Contact us through our website or give us a call on:

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