

Benefits from the Levy System

SPOTLIGHT > MACADAMIAS

Lace bug all but conquered



When it emerged in the Australian macadamia industry, little was known about how to manage lace bug in macadamias, which attacks the flowering and early nutset stage in macadamias, often with devastating consequences.

It became a serious pest, with some growers losing up to 90% of their crop. Adding to the dilemma was the withdrawal from the marketplace of one of the

key control measures – endosulfan.

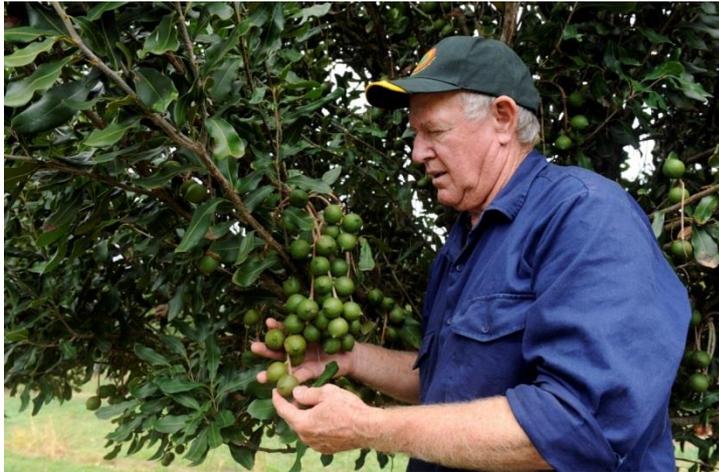
A suite of focused levy-funded R&D and extension projects have since been implemented to drastically reduce losses associated with lacebug, including:

- **Continuing research to understand lacebug life cycle and develop controls and monitoring tools for the pest.** Scientific research, led by the New South Wales Department of Primary Industries (NSW DPI), over a number of years has shown that lace bug can be controlled with a suitable compound when combined with the correct spray timing, calibration and coverage. The crucial element to manage lace bug is coverage. Compared to other horticultural tree crops macadamias are quite tall. This added to the challenge of coverage, as the size of the macadamia trees is often over 10m high and the size of the lace bug is less than 2mm, a very small target a long way off the ground.
- **VC projects to facilitate the required efficacy trials and obtain minor use permits for lace bug controls (Diazinon and Lepidex).** This was led by the Australian Macadamia Society (AMS), with assistance from NSW DPI and HAL to coordinate and submit an application to the APVMA. A minor use permit was awarded to the industry in a timely manner to assist growers.
- **Extension program to facilitate adoption of best practice for growers.** The message of correct timing, calibration and coverage was then extended to industry by the peak industry body (AMS), research institutions (NSW DPI), processors and consultants via a number of AMS lead events (e.g. MacGroups and Consultants meetings) and AMS publications.

- **Resource materials** (fact sheets, case studies) were developed and disseminated (hard copy and online) to growers and key industry contacts.

There has been positive feedback from industry about the uptake of developing better pest management and reaping the benefits. Indeed, the control of lace bug in 2014 and 2015 means that industry production will increase by at least 10-20 per cent this year.

In late 2013 Northern Rivers grower Col Dorey put the recommendations from the research and the new controls into practice and certainly reaped the reward by achieving a substantial increase in yield in some trees in the orchard hit by lace bug earlier that year.



(Above) Australian macadamia grower Colin Dorey.

In one particular block on the Dorey farm (which had been consistently producing over 20kg of nut in shell per tree), some trees fell to just 2kg after the lace bug attacked. The block as a whole produced only 35 tonne of nut in shell (compared to its usual 75-80 tonne).

The Dorey's completed one spray with the new control Diazinon in September 2013, achieving correct timing, coverage and calibration. The result was excellent, with the block

producing over 85 tonne of nut in shell in 2014 (a 50 tonne improvement from the previous season that equated to over \$200,000).

Based on professional pest scout advice, the Dorey's sprayed all their blocks for lace bug with either Lepidex or Diazinon in August-September 2014, which resulted in an increase in production in all blocks. "This spray proved critical as it made us realise that we had lace bug creeping into other blocks," said Col Dorey.

Hundreds of other macadamia growers changed their practices as a result of information they received from the lace bug research and AMS-led extension program, with the result being that growers now understand how to manage the pest which has in turn delivered increased production and profitability. Ultimately, a substantially positive return on investment has been delivered to growers from this levy-driven initiative.

To view more grower stories highlighting the success of Horticulture Levy investments to date visit the Voice of Horticulture website > <http://voiceofhorticulture.org.au/>