



Hazelnut Growers of Australia Ltd.
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Hazelnut Newsletter Number 15 – Summer 2007

Welcome to Newsletter No 15.

Please see last page for important feed-back form.

FROM THE PRESIDENT

I hope you are all coping with this horrible drought. Let's hope we get an early break, and possibly floods as predicted in the weekend's newspapers (The Age Saturday 6 Jan).

Sarah and I have one of the best crops for years, but lack of rain is causing the trees to be stressed and some of the nuts are falling off the trees without developing.

We have tried spraying nutrasoil (worm juice) and water out of the spray mister onto the leaves of the trees to help reduce tree stress. This appears to work for a period (2-5 days) dependent on temperature; however it is very time consuming and should only be done when the temperature is low so the leaves do not burn.

Another tactic we have tried is to leave the grass relatively long so the soil does not heat up reducing stress on the hazelnut's surface roots. Leaving the orchard with long grass has caused us some concern given the nearby Mt Buffalo National Park going up in smoke; however this threat has now passed.

AGM and Seminar in Myrtleford

The Annual General Meeting (AGM) and Seminar in Myrtleford has already been reported in the recent Nutgrower (thanks Lyn McRae).

At the meeting the following committee members retired:-

Executive:-

Stewart Deans – President
Peter Wheelwright - Vice President
Vanessa Cox – Secretary
Clem Cox – Treasurer

Regional Delegates:-

John Zito – Tasmania,
Rod & Alexandra Tuson – Central West NSW,
Chris Nixon – NSW South Coast,
Jim Clement – Victoria Southern.

ANIC delegate – Nicole Schmid.

The following members were elected to the Executive:

Peter Wheelwright – President
Vanessa Cox – Vice President
Didi Killen – Treasurer
Sarah Guthridge – Secretary

HGA welcomes several new faces among its Regional delegates:-

John Wheatley – Tasmania
Justine Merry - Victorian Southern
Wayne Merriman – NSW South Coast,

Vanessa Cox – Central West NSW

Continuing are Donald Fraser – NSW Southern Highlands,
and Sarah Guthridge - NSW/Vic Border.

ANIC Delegates – Stewart Deans continues, with Vanessa Cox filling the shoes of Nicole Schmid, who resigned.

On behalf of members, I would like to thank the outgoing committee and welcome the new committee members.

Special thanks go to Tom McInnes for his work on the change from 'Company Limited by Guarantee' to Incorporated Association.

At the AGM this motion received an unanimous 'Yes': thank you those members who sent in proxy votes. The name of the incorporated association will be Hazelnut Growers of Australia Inc.

Further special thanks go to Jim Clement for his work on the grower survey, which is providing invaluable information on the makeup of our industry.

Wishing you all more rain

Peter Wheelwright

COMMITTEE MEMBERS SOUGHT

HGA has two Committees to which representatives are appointed at the first Council meeting following the AGM. HGA can also co-op members to these committees for specific short-term tasks.

The Committees are 'Research and Industry Development Committee (RID)', and 'Publications Committee'.

Both have been respectively convened and chaired by Lyn McRae, Orange, NSW, who as Sub-Editor, has diligently ensured that HGA news is reported in the 'Around the Associations' column in the Australian Nutgrower.

Lyn announced at the AGM that she is retiring to focus on farm and family. Lyn's input will be greatly missed.

Research and Industry Development.

The RID committee meets several times a year according to need, and makes recommendations to HGA Council on specific matters, such as Bio-Security. It also recommends priorities for HGA research and industry development, and seeks funding.

As both researchers whose projects have been co-funded by HGA, - ie: Basil Baldwin and Lester Snare, are based in Orange, NSW, in recent years the meetings have been at the Agricultural Institute, Orange, thanks to Lester Snare and NSW Department of Primary Industry.

HGA representatives have been Bruce Thompson, Nicole Schmid, Vanessa Cox and convenor, Lyn McRae.

Members who would like to nominate for R.I.D. committee should do so now - for appointment at the April Council meeting. Ability to attend meetings in Orange would be useful, but is not critical thanks to e-mail and tele-conferencing..

Publications Committee

This committee exists under HGA's Articles of Association and needs re-activating. Its chairperson is 'Sub-Editor' who is responsible for quarterly copy for 'Around the Associations, Australian NutGrower Journal.

Re-invigoration of the Publications Committee would dramatically ease the task of the Secretary, support the Regional Delegates with up-to-date handouts and leaflets, and speed the process of up-dating the HGA Handbook and Web-site.

The October Council meeting noted that several voluntary organisations use their Membership Application Forms to canvass for specific skills that a member might contribute.

Skills such as proof reading, writing a press release, compiling a media list, designing a display or classified advertisement, data entry and management, publication design and layout, web site design and implementation, photography and library, are all specific skills that could take just a few hours a month but would take the pressure off the executive and result in a more pro-active HGA..

Please use the form at the end of this newsletter to register your interest and area of skill.

Fellowship vs Privacy Issues.

Wouldn't it be nice to find that you have an HGA member growing or planning to grow just around the corner from you. There could be opportunity to batch crops; share equipment and knowledge and achieve economies of scale.

Due to privacy concerns HGA has not distributed its membership contact details to other members.

Members are listed according to their mailing address. – often a metropolitan P O Box. Frequently HGA Executive finds that a cluster of growers are farming just kilometres from each other, but this was not apparent from the mailing addresses.

If you would like your contact details listed on HGA's Fellowship list, please complete the response form at the end of this Newsletter.

Economy of E-mail.

The seasonal Newsletter is HGA's chief communication tool. Printing and mailing the seasonal newsletter four times a year to over 100 members represents sizable slice of HGA's budget.

Thanks to the advent of internet Broadband, more and more members are able to download large documents with digital images quickly.

If you can receive the newsletter electronically, please let us know and ensure that HGA has your current e-mail address. It is most frustrating to prepare an e-mail distribution list and send out the newsletter - only to find that 15 – 20 e-mails bounce back and that the hard-copy print run must be increased.

If you have told HGA that you can receive large e-mails but receive this as hard copy in the mail – it is because your e-mail details require updating.

Vanessa Cox,
Former Secretary.

ANNUAL CONFERENCE OUTSTANDING

"I found the presentations on understanding the soil and working through a range of strategies to enhance its biological, physical and chemical properties very interesting and learnt a lot about this important subject.

"I would like to thank Sarah Guthridge for the hard work that went into organising the event. "

insert the name of the person who wrote this.

We've received a number of requests for copies of papers presented by the following speakers at the recent conference. We will send digital versions to those who can receive large emails.

(1) "*Secrets of healthy soil*" - Cathy Botta

(2) "*The Do's and Don'ts of Organic Agriculture*" - Chris Alenson

HAZELNUT GROWERS' HANDBOOK

Following discussions between HGA Council and Executive on the slow progress of updating the Handbook, it was decided to approach hazelnut researcher, Lester Snare, NSW DPI, and see if he could assist this important work.

Apart from recently completing the 50% HGA funded 'Hazelnut Pest and Disease Analysis', Lester has a lot of hazelnut information at his finger-tips.

Lester has indicated interest in assisting HGA, potentially working with HGA's RID Committee to ensure an accurate and up-to-date Handbook becomes available to members.

If external matched funding is not forthcoming, HGA will need to draw 100% from its own financial resources.

INCORPORATION PROGRESS

Following unanimous support at the AGM, work is proceeding on the changeover to an incorporated association, and should be completed before the end of HGA's financial year, 30 June 2007.

HAZELNUT PEST AND DISEASE ANALYSIS

This was funded 50:50 by Horticulture Australia Ltd (HAL) and HGA. The completed analysis by Lester Snare is currently posted on HAL's web-site, however access is restricted to HAL member/subscribers.

HAL has indicated that if HGA provide a list of current members, these can be issued with the necessary access pass-word.

HGA understands that a condition of funding through bodies such as HAL and RIRDC is the obligation to ensure that results are made widely available to the industry and interested public.

HGA Executive's concern is that many hazelnut growers ARE NOT HGA members. Such growers are not briefed by HGA, and in the event of a hazelnut 'Bio-Security' risk or incursion cannot be easily identified or quickly contacted.

HGA Executive believe that restricting information contained in the Pest and Disease Analysis outweighs the benefit of ensuring non-HGA hazelnut growers and interested public have access.

HGA will seek HAL's permission for the data to be co-hosted on NSW DPI's web site, with links to the HGA web-site.

CHEMICAL USE IN MINOR CROPS – DAFF Study

Have you any idea of the cost of registering a chemical for use on a specific crop? In minor industries the cost far outweighs even the most optimistic use projections.

Many minor horticultural industries are obliged to apply chemicals that are not specifically registered to their crop.

Last year, the Department of Agriculture, Fisheries and Forestry (federal) selected the Hazelnut and Chestnut industries for a pilot project which will identify 'gaps' in minor industry pest and disease problems (including weeds) and chemicals legally available for such use.

As a result five DAFF sponsored post-graduates attended HGA's annual conference in Myrtleford, which is also a chestnut growing centre. The team will focus on Orange, NSW, and Bright, Vic, where the greatest concentration of hazelnut and chestnut growers exist.

Their findings will help establish pathways to assist the issue of Minor Crop Use Permits for commonly used chemicals in Australia's sun-rise rural industries.

POST HARVEST STORAGE PEST

Be on alert for Indian Meal Moth (I.M.M.)

Cracks or splits in hazelnut shells can result in hazelnut growers unwittingly spreading a major storage pest, the Indian Meal Moth.

Drought stressed trees and hungry birds are likely to result in increased levels of split or cracked nuts this harvest.

HGA urges members to cull damaged nuts and to use commercially available 'attract and kill' pheromone baits in the nut shed.

The Indian Meal Moth, *Plodia interpunctella*, and its voracious grubs can contaminate and degrade hazelnut product on-farm, in transit, during and post processing and in pre- and post-retail storage.

Like other pantry moths it is found worldwide around dried foods:- nuts, rice, grains and meal, stock feed and dried pet food. Following accidental release of 100 adults from a research establishment, the moth has become endemic in Australia.

All instars of the insect are resistant to proprietary household insect sprays.

HGA members, Clem and Vanessa Cox, found nearly a decade ago that the only effective remedy was evacuation and costly professional fumigation of their entire premises, plus destruction (by boiling) of infested and any potentially infested nuts and kernel.

Fumigation is widely employed overseas to eliminate storage pests, for instance prior to export. Need for widespread use would prejudice Australia's clean green hazelnut image.

"There is increased inquiry for hazelnut that is Certified Pesticide Free, ie free from exposure to pesticide on the farm, in storage and during and after processing," said Vanessa.

Since fumigating, the Coxes had been free of Indian Meal Moth until last spring, when pupae and adults were found in a sealed bin of recently cracked raw kernel.

As the moth takes six weeks to complete its life-cycle, the Coxes believe eggs or grubs came into the clean room in the kernels of damaged hazelnuts.

Life-Cycle.

Adult female moths lay 60 – 300 eggs, singly or in clusters, on or near dried foodstuffs. Eggs hatch in 2 – 14 days, with the larvae dispersing shortly after to tunnel into kernel. When ready to pupate, the larvae emerge through a neat round hole in the hazelnut kernel.

Presence of caterpillar silk and frass are other indicators as are holes in plastic bags. If enclosed and ready to pupate, the grub will chew its way through light packaging materials.

Grubs wander some distance to find a suitable site to pupate. Cocoons are commonly found in crevices, suspended from the ceiling or on top of cupboards. After as little as two weeks, adult moths emerge and mate. Adults live from five to 14 days, they are attracted to light but the female chooses dark areas for egg laying. In good conditions the moth can complete its life-cycle in six weeks, producing up to six generations a year.

Practical Preventative Measures

On Farm

- Control birds to minimise the number of cracked shells on the orchard floor. Birds will often fail to open thick shelled varieties and discard the damaged nut.
- Ensure adequate water and nutrition to avoid physiological shell damage due to stress.
- Pick up frequently to minimise chance of infestation on the orchard floor, particularly groves near urban areas.
- Ensure rigorous harvest and de-husking operations are not causing an unacceptably high proportion of damaged shells.
- Cull and destroy nuts with damaged shells or, if cracking on farm, store in a manner to prevent IMM breeding, and utilise early.
- Monitor nut storage, processing areas and domestic pantry for presence of I.M.M. (see photo).

In Transit

Indian Meal Moth is found chiefly in locations where it has been introduced in an infested food source, such as packaged dry goods, grain, stock pellets and dry pet food. Transport depots and stores are candidate areas.

- Avoid rough handling - shells will crack if a bag of nuts is chucked off the back of a truck.
- Mark bags of nuts as 'Fragile, Handle with Care', or better pack on to a pallet and shrink-wrap
- Ensure consignments are correctly labelled. Miss addressing or poor instructions can result in a batch sitting around a depot for days.

Processing Shed/Store Room

- Do not store nut in shell in the clean room (cracking room) - particularly if purchased off farm.
- Use air-tight food-quality bins with sealed lids for temporary storage of raw kernel. Wash out bins thoroughly between batches.
- Remove shells and kernel fragments and destroy, or spread as a thin layer of mulch and no longer an attractive habitat.
- Roast and/or vacuum pack kernel as soon as possible after cracking to kill eggs and grubs.
- Store packed kernel in a cool room or refrigerator – adult moths are not active at 4 degrees C.
- Monitor packed kernel, particularly raw kernel that is not vacuum packed and is at room temperature. Low temperatures cause pupae and grubs to suspend activity and 'over-winter', resuming activity when conditions become warmer.
- Maintain pantry moth monitor traps. If a problem exists install an 'insecto-cutor' to attract adult moths to ultra-violet light and kill.

CHEAP AND EFFECTIVE PANTRY MOTH MONITOR

Thanks to proposed world-wide withdrawal of the deadly fumigant, methyl bromide, scientists turned their attention to other means of controlling storage pests which cost the world billions of dollars a year in spoilage of foods.

The product pictured uses powerful moth pheromones to attract adults into the trap where they become stuck on a layer of tacky glue. It is widely available in supermarkets for around \$10.00.

Warning – keep the trap folded closed - as shown left. Insectivorous birds are attracted to the moths and the glue will trap a bird by its feathers – very messy and distressing.



Indian Meal Moths. Adults are around 1 cm long, with a 2 cm wingspan fully extended. The moth has a zig zag fluttery flight pattern. At rest the top wings present a handsome two tone V pattern behind the head. It lacks a proboscis and has strong chewing mandibles.

STORY AND PHOTOS BY VANESSA COX

BIOLOGICAL CONTROL OF APHIDS

By Stewart Deans

Aphid numbers grow as the leaves develop in the Spring and appear to put the trees under some stress. This season I decided to attempt to control the aphids using insects.



The first business I contacted directed me to Bugs 4 Bugs in Queensland and they advised three releases of green lacewings with two weeks between releases.

At the time of ordering the aphids were becoming a problem on only a few trees so I thought I may be in time to prevent a major infestation.

Bugs For Bugs suggested I release 2500 lacewing larvae at each of the three releases.

The larvae were shipped as eggs and began hatching in the post so that when they arrived some of the larvae could be seen crawling around in the containers.



The five containers also held Lucerne mulch and food for the hatchlings with instructions to release the larvae within a day or so of receipt.

Apparently, if released too early before the eggs have hatched they may be eaten by ants, and if held for too long the larvae will start to eat each other.

The contents of the five containers were divided between the small cups provided and hung in the trees.



At about the time of the second release I noticed one adult lacewing but never saw any other adults. The number of aphids had exploded by this time and almost all the trees were heavily infested with aphids and the leaves were glossy with honeydew, which was attracting numbers of bees.

By the time of the third release there was little sign of aphids. I searched for adult lacewings without success but saw many other insects.

For me the results were inconclusive; I could not say whether the lacewings had multiplied and eaten the aphids or other natural predators had.