AUSTRALIA'S

HONEYBERNEWS

The Official Journal of the NSW Apiarists' Association

Volume 7 Number 5
September-October 2014

"The Voice of the Beekeeper"

DENMAR APIARIES



ITALIAN

Prices effective from 1 July 2012

UNTESTED

1-10 \$24.55 each 11-49 \$17.95 each **50+......\$15.50** each



ISOLATED MATED BREEDERS \$280.00 EACH

TERMS 7 DAYS

Late Payments - Add \$2 Per Queen

PAYMENT BY: Cheque or Direct

Details on ordering

PO Box 99 WONDAI Queensland 4606 Phone: (07) 4168 6005 Fax: (07) 4169 0966 International Ph: +61 7 4168 6005 Fax: +61 7 4169 0966 Email: ausbee4@hotmail.com



For orders contact:

John or Stephen Covey

Ph: 0427 046 966

Email: sales@coveybees.com.au PO Box 72 Jimboomba QLD 4280 Specialising in

Caucasian Queen Bees

1 - 9 \$24 ea plus P & H 10 - 49 \$20 ea plus P & H 50 - 199 \$17 ea free P & H 200 and over per season discounts apply Queen Cells \$5.00 - collect only

Post and Handling \$11 per dispatch. Prices include GST Valid Sept 2014 to March 2015

Caucasian Breeder Queens - \$550

Naturally mated on a remote island

Terms: Payment 10 days prior to dispatch

HONEY yn Uadel

LLoyd & Dawn Smith

Committed to maximising returns to beekeepers

Honey & Beeswax for sale? Call us for a quote

Phone 07 3271 2830 Fax 07 3376 0017 Mobile 0418 786 158 136 Mica Street, Carole Park Qld 4300 Email: hdunder@bigpond.net.au



Complete Line of Beekeeping Equipment and Supplies

P: 02 6226 8866 M: 0408 260 164 10 Vine Close, Murrumbateman NSW 2582 E: sales2@bindaree.com.au W: www.bindaree.com.au

AUSTRALIA'S HONEYBEE NEWS



The official Journal of the NSW Apiarists' Association (NSWAA) www.nswaa.com.au

Published Bi-Monthly Email: honeybeenews@bigpond.com ISSN 1835 6621

CONTENTS

	0 1 1 1		
Executive & Industry Contacts	Page 4	Doug's Column - The World Bee Crisis	Page 21
President's Report	Page 5	Beekeeping in the Kingdom of Tonga	Page 27
New Members	Page 6	Bee Venom may hold Cancer Cure	Page 30
Executive Update	Page 6	SICK BEES - Part 18d -Ag Exposure	
Key Workshop Results	Page 8	Colony Collapse Revisited	Page 31
Rapid Hygienic testing of Honeybees	Page 10	'Flying Doctor' Bees	Page 35
The Frost Report - Drones & Selective Breeding	Page 11	The Honeybee & Pollination Program	Page 35
CropLife Media Release	Page 14	Canadian Beekeepers claim Pesticide Damage	Page 37
Beekeeping Training Day Report - Sydney	Page 15	AHBIC News	Page 43
Starting in Beekeeping - Bathurst	Page 18	Classifieds/Beekeeping Journals	Page 44
Canola Growers On Alert	Page 18	Advertisers	Page 46

COVER: What you see in this picture is liquid nitrogen rapidly freezing brood during hygienic behaviour testing at Tocal College. Liquid nitrogen boils immediately on contact with a warmer object.

PHOTO: Elizabeth Frost DPI

Copy Deadline for Next Issue of Australia's Honeybee News - 25 November 2014

Pre-Paid Advertising Rates

	FULL PAGE		HALF PAGE		QUARTER PAGE		EIGHTH PAGE	
	B & W	Colour	B & W	Colour	B & W	Colour	B & W	Colour
6 Issues	\$1180.00	\$1950.00	\$680.00	\$1100.00	\$440.00	\$595.00	\$250.00	\$355.00
3 Issues	\$710.00	\$1100.00	\$420.00	\$590.00	\$265.00	\$325.00	\$160.00	\$200.00
1 Issue	\$290.00	\$430.00	\$160.00	\$240.00	\$120.00	\$160.00	\$85.00	\$110.00
Classified Ads up to 5 lines - \$40.00 (Free to Members)								

Australia's Honeybee News goes free of charge to NSWAA members. Subscriptions are welcome - within Australia \$45.00, Overseas (airmail) AUS\$65.00 - Payable to NSWAA, PO Box 833 Mudgee 2850 Australia Email: info@nswaa..com.au

The opinions expressed in articles published in Australia's Honeybee News are those of the authors and do not imply the endorsement of the NSWAA for the promotion of any product, goods or services mentioned unless specifically stated.

Editor: Margaret Blunden PO Box 352 Leichhardt NSW 2040 - Phone: 02 9798 6240 **Advertising Enquiries:** Mobile: 0411 662 014 Fax: 02 9797 8061 Email: honeybeenews@bigpond.com

Printer: Farrell Printers PO Box 253 Croydon NSW 2132

Phone: (02) 9550 4055 Fax: 02 9550 3403 Email: rob@farrellprinters.com.au

MEMBERSHIP SUBSCRIPTION RATES

The Association Membership year runs from: 1 March to 28 February

Affiliated	/Retired/Student	t \$65.00	1 vote
0 to	10 hives	\$65.00	1 vote
11 to	200 hives	\$120.00	2 votes
201 to	400 hives	\$180.00	4 votes
401 to	700 hives	\$230.00	6 votes
701 to	1000 hives	\$300.00	8 votes
1001 to	1500 hives	\$340.00	10 votes
Over 1500	0 hives	\$400.00	12 votes

MEMBERSHIP BENEFITS

- To provide a means whereby the Apiarists of this State may be represented through a common organisation for the welfare of
- Maintaining access to your resource
- Helping to secure your industry's future
- Strong representation to Government
- Membership Badge
- Copy of Code of Practice for Keeping Bees on Forested Lands
- Australia's Honeybee News Bi-monthly Journal
- Free classified advertisement in Journal
- Annual State Conference & Trade/Field Days
- Nine Branches throughout the State
- Opportunity to meet other beekeepers and DPI representatives at meetings, workshops and field days.
- OAMPS Insurance Brokers Ltd (Special Beekeeper Policy) Justin Farrugia Ph:02 6933 6600 E:justin.farrugia@oamps.com.au
- Wesfarmers Federation Insurance: Jane Hayes PO Box 122 Goulburn 2580 M: 0417 943 451 E: jane.hayes@wfi.com.au

NSW Apiarists' Association Inc. Executive Council



Neil Bingley, Lamorna Osborne, Rob Michie, Shona Blair, Kate McGilvray, Casey Cooper

PRESIDENT: Casey Cooper Darby's Road Tingha 2369 M: 0428 233 551 Email: cooperbees@bigpond.com.au VICE PRESIDENT: Neil Bingley 101 Woodfield Rd Sutton 2620 M: 0428 487 105 Email: beez101@bigpond.net.au **COUNCILLORS:**

Rob Michie 127 Stirling Rd Moore Creek 2340 Ph: 02 6767 1066 Email: robraem@westnet.com.au Dr Shona Blair 14a St. Marys St Camperdown 2050 Ph: 0422 977 510 Email: shona.blair@wheenbeefoundation.org.au Dr Lamorna Osborne PO Box 1014 Gymea 2227 Ph: 0419 731 684 Email: lmosborne13@gmail.com SECRETARY/TREASURER: Kate McGilvray PO Box 833 Mudgee 2850 Ph: 02 6373 1435 Fax: 02 6373 1436

Email: info@nswaa.com.au Website: www.nswaa.com.au

BRANCHES	PRESIDENTS		SECRETARIES	
Central Tablelands Hunter Valley	Mal Porter Col Wilson	02 6337 5383 02 4930 4950	Debbie Porter Patricia Heenan	02 6337 5383 02 4997 5681
North Coast	Barry Watts	02 6689 5359	Col Maloney	02 6663 7051
Northern Tablelands Riverina	Brian Woolfe David Mumford	02 6732 3168 02 6959 2519	Allyssa Staggs John Smith	02 6723 1361 02 6926 2227
Southern Tablelands	James Kershaw	0400 370 481	Bill Stratton	02 4421 4198
Sydney Tamworth	Paul Drew Ray Hull	02 9887 1175 02 6760 3634	Joy Hood To be advised	0468 376 581
Western Plains	Bryn Jones	02 6887 2638	Lisa Mumford	02 6887 2638

AUSTRALIAN HONEY BEE INDUSTRY COUNCIL (AHBIC)

Chairman: Ian Zadow Mob: 0429 433 125 PO Box 339, Tintinara SA 5266 Ph: 08 8757 2435 Email: immjzad@bigpond.com Executive Director: Trevor Weatherhead Ph: 07 5467 2265
Mailing address: PO Box 4253, Raceview QLD 4305
Email: ahbic@honeybee.org.au Website: www.honeybee.org.au

FEDERAL COUNCIL OF AUSTRALIAN APIARISTS' ASSOCIATIONS (FCAAA)

Federal President: Robert McDonald

19 Eleanor Drive Campbells Creek VIC 3451 Ph: 03 5472 4973 Email: mcdonald.robert@y7mail.com

HONEY BEE RESEARCH & DEVELOPMENT COMMITTEE (HBRDC)
Ms Margie Heath, Project Manager, RIRDC PO Box 4776, Kingston ACT 2604 Ph: 02 6271 4145 Email: Margaret. Heath@rirdc.gov.au Website: www.rirdc.gov.au

AUSTRALIAN QUEEN BEE BREEDERS ASSOCIATION (AQBBA)
Secretary: Mrs Paula Dewar, 157 Lake Moogerah Road Kalbar QLD 4309 Ph: 07 5463 5633 Email: aqbba@bigpond.com

CROP POLLINATION ASSOCIATION (CPA)
Secretary: Mr Stephen Targett, PO Box 325 Narrandera NSW 2700 Ph: 0428 649 321 Email: wally.56@hotmail.com

HONEY PACKERS & MARKETERS ASSOCIATION (HPMAA)

Secretary: Mr Ross Christiansen Email: ross@superbee.com.au



PRESIDENT'S REPORT



Some areas of the State have had good rain others are still looking to the sky to see when they may get some. With this it seem that this year will see a low honey production.

CONFERENCE 2015

The 2015 State Conference will be held in Sydney at Penrith Leagues Club on Thursday 2 July & Friday 3 July. The NSWAA Conference will be held at this time of year as NSW will be hosting the AHBIC Conference to be held on Saturday 4 July.

STATE WATER AREAS

Over the past years there has been a loss of bee sites in State Water areas (water board). If anyone has lost sites in these areas could they pass on any information and paperwork about this to the Executive so we may look at these areas to be opened up to bee sites again.

MID NORTH BRANCH

Sadly the NSWAA Executive moved that the Mid North Coast Branch of NSWAA be closed. Over the past few years there has been one person on the Executive for the branch. There was a meeting held where no person wished to step up onto their executive so sadly the branch was closed.

I would like to thank Daniel Costa for his time and work trying to keep the branch going.

BEECONNECTED

The Australian Honey Bee Council (AHBIC) in partnership with Crop Life Australia have launched BeeConnected, a world-first innovative communication tool to enable collaboration between farmers and beekeepers.

BeeConnected is a smart-phone application which allows farmers to easily log the location of their properties through a Google Maps-based platform with GPS capability. Beekeepers can use the same functions to log the present or future locations of their beehives. When a beehive is logged nearby to a farm property, both users are sent automated notification and are able to chat further about their activities via a secure internal messaging service.

BeeConnected can be downloaded for FREE as an iPhone or Android App or accessed on a desktop computer via a web browser. For more information and download visit: www.croplife.org.au/beeconnected. This is a great tool to help prevent the spraying of bees in cropping areas. If you can look at the weather on your phone you will find this easy to download and use.

COTTON AUSTRALIA

Dr Doug Somerville and myself met with Dr Ian Taylor Cotton Research and Development Corporation on the 20 August in Sydney. While the cotton industry within Australia doesn't value honey bees in the role of pollination, Cotton Australia commissioned Dr Saul Cunningham from CSIRO to conduct a review of all the literature on the subject.

Dr Ian Taylor made a commitment to fund a PhD on aspects of the subject of cotton and honeybees.

Some interesting points to note that were tabled about cotton during the meeting:

- Sown beginning of October
- Flowering over three months- December to February
- Green and brown mirids are a major problem during flowering
- Fipronil chemical of choice for control (extremely highly toxic to honeybees)
- A handful of growers haven't applied insecticide for three years
- Chairperson for Cotton Australia keeps honeybees.

Future meetings with Cotton Australia are being planned to continue the dialogue between the beekeeping industry and the cotton industry to hopefully avoid previous years where commercial apiaries have experienced major losses of bees from insecticide use on flowering cotton crops.

FORESTRY CORPORATION

The association has responded to a meeting with Richard Rienstra on the 18 August with a 12 page submission. The report "Apiary Sites on Forestry Corporation Managed Lands" covers a range of areas including, beekeeping industry structure, apiary movements and reliance on site choice, importance of apiary sites (in a complex system) what price a forestry site, market value of apiary sites, secure tenure of apiary sites. Forestry corporation measure to improve business.

The report was in response to the Forestry Corporation's wish to maximise the return to them from apiary sites. The association is now waiting for their response.

Thank you to Dr Doug Somerville for his help and input into this document.

NATIONAL PARKS

Neil Bingley, Doug Somerville and myself attended a meeting convened by the National Parks policy section to further discuss the review of the current policy of beekeeping in National Parks.

The meeting was held in the NP&WS offices at Hurstville on Monday the 22 September. It was a productive meeting and there should be a discussion paper released by Christmas by the department on bee sites.

There was a lot of time spent discussing the sections of the National Parks and Wildlife Act (1974) that are relevant to beekeeping. Further clarification is being sought as to what prohibits new sites being created on National Parks.

Casey Cooper State President

NEW MEMBERS

A warm welcome to the following new members:

Lee Allcock Lochiel
Ann Begg Eglinton

Richard Black Rockley Mount

Sue Boss Bathurst
Lionel Boss Bathurst
Anthea Bourne Bathurst
Nathan Cooney Bowral
Jan Dickie Newbridge
Robert Dickie Newbridge
Ian Ditchfield Sodwalls

Mishka Eggins Chatham Valley

Bob Fairweather Boxhill

Brian Faulkner North Goulburn

Margarete Formanek
John Grubb
Lynham ACT
Kirsten Hartley
Evan Hill
Selena Hitchens
Ken Macken
Tyson Manders
Kurrajong
Lynham ACT
Hampton
Rozelle
Richmond
East Kurrajong
Yetholme

Tyson Manders

Kevin Miles

Linda McCrystal

Peel

Patrick Procter Megalong Valley Bossley Park Martin Ratcliff Gary Reidy Mittagong Lina Roberts **Bathurst** Richard Schmidt Colo Heights Gai Torshavn Bathurst Jeannette Webster **Bathurst** Kelley Whitaker Castlecrag Erroll White Nowra Angus Wilson Mudgee

Barry Wilton Wisemans Creek

Ron Witz Nowra
Dianne Wykes Bathurst

Congratulations to the enthusiatic Members of the Bathurst, Sydney Metropolitan & Southern Tablelands Branches for having several Training Days where they have recruited new beekeepers to join the Association.

PROTECT YOUR BEEHIVES WITH WAX!

Paraffin + Microcrystalline wax

Hot dipping with a 50/50 mix of paraffin and microcrystalline is an efficient steriliser and protector against rot.

bulk wax at wholesale prices!!

View the full product range on-line *WAX *moulds *wicks *tea light cups *wicks and more...

www.candlemaking.com.au 02 9653 3600



Personal shoppers welcome at our warehouse in Arcadia, in Sydney's rural north. Always interested in purchasing local beeswax.

EXECUTIVE UPDATE

An update to members on the status of motions from 2014 Conference:

MOVED: J Kershaw SECONDED: S Blair That NSWAA consider allowing those who have completed the Marcus Oldham rural leadership course to sit in on a number of executive meetings to gain a perspective of the running of the NSWAA.

STATUS – administrative in nature

MOVED: N Bingley SECONDED: S Blair That this conference endorses the Best Management Practice for the transportation of open entrance beehives.

STATUS – Best Management Practice nationally endorsed at AGM

MOVED: G Porter SECONDED: R Porter Nominations should remain open for new or existing executive nominees until morning tea on the second day of the conference so as to give conference attendees the best opportunity to canvas and nominate candidates for the position of executive.

STATUS – administrative in nature

MOVED: N Bingley SECONDED: C Cooper That NSWAA recommends that the FCAAA be wound up ASAP and the contingency funds be transferred to AHBIC, managed by the current producer member bodies and operated under current guidelines.

BEE ENGINEERING

MANUFACTURERS OF



NEW PRODUCTS

HONEY & CAPPINGS STAINLESS STEEL

VANE PUMPS 50mm & 65mm VARIABLE SPEED

DEBOXER

HEAVY DUTY HANDS FREE

PLUS UNCAPPING MACHINES
7 DIFFERENT MODELS TO CHOOSE FROM

Phone (08) 9259 0676 Email: bee@bee-engineering.com PO Box 126 Parkwood Western Australia 6147



Bee

smarter

Get Sorted quickly and efficiently with a utility multi-purpose loader from Avant Equipment Pty Ltd.

We supply and support AVANT and AUSA range of Compact Loaders, Telehandlers and Rough Terrain Forklifts.

Manufactured in Europe to the highest specifications, these machines are rugged, reliable and well designed for access, safety and ease of maintenance. Work smarter not harder.





- · Easy to use
- High clearance, all wheel drive
- Lightweight and compact
- Easy transport / storage
- 100 rattachments
- Backed by a family firm in business for 36 years



ACT NOW

It will be the best addition to your business Free Call - 1800 686 411 or Ph- 02 42726853

www.avantequipment.com email - sales@avantequipment.com

- + Easy finance options
- + Models also available for lease
- Excellent finance rates and payments customised to suit your seasonal income.
- + Prompt delivery anywhere in Australia

Avant Equipment Pty Ltd





KEY WORKSHOP RESULTS SUMMARY

This is a summary of the key results from the NSWAA Workshop held the day before the 2014 State Conference in May.

All issues generated by the participants are detailed in the full document. If you would like a copy contact Secretary Kate McGilvray (02) 6373 1435 or email info@nswaa.com.au

The following list summarises the priority topics in order based on the voting process:

Success Measures

- Financially Viable [33]
- Improved Communication [33]
- Influencing Government [24]
- NSWAA working Effectively [24]
- Beekeeper Education [21]
- Public Relations [21]
- Increasing Membership [33]
- Pathway to peak national body [7]
- To Promote Beekeeping [53]

NSWAA Purpose

- Represent Beekeepers [57]
- Lobby Government [53]
- Communicate back to all members [39]
- Biosecurity [34]
- Public Relations [24]
- Encourage non-members to be members [16]
- Lobby Government [53]
- To make Policy [9]
- To Promote Beekeeping [7]

Association Issues

- Develop Management Plan [44]
- Executive Communication with Branches [35]
- Increasing Association resources [28]
- Time & expertise required for leadership roles [33]
- Succession Planning [25]
- Paid CEO to run & lobby industry [24]
- Weak Branches

Industry Issues

- Better access Forestry/National Parks [46]
- Disease & Health [24]
- Decline in Genetics of Queen Stock [22]
- Public Relations & Education [20]
- Input into research [18]
- Biosecurity [16]
- Functioning Quarantine Station [15]

Executive & Branches

- Branches promoting membership [33]
- Branches communication member issues to executive[33]
- Branches increasing quantity & quality of local events [31]
- Improving communication with branches [26]

Key Themes

- NSWAA is a Representative Association (Government)
- Use time better issues identification
- Communication between members, branches and executive (both ways) needs work
- Convert non-members to members
- Support skills development in executive (increasing demands)

Our Success Measures "How do we know if NSWAA is successful"

Participants were asked to identify how they saw that the success of NSWAA could be identified.

This ideas where combined into topics and voted on by participants to gain an insight into how success of the organisation is to be measured.

Financially Viable [33]

- NSWAA able to generate enough funds (through membership and other
- activities) to be
- able to engage in key activities to support the NSW Industry
- Money in the Bank
- AHBIC is working on behalf and with states at state and federal level

Improved Communication [33]

- Communicate outputs and achievements
- NSWAA more communication with Branches and Members ie: Executive
- meeting out comes into HBN
- Communication, Team Work and be Positive
- Other AG Industries know we exist
- Industry presence

Influencing the Government [62]

Achieving its goals that are improving the industry

Thank you to Facilitator Greg Mills from Go Ahead Business Solutions and all who attended.



Rough Terrain Forklifts

Visit our new website www.hummerbee.com to learn about all of our other available models:

XRT XL XT_{2WD}

The proven beekeeping rough terrain forklift...

TURBO

Move your hives faster and more reliably with the Hummerbee Turbo. With over a 900 kg rated lift capacity and compact design, the Hummerbee is the perfect addition to your bee business. Its overall length is only 2438 mm, so it can fit sideways on your truck for ease of transport. Also, with a weight of under 1900 kg, it is easy on your axles too. There are a variety of options available to tailor the machine to your needs.

A & O FORKLIFT

шшш.hummerbee.com 800 - 943 - 8677



RAPID HYGIENIC TESTING ON HONEYBEES

YES, WE HAVE AND YES, WE CAN.....

Congratulation to all Australian Queen Bee Breeders in the Australian Honey Bee Industry Council's (AHBIC) Australian Queen Bee Breeding Group. This consists of 14 lines of honey bees submitted for our national program.

I am a Tasmanian Beekeeper who is a member of the group and have assessed the bees in this program four times over a number of years. I assessed these lines of bees under all known protocols that we use in Australia. These protocols included the amount of honey produced, a docile nature, non-swarming tendencies and bee colour (I know bee colour seems a ridiculous factor, but Australian beekeepers like a nice golden bee). However, we now know that we have to select for the most important ability and that is to detect American foulbrood and chalkbrood early and they do that if they have Rapid Hygienic Behaviour tendencies.

Hygienic behaviour isn't just the behaviour to clean out the bottom board, more importantly it is the ability to detect that something is not right in the brood nest and to act to protect the hive.

If bees can detect that there is Varroa mite, or foulbrood early, then they can take action. They can interrupt the Varroa mite early by uncapping the brood and disrupting the Varroa cycle and /or remove the foulbrood before it gets infectious.

Three years ago we sent 250 queen bees to the United States to have their hygienic behaviour against Varroa mite tested. These queens were not as good as the Russian queens but were not far behind the average commercial queens breed in the USA.

This changed our thinking towards getting stock with proven hygienic behaviour from the United States through our quarantine station to breed with our own stock to give us any chance of survival if or when the Varroa mite arrives in Australia.

AND NOW THE BREAK THROUGH REVELATION

I have met a very determined and capable young woman, Jody Gerdts, from the United States living in Australia, who has extensive experience doing the rapid hygienic test on honeybees.



Over a weekend, Jody and I, tested 45 hives headed by queens from the Australian Queen Bee Breeding Program. Of the 45 hives, 8 hives (17.5%) were successful.

There are six different lines in these eight hives and the average result was 96%, which is as good as anywhere in the world. Of these six lines three hives returned amazing result of 98-99% which is almost better than anywhere in the world. This means that we have our own breeding stock right here in Australia to create bees with excellent rapid hygienic behaviour.

We in Australia, with the help of Jody Gerdts of Bee Scientific are just starting our program to ensure our hives will be tested for Rapid Hygienic Behaviour. Marla Spivak has been doing this in the United States for years, selectively breeding and they are averaging 68% of their stock with rapid hygienic behaviour compared to our 17.5%. We do have a way to go, but this is exciting and gives us hope for the future

If we have lines that have superior honey production it would be good to keep them and then try to introduce some hygienic behaviour. Maybe some that are in the say 80% range would not take much to get them up into the 90's. We may, of course, have to drop some of the lines that didn't give favourable results to ensure we don't breed inferiority.

I thank Jody Gerdts for her wonderful positive attitude. All the results and photos can be viewed on the AHBIC website: www. honeybee.org.au



FRAMES
FULL DEPTH
WSP
IDEALS
HONEY COMB
QUEEN CAGES

BOXES LIDS CLEARER BOARDS BOTTOM BOARDS RISERS & MORE

Contact: Phil Kethel 285 Hydes Creek Rd Bellingen NSW 2454 Ph/Fax: (02) 6655 1385 Mobile: 0428 960 917 Email: philkhydescreekww@bigpond.com

SA BEEKEEPING SUPPLIES

2 Gawler River Rd, Lewiston SA 5501

Food Grade Plastic Foundations
Full Depth - W.S.P - Manley
Mahurangi Frames to suit
8Fr & 10Fr W/Wire excluders
Beautifully made
Heavy Duty Hive-locks
Discount on pallet lots

Gary & Cynthia Brown

Ph/Fax: (08) 8380 9695

Mob: 0429 806 609

Email: beekeep2@bigpond.com.au

THE FROST REPORT

Elizabeth Frost Honey Bee Development Officer NSW Department of Primary Industries Tocal College, Paterson NSW 2421 Ph: 02 4939 8951 E: elizabeth.frost@dpi.nsw.gov.au W: www.dpi.nsw.gov.au



DRONES AND SELECTIVE BREEDING

If you plan to raise queens for yourself or for sale this season and haven't put drone comb in your top-performing colonies yet, stop reading this article! Light up your smoker and put a frame of drone comb in your best hives. Right now! And don't forget, if fresh pollen and nectar isn't coming in from the field, your drone mother colonies should be fed sugar syrup and supplemental pollen or protein mix in order to stimulate drone production.

Now that you've done that, let's talk about breeding with a purpose. Good queen rearing practices will yield healthy, robust queens. Queens of superior quality, however, will result from a combination of:

- good drone rearing/stocking practices
- good queen rearing practices
- a program of continual stock selection

The genetics of a queen and the drones she mates with have a major impact on most colony characteristics including, but not limited to productivity, temperament, swarming tendencies, and resistance to pests and diseases. With this in mind, it is in the best interest of stock maintenance to flood your mating apiaries with drones from colonies with known desirable characteristics.

SMALL-SCALE OPTIONS

Small-scale queen producers raising a few to a few hundred queens over the season may obtain adequate matings without using specific drone mother colonies and introducing drone comb frames for drone production. Strong healthy colonies will naturally raise drones given appropriate conditions. However, the drones your virgins mate with may be from both managed and feral hives in the area of the mating apiary and drone congregation area. Given this knowledge a small-scale queen producer will still benefit from increasing the population of drones in colonies with desirable traits if the characteristics of feral colonies or managed colonies within a 2.5km radius of the mating yard are unknown or undesirable (for example-very defensive or prone to swarming).

DRONE PRODUCTION

Putting drone comb in drone mother colonies, chosen for their desired characteristics, is the first step in queen rearing. 40 days must pass from the time the queen lays unfertilized (male) eggs until drones reach sexual maturity. For your drones to be sexually mature at the time your virgins take their mating flights, grafting should start no earlier than 21 days after drone comb is laid up by your drone mothers. When fresh nectar and pollen is scarce, drone mother colonies should be fed sugar syrup and pollen or protein supplement, otherwise workers may purge adult drones from the hive and cease drone rearing. Many queen breeders start drone and queen rearing activities at the onset of good rearing conditions, that is, when temperatures start to increase, fresh nectar is available and three different sources of pollen are coming in from the field.

DRONE STOCKING RATE

The stocking rate for drones in mating apiaries is based on the following:

- Virgins mate with an average of 12 drones
- 1 full-depth drone comb may yield 3,500 mature drones in perfect conditions (i.e.-rarely)
- Environmental conditions vary (nectar, pollen availability)
- Queens and drones fly up to 3km (usually) to mate in Drone Congregation Areas

For 100 mating nucs (i.e.-100 virgins), between 4-10 drone mothers should be managed with 2 drone combs in the brood box of each drone mother. The second drone comb frame should be introduced 14 days after the first drone comb was introduced to ensure availability of mature drones for subsequent rounds of virgins in the 100 mating nucs.

LOCATION

Drone mothers may be located anywhere within 2.5km of the mating apiary, as virgins and drones fly about the same distance to the drone congregation area and virgins don't necessarily mate with drones from colonies within the same apiary.

FUNDAMENTALS OF SELECTIVE BREEDING

- 1. Evaluate colonies within your operation. Colonies may be evaluated for specific characteristics of queen (i.e.-brood pattern), workers (i.e.-temperament, productivity, resistance to diseases, etc.) and drones (i.e.-population, colour). Record this information.
- 2. Select breeder queens from colonies with desired characteristics. These queens will produce the next generation and are either used as queen mothers or drone mothers. Never use the same colony to produce queens and drones in the same year as this may speed inbreeding (evident in poor brood patterns).
- 3. Control matings between queens and drones produced by breeder queens. If artificial insemination (AI) or isolated mating is not possible to produce future breeder queens, flood the mating apiary with selected drones using the recommended stocking rate.
- **4. Evaluate the next generation** the mated daughters of the breeder queens. Evaluate queens individually (i.e.-brood pattern) and the colony as a whole for specific characteristics (i.e.-short-term weight gain to gauge productivity, hygienic testing to gauge disease resistance, etc.). Record this information.

TIMING

The following chart is an exact time schedule for the development and sexual maturity of queens and drones, adapted from the publication *Instrumental Insemination of Queen Bees* by the Institut für den Wissenschaftlichen Film in Göttingen. Timing is essential to ensure that sexually mature drones with desirable characteristics are available when virgins take their mating flights. This chart can be adapted by the AI technician with the addition of excluders to drone mother colonies before drones start emerging on Day 23 and the caging of queen cells by Day 14 (10th day after grafting) upon which they are either immediately introduced into their own queenless nuc or returned to the queen bank for emergence. Use this chart to guide your drone and queen rearing schedule.

DRONES					QUEEN		
WORK NEEDED	STAGE OF	DAY	DATE	DAY	STAGE OF	WORK NEEDED	
	DEVELOPMENT				DEVELOPMENT		
Give 1st drone comb,		-10					
supplement feed as needed,							
possibly confine queen to comb		-3					
comb	Eac	0					
	Egg	2					
		3					
	Larva	4					
		5					
		6					
		7					
	Prepupa	8					
		9					
	Capping	10					
		11					
		12				701	
C' . 2 . 1 1		13				Place empty brood comb in	
Give 2nd drone comb if 2nd GRAFT planned,	Duno	14 15		-2		breeding colony for grafting material, supplement feed	
supplement feed as needed	Pupa	16		-2	1	material, supplement feed	
supplement feed as needed		17		0	1	Eggs are laid	
		18		1	Egg	2555 410 1414	
		19		2	""		
						Set-up Swathmore swarm	
						box or other Queenless cell	
		20		3	""	starter colony	
		21		4	Larva	GRAFTING	
	. ·	22		5		Move graft to cell builder	
	Emerging	23		6			
	Emerging	24 25		7 8			
		26		9	Capping	Move to incubator or move	
		27		10	Сарріпід	w/in cell builder to add 2nd	
		28		11		GRAFT	
		29		12			
		30		13		Put cells in Queenless	
		31		14		nucleus colonies	
		32		15	Emerging		
		33		16	Emerging		
	D : :	34		17			
	Beginning	35		18			
	of sexual	36		19 20	5 days old		
	maturity	38		21	Sexual	Mating flights to Drone	
Mating flights to Drone	Full	39		22	maturity	Congregation Area unless	
Congregation Area until	sexual	40		23	7-8 days old	weather delays	
death by mating or hive	maturity	41		24	- J 	Leave nuc for 1 week	
exile	,	42		25		1	
		43		26	Possible start of		
				27	egg-laying		
				28			
				29			
				30		Check egg-laying	

A SIMPLE IMPROVEMENT PROGRAM

In *Queen Rearing and Bee Breeding* published in 1997, authors Harry Laidlaw Jr. and Robert Page Jr. propose a simple program of stock improvement for beekeepers who may not have the resources to conduct an extensive breeding program. They write:

"[Beekeepers] can improve their stocks if they eliminate queens in colonies that have bad characteristics, such as brood diseases, strong defensive behavior, poor productivity, etc and replace them with queens derived from good colonies.

In addition, all colonies should be requeened regularly with good stock in order to provide a pool of drones of good quality to mate with new queens produced throughout the season. In time, the general quality of all colonies should improve, however, not to the degree that may be obtained with a more vigorous program."

I will describe such vigorous selective breeding programs indepth in the forthcoming NSW DPI publication on queen bee breeding. Until then, keep up the good drone production!



Figure 1. Drone with eye colour mutation. A research tool, but not a commercially beneficial characteristic



Assembly & Wiring Service Let Valley Industries save you TIME and MONEY

Frame assembly, gluing, stabling, side pinning & wiring
Purpose built hive & honey pallets

Call or email to discuss your specific Apiary needs

No job too Big or too Small

Valley Industries Ltd

"Helping people to help themselves"

Mark Page, Unit Manager

70 Whitbread Street Taree NSW 2428

www.valley-industries.com.au

Phone: 02 6552 8828 Mobile: 0458 522 240

Email: mark.page@valley-industries.com.au

Australian Disability Enterprise Freight can be arranged

POLLEN



100% PURE NATURAL POLLEN

Just as the bees collect it for themselves! We have irradiated pollen as per AQIS standard

Just the right thing to get a broodnest started for <u>almond pollination</u>

Pollen available in 5kgs bags

1 x 5 kg bag\$15/kg4 x 5kg bags1 Box\$13/kg20 x 5kg bags5 Boxes\$12/kgPlus freight

Contact: Browns Bees Australia Terry Brown Ph: 02 6886 1448 Email: brownsbees@gmail.com



MEDIA RELEASE

WORLD FIRST APP FOR AUSTRALIAN FARMERS AND BEEKEEPERS TO ASSIST PROTECT POLLINATORS

25 September 2014 (Canberra) – Australian farmers and beekeepers now have access to a world-first smartphone application to help ensure the safety of bees during normal farming practices. CropLife Australia, the peak national organisation for the plant science sector, today launched BeeConnected, a first of its kind geomap based, user-driven communication and coordination tool to help protect Australia's honey bee population.

Chief Executive Officer of CropLife Australia, Matthew Cossey, said "Australia has one of the healthiest honey bee colonies in the world, responsible for the pollination of many of Australia's food crops and it's therefore essential we all assist in keeping it that way. CropLife Australia's consultation on new and world leading stewardship programs with both farmers and beekeepers identified an opportunity to enable easy and effective communication between the parties. For this reason, CropLife Australia, in partnership with the Australian Honey Bee Industry Council, has today launched BeeConnected, a world-first innovative communication tool to enable collaboration between farmers and beekeepers."

The Executive Director of the Australian Honey Bee Industry Council, Mr Trevor Weatherhead, said BeeConnected enables two-way communication between farmers and beekeepers that will help protect pollinators while ensuring personal privacy.

"The Australian Honey Bee Industry Council is proud to partner with CropLife Australia in promoting the use of such an innovative tool that will help beekeepers and farmers work together to keep bees healthy," said Mr Weatherhead.

"It's easy to take for granted the importance of honey bees and pollination however, the financial value to agricultural and horticultural crops is estimated at approximately \$4 to \$6 billion annually. Beekeepers and the cropping community working together will help to limit any potential damage to bees."

Mr Cossey said improved communication between users of crop protection products and beekeepers using BeeConnected can further reduce the risk of unintended exposure of bees to any products that may have the potential to negatively impact bee health. BeeConnected uses latest technology to provide a convenient, efficient medium for this communication to take place.

"BeeConnected allows farmers to easily log the location of their properties through a Google Maps-based platform with GPS capability. Beekeepers can use the same functions to log the present or future locations of their beehives. When a beehive is logged nearby to a farmer's property, both users are sent automated notifications and are able to chat further about their activities via a secure internal messaging service.

"Farmers and agricultural service contractors can also use BeeConnected to log the time and location of a specific crop protection product application activity. They are then connected with beekeepers in the specific geographical area by the same alert and messaging system.

"CropLife Australia and our members have invested significant time, money and resources into the development of the app and are very proud to again be implementing and facilitating world-leading industry stewardship initiatives," said Mr Cossey.

"CropLife is very pleased that all of Australia's state farmer organisations and a number of key agricultural producer groups have joined the initiative as official supporters and will be promoting use of the app amongst their members. BeeConnected is officially supported by the Aerial Agricultural Association of Australia, AgForce Queensland, Australian Seed Federation, AUSVEG, Grain Producers Australia, Grain Producers SA, NSW Farmers, Northern Territory Farmers Association, Queensland Farmers' Federation, Tasmanian Farmers & Graziers Association, Victorian Farmers Federation, and WAFarmers.

BEEKEEPING TRAINING DAY REPORT

On 23 August 2014 the Sydney Metropolitan Branch opened their series of training days for new beekeepers with a class of eight participants drawn from all walks of life.

Our class was ably led by Bruce White who conducted the various segments during the day assisted by members of our Branch.

A light luncheon was served with many stories/questions exchanged.

Practical demonstrations with hands-on opportunities were offered throughout the day and availed of by our participants with the occasional attempt at humour to keep us all moving and involved!

I found the day interesting the newly inducted beekeepers enthusiastic to further their study and experience with their bees!

Our thanks go to Shona and Wheen Bee Foundation for their support in conducting this course. *Michael Fogarty,* Treasurer



Sydney Branch President Paul Drew opening the training day



Shona Blair explaining the functions of bodies associated with beekeeping in Australia



Michael Fogarty explaining the mysteries of lighting your smoker to give you a cool and voluminous smoke



Showing correct opening of hives



Correct removal of queen excluders



Use of hive tool and selection of frames from a hive body during inspection



Describing variety of cells used by the bees and their uses

Photos: Laura Rittenhouse

AT LAST HERE IS THE ANSWER TO YOUR TRUCK LOADING PROBLEMS, THE DONKEY BEEKEEPER !!!!

The Donkey Beekeeper has been developed specially for the Bee Industry, they are made in the USA (est 1985), are light but very strong, comfortable to operate, very safe and easy to use and it can mount and dismount off your truck in seconds, without the need for ramps!!!!









Here are some key features of the Donkey truck mounted forklift:

#3 speed auto

On demand 3WD

Scissor reach

3150mm (10'4') lift height

24 km per hour travel speed

Disc brakes

High ground clearance

Kubota diesel

Sammut Agricultural Machinery P/L, 67 Joshua Rd, Freemans Reach 2756

Phone: 02 4579 6511 Mobile: 0414 423 680

Website: www.sammut.com.au Email: sales@sammut.com.au



Supporting Aussie Beekeepers Since 1953





For more than 60 years Capilano Honey has grown from a small beekeeping cooperative into Australia's and one of the world's largest honey packing companies. Domestic and international demand for Capilano branded honey is very strong and we are actively seeking to expand our supplier network, sourcing quality honey and beeswax from new and existing beekeepers. Capilano Honey does not require suppliers to be shareholders in order to conduct business, so give us a call to discuss your interest in supplying Capilano.

Contact: Ben McKee

Managing Director Phone: 1800 350 977 Fax: (07) 3712 8285 Email: b.mckee@capilano.com.au

Contact: Bill Winner

Beekeeper Services Manager Phone: 1800 350 977 Fax: (07) 3712 8285 Email: b.winner@capilano.com.au

Contact: Michael Bellman

Branch Manager, Western Australia Phone: 1800 350 977 Fax: (08) 9271 1025 Email: m.bellman@capilano.com.au

Australia's favourite honey, naturally!

www.capilano.com.au



STARTING IN BEES

The Central Tablelands Branch held a course in Starting in Bees on 9 August with 19 interested people in attendance. Bruce White organised the program and was teacher for the day.

Firstly everyone was given a very good look at how to start off a hive of bees with the DVD *It's a Buzz*, and then Bruce explained the regulations for keeping bees.

After a morning tea break Bruce took everyone outside to show them how to work with a hive of bees (hives were made available by John Deacon).

Bruce split the class up into four groups with the help of John Lockwood, Wayne Hammond and Noel Chuck to show how to open a hive and how to pull frames out without damaging the queen and bees.





During lunch, which was provided by the Branch, it was good opportunity for everyone to mix, talk and ask questions with some of the Branch beekeepers about what they had been shown in the morning lessons.

After lunch it was back to the classroom for Bruce to finish off the day with some more DVDs on diseases. I am sure that everyone who took part went away with a better outlook on bees and beekeeping then they had before doing this course.

A big thank you to Bruce for his time in coming along to help all these new 'prospective' beekeepers.

I would like to thank Tom Stanton and Sonya Tobin for coming along and handing out a bag of goods to the new people and Sam Lockwood for sending along a price list showing what he has in way of beekeeping gear in his business.

Also a big thank you to our Branch Members who helped out on the day: Debbie Porter, Noel Chuck, John Deacon, Wayne Hammond, David Lord and John Lockwood.

Mal Porter

President - Central Tablelands Branch Phone: 02 6337 5383 Mobile: 0428 375 383

CANOLA GROWERS ON ALERT

ABC Rural - Kath Sullivan, 18 September 2104

Canola growers are being warned to look out for diamondback moths, which are spreading across the South Australian Mallee.

Greg Baker, entomology leader at the South Australia Research and Development Institute, says the moths have the ability to considerably reduce yields in canola and brassica crops. "They eat the foliage, but perhaps more critically are feeding on the developing flowers and pods."It's impossible to say how much damage the moths are causing."

Mr Baker says numbers of diamondback moths across South Australia are up across all regions, but the drier regions, in particular the Mallee, are worst affected.

"There's more diamondback moth around this year and that relates to the fact that there were a lot of brassica weeds that took advantage of the summer rain this season and hence the diamondback moth was more prevalent in the autumn and winter."

APIECOFLORA 2014

Apimondia is pleased to announce the second edition of ApiEcoFlora 2014 symposium in Rome 5-7 November 2014. The event will address topics related to pollination, biodiversity and environment linked to the bees and their wellbeing. The level of partners and invited speakers make this symposium an excellent opportunity to gain new insight on these topics and promote networking. Plenty of information on dates, deadlines, scientific programme, registration and accommodation is available on: www.apiecoflora.org

Ligurian Queen Bees

(The gentle achiever)

Honey with hygienic qualities due to

One hundred and twenty years of natural selection

Nectar, pollen and propolis assured

Exclusive to Kangaroo Island, free of disease

Your order delivered Express Post

\$15.40 each inc GST for 5 or more \$22.00 each inc GST 1 to 4 plus postage

> 5 frame nucleus hives \$100 plus GST

Kangaroo Island Queen Bees

Ph: 08 8559 5045

Email: kiqueenbees@hotmail.com PO Box 142, Parndana Kangaroo Island 5220



Don't get stung with the wrong insurance

When it comes to buying insurance to protect your business, it's important to deal with an insurance broker that understands your industry.

As a proud partner of the NSW Apiarists' Association, OAMPS Insurance Brokers can help you find the right cover with the most competitive premium possible.

Contact Justin Farrugia on **02 6933 6600** - justin.farrugia@oamps.com.au

Closer to clients
Closer to communities®





Opening hours: Monday to Friday 9 am - 5 pm Saturday morning (August - April) 9am - 12pm

Suppliers of:

Redpath's Quality "Weed" Process Comb Foundation Alliance (NZ) Beekeepers Woodware Lega (Italy) Honey Extractors and Pumps Pierce (USA) Electric Uncapping Knives Beeco (Aust) Stainless Steel Smoke Nassenheider "Fillup" Auto Dose Honey packers Ecroyd (NZ) Bee Suits

Redpath's Beeline Apiaries Pty Ltd

Trading As: Redpath's Beekeeping Supplies A.B.N. 54 063 940 161 193 Como Parade East, Parkdale Vic 3195, Australia

Phone (03) 9587 5950 Fax (03) 9587 9560 Email redpaths@redpaths.com.au Website www.redpaths.com.au





HEAT YOUR HONEY PLANT FOR LESS THAN \$30.00 A DAY!!!*



SELF CONTAINED HOT WATER RECYCLING SYSTEM

- Thermostatically Controlled
- Running at 98° +/- 2°
- Wash Down Hose & Gun
- Diesel Fired, Economical to Run
- Simple & Reliable! 10 plus years of field service

ENQUIRIES TO:

495 GRAND JUNCTION ROAD WINGFIELD SA 5013 Ph: (08) 82440110 Fax: (08) 8244 0156

Email: info@spitwatersa.com.au

130 GIPPS ROAD, SMITHFIELD NSW 2164 Ph (02) 9725 4211 Fax (02) 9725 2631 Email: info@spitwaternsw.com.au

Based on a 10 hour working day*

DOUG'S COLUMN

Doug Somerville Technical Specialist, Honeybees - NSW Department of Primary Industries - Goulburn doug.somerville@dpi.nsw.gov.au



THE WORLD BEE CRISIS

This is a fairly dramatic heading, but probably justified given the amount of major political activity about bees around the world including the USA, England and Australia. In the May-June Honeybee News, I reported on the most recent senate inquiry. The following notes are some thoughts and points of interest on the noise coming out of the USA, England and Canada.

A White House press release [USA]: On 20 June 2014, a Presidential Memorandum – Creating a Federal Strategy to promote the health of Honey bees and other Pollinators was released by the White House Press Secretary. The Memorandum was directed to 15 heads of executive departments and agencies.

The memo starts off stating that honey bees alone add more than \$15 billion in value to agricultural crops each year in the United States. Over the past few decades, there has been a significant loss of pollinators, including honey bees, native bees, birds, bats and butterflies from the environment.

It goes on to say that this problem is serious and requires immediate attention. The memorandum states that bee scientists believe that bee losses are likely caused by a combination of stressors, including poor nutrition, loss of forage lands [suitable flora], parasites, pathogens [pests and diseases], lack of genetic diversity and exposure to pesticides.

As a result of this combination of concerns the memo announces the establishment of the 'Pollinator Health Task Force', to be co-chaired by the Secretary of Agriculture and the Administrator of the Environmental Protection Agency, plus 15 heads of various government departments or their designated representative. The principal mission of the task force will be to develop a National Pollinator Health Strategy, including:-

- Pollinator Research Action Plan.
- Public Education Plan.
- Public and Private Partnerships plan.

The research component will include studies of the health of managed honey bees and native bees; plans for the extended sharing of data related to pollinator losses; assessments of the status of native pollinators; strategies for developing affordable seed mixes; using pollinator friendly seed mixes for restoration and reclamation projects; produce best practice to reduce pollinator exposure to pesticides; plus new ways to control bee pests and diseases; and finally to restore pollinator habitat [ie a greater diversity of flora].

One section [3] gives the committee 180 days to get their act together and provide plans to enhance pollinator habitat by outlining a range of pathways for the committee to provide direction.

The pollinator crisis, as alluded to in this Presidential Memorandum, is more than just honey bees, although clearly this is one of the driving imperatives for this very high level of government activity.

The story in **England:** A report by the UK Department for Environment, Food and Rural Affairs, titled: *A Consultation of the National Pollinator Strategy for Bees and other Pollinators in England* was released in March 2014. The forward was written by the Secretary of State of this department and states in part "that bees and other pollinators...... contribute massively to the diversity of our plant and animal life." They go on to say that they recognise that pollinators face many pressures which have led to declines in numbers, diversity and reduction in the geographical ranges of some species.

The government commits to investing in science over the next three to five years to address key gaps in our understanding to provide a strengthened evidence base for policy actions to support pollinators. The report has a similar thread to the White House Memo, with a strong focus on habitat management.

Two action items listed not relevant (yet) to Australia include the need to improve beekeeper control of varroa mites and to take measures to minimise the significant effects of the exotic pest the Asian hornet. The hornet in question is native to Asia and is now established in Europe. It is one of several species that have the potential to be invasive in the Australasian context.

Pesticides are recognised as one of the potential pressures, although it also states that it recognises that neonicotinoids are not the only group of pesticides that have the potential to damage pollinators. The main pressures and impacts on bees and other insect pollinators are discussed in more detail in a 2013 report, *Status and Value of Pollinators and Pollination Services*.

Honey bees are not the only insect under pressure, both butterflies and bumble bees have suffered. An analysis of the distribution data for butterflies in the UK shows that declines of butterfly diversity across the UK are significant and of major concern. Of the 25 UK bumble bee species, eight have undergone major range contractions and three are considered extinct.

Several countries, including the UK, conduct annual surveys to determine and map any honey bee health trends. The following is the **Canadian** story. In 2014, the Canadian Association of Professional Apiculturists developed a set of questions to be used to survey beekeepers to determine the cause of winter losses on honey bee colonies. Some surveying has been conducted since 2006. For the purpose of this survey, the total number of dead colonies also included colonies with three frames or less covered with bees. This number is suggested as being an unviable colony and unlikely to reach a commercial productive status during the spring/summer period.

A long term view of Canadians is that a 15% winter loss is acceptable. Since the gathering of data in 2006, this figure has only been this low once in the 2011/12 survey period, otherwise in every other period the winter mortality rate has been higher with a peak in 2007/08 of a 35% loss.

In the 2013/14 period, the average loss was 25%, with British Columbia at 15% and Ontario at 58%. Several factors are cited as being major contributors to winter losses, including the weather. The winter period of 2013/14 was considered cold and long, followed by a cold and wet spring. This combination of weather factors meant that many colonies consumed all their stored honey and starved.

Other stressors listed include poor queen health, nosema disease, varroa mites and pesticides.

Although varroa mites are considered a serious problem in Canada, there were fewer concerns cited by beekeepers indicating that many of the treatment options can work well when properly applied. Beekeepers in Canada are regularly using the organic acids as part of a chemical treatment rotation in conjunction with the Apivar.

There is a widespread resistance by varroa mites to Apistan and Bayvarol, thus their use in honey bee colony management has declined. Nosema disease was specifically mentioned in the Canadian report as being "considered a serious pathogen across Canada that can influence colony survival." This disease also is a major disease of adult bees within the Australian context but its impact largely goes unnoticed.

In **conclusion** my take on these reports and political activity around the world is that you can't ignore the fact that something is happening to our honey bees and also other beneficial insects. What is happening will be up to a bunch of observant beekeepers and researchers to figure out. I very much doubt that the stressors experienced by honey bees in one location on the planet will be exactly the same elsewhere.

Honey bees in the Australian context are exposed to a range of significant pests and diseases including nosema, as

highlighted in the Canadian report. We don't have varroa mites, which is of major benefit to us. There is absolutely no argument that varroa mites have changed the face for the world beekeeping scene.

Breeding superior bees and managing the nutritional stressors on a honey bee colony are two areas we can focus on with very clear benefits.

Footnote: The following is nothing to do with the previous article but extremely interesting none the less. A question posed 'Can insects feel pain?" has been discussed and reported on, in the Netherlands. I have work colleagues in the pig and poultry industries that spend a lot of conversation on the subject of animal welfare. Insects (honey bees) have traditionally escaped this attention, but......

Animal welfare, when talking about normal production animals, involves the five freedoms which state that animals should be free from:-

- 1. Hunger, thirst and improper diet
- 2. Thermal and physiological discomfort
- 3. Pain, injury or disease
- 4. Anxiety and chronic stress
- 5. Limitations on the natural behaviour

The authors of the report go on to conclude that insects are unlikely to experience pain and consider it unlikely that insects can perceive their own welfare state. But the absence of evidence is not evidence of absence. Thus if the precautionary principle is used, the integrity and health of an insect must be maintained where reasonable.

WOW, does this sound some alarm bells for the management of honey bees?! Perhaps we will leave this one to the pig and chook guys to continue to find solutions.

BEEKEEPING Q JOHN L. GUILFOYLE PTY LTD.

U	email: john@johnlguilfoyle.com.au		ABN 57 548 699 481				
_	38 Begonia Street	Shop 6	299 Prospect Road	2 Wells Street			
	Inala	82 Victoria Street	Blair Athol	Bellevue			
	Brisbane	Werrington	Adelaide	Perth			
P	Qld 4077	NSW 2747	SA 5084	WA 6056			
B.4	Ph: (07) 3279 9750	Ph: (02) 9623 5585	Ph: (08) 8344 8307	Ph: (08) 9274 5062			
M	Fax: (07) 3279 9753	Fax: (02) 9673 3099	Fax: (08) 8344 2269	Fax: (08) 9274 7142			
Ε	PO Box 518	PO Box 4011	PO Box 128	Email:			
	Inala Qld 4077	Werrington NSW 2747	7 Kilburn SA 5084	guilfoylewa@tnet.com.au			

Please phone, write, fax or email your closest branch for a copy of our current catalogue and price list





The Sydney Metropolitan Branch of the NSW Apiarists' Association, in conjunction with the Wheen Bee Foundation, invites you to this one day course:

Learn About Beekeeping

Where: Wheen Foundation Apiary, 170 Old Kurrajong Road Richmond NSW

Date: Sunday 9th November 2014 **Registration:** 8.30 am **Time:** 9 am – 5 pm

Cost: \$170

This includes a day of instruction from an expert beekeeper with the opportunity to handle live bees, NSW Apiarists' Association Membership, a subscription to *Honeybee News*, the Department of Primary Industry's *Bee Agskills* workbook and a guide to sourcing bees and beekeeping equipment. Safety clothing is available to purchase with registration.

Instruction: by Bruce White, OAM

Retired Technical Specialist Apiculture NSW Department of Primary Industries

Programme

- Introduction to Beekeeping (It's a Buzz)
- Protective clothing
- Regulations: Apiarists Act

Morning Tea

- Equipment Design
- Handling Colonies Practical

Lunch

- Hive Apiary Site Selection
- Flora
- Nutrition Bees need
- Feeding (at hives)
- Seasonal Management
- Pests and Diseases
- Endemic Diseases (DVD)
- Exotic Diseases (DVD)

Afternoon Tea

Swarm Catching a practical demonstration

- Sugar shake for exotic parasites
- Inspecting hives for diseases
- Take a glass slide
- Making hive increase
- Re-queening
- Valuing hives
- Transporting hives
 Questions and discussion

Please note: whilst every care will be taken to ensure that the day will be rewarding, *live bees and working hives will be opened*. So participants should ensure they have appropriate protective clothing. Including at least a hat and veil to protect the head. It is also recommended that participants wear light coloured, loose clothing that covers the limbs, covered shoes and avoid using perfumes, scented lotions, shampoos etc. on the day of the course.

Enquiries or bookings:

Tanya 0414 501 198 or Paul 0403 175 708 or Doyle 0412 27 28 27

sydneybranch@nswaa.com.au \$50 booking fee includes the pre-registration pack

Numbers are strictly limited – so book ASAP

NUPLAS Plastic Bee Hives

AMERAME

All you have to do is visit www.nuplas.com.au click on 'sign me up' and go in the draw to Win 1 of 5 Ten Frame Triple Hive Sets when released in October 2014!



Check out our website

www.nuplas.com.au

NUPLAS PTY LTD - INJECTION MOULDERS

Tel 03 5032 9199 | Fax 03 5032 9399 | Email sales@nuplas.com.au

8 & 10 8 FRAME **FRAME DRIP TRAY SUPERS** $\mathbf{2250}$ 8 FRAME STD/VENT **INCLUDES GST INCLUDES GST BASE BOARD 8 FRAME LIDS INCLUDES GST INCLUDES GST TRIPLE BEE HIVE** SET **INCLUDES GST** PayPal[™] VISA MasterCard. Buy on-line and pay only \$30 delivery!



AUSTRALIAN QUEEN BEE LINE ABN 63 181 851 647

Italian and Carniolan Queens

Prices GST Inclusive: Postage & Handling applies for orders under 10

1 - 9	\$22.00 each
10 - 49	\$18.00 each
50 - 99	\$17.00 each
100 & Over	\$16.00 each
200 & Over	Discounts Apply



VISA

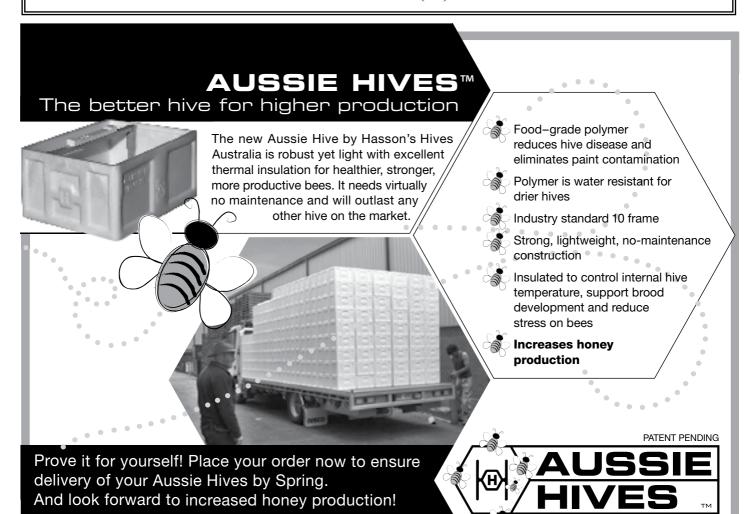
Terms: Payment prior to dispatch For orders and enquiries please call: Charlie or Brenda Casido/Mely

Office hours: 9:00 am - 5:00 pm Monday to Friday Phone: (02) 6369 0565 Fax: (02) 6369 0575

Email: ozqueenbeeline@optusnet.com.au, australianqueenbeeline@yahoo.com.au Website: www.australianqueenbeeline.com

> Address: 21 Leewood Drive, Orange NSW 2800 Postal Address: PO Box 80, Orange NSW 2800

Before & After office hours contact numbers: /F: (02) 6360 4113 Mobile: 0434 353 301



T/F 03 5664 8382 E shayo@sympac.com.au W www.aussiehive.com.au

BEEKEEPING IN THE KINGDOM OF TONGA ON THE ISLAND OF VAVA'U

Bruce White OAM Retired Technical Specialist Apiculture NSWDPI and Dr Lamorna Osborne NSW Apiarists' Association Executive Member.

The Kingdom of Tonga in the Pacific is the very first country in the world to see the dawn of every new day. Named the Friendly Island by Captain Cook in 1773, the Kingdom of Tonga is made up of 176 islands of which 40 are inhabited.

The Polynesians arrived 3,500 years ago. Tonga is the world's only remaining Polynesian Monarchy and the only South Pacific country not be invaded by a foreign power.

Tongan's are humble down to earth people that deeply respect tradition and culture, they are sports loving and Tonga is a very safe place for tourists to visit. Many churches dot the countryside and most businesses close on Sunday.

December to April the weather is hot and humid, 29°C day temperatures with considerable rainfall. May to November the weather is cooler, 25°C day temperature and day to night temperatures only vary about 7°C.

Tonga has a variety of scenery, dramatic volcanic landscapes, low lying coral atolls, pristine coral reefs and sandy beaches.

Tonga is divided into four main island groups: Tongatapu, where the capital Nuku'alofa is, the Ha'apai group, the Vava'u group and the Niuatoputapu group, a spread of 700km.

Virgin Australia have direct flights to the capital Nuku'alofa then Real Tonga operate a Chinese built aircraft to Lapepau'u airport in Vava'u - an interesting experience!

Vava'u is regarded as Tonga's most scenic; the island is 115 square km and home to Tonga's second largest port with the capital Neiafu. Port of Refuge attracts yachts from all over the world; you can even swim with the whales.

Vava'u is fringed with coral reefs and very clear water in places. You can see down to the beautiful coral gardens packed with brightly coloured tropical reef fish with visibility down to 30 metres.

The language spoken is English and Tongan. In Tongan bee or pi is wasp Bee is hone (hon ay)

Vava'u has one National Park, Mount Talau with no restrictions on beekeeping.

Tonga's flora represents a South Pacific environment that is unique as it is beautiful, open country, rainforests and mud flats. Very little if anything is known about the flora's benefit to honeybees.

Vava'u has a Botanical Garden that we visited and discussed the flora with the botanist who has an excellent knowledge but was not familiar with the rewards for honeybees.

One of the beekeepers Jonathan Treaster and his wife Lena were successful in obtaining a grant from The Tonga Business Centre, so they could be trained in beekeeping practices.

Lamorna told me about the project and I applied and was successful in being selected to provide the training. Lamorna accompanied me for some of the twenty four days spent in Tonga and helped with the training.

Jonathan and Lena had two apiary with managed colonies one located near the International Airport at Lupepau'u and the other at Holeva, with a total of seven hives plus a lot of material, about ninety well made ten frame full depth Langstroth material all

with plastic frames and plastic comb foundation included. They had purchased the material from a beekeeper who had left the island. Another hive was owned by the Ministry of Agriculture and Forestry and two by an Australian who is managing the Vanilla plantations for the Australian company Queen.

Disease Status

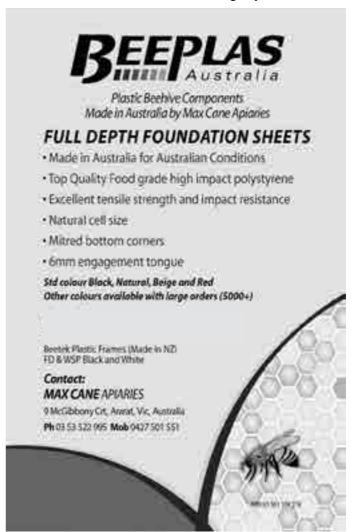
Managed and feral colonies were inspected for pests and diseases. Varroa destructor was detected at various levels of infection on brood and adult bees and very low levels of chalk brood (*Ascophaera apis*). Some feral colonies had brood capped with a black unperforated cap which when opened had a dead dry pupa inside, I'm not sure if this was caused by Varroa or Black Queen Cell virus or some other cause. Wax moth was detected in feral colonies.

No other pests or diseases were found.

In August 2006, as part of an industry development and training plan, AgriQuality New Zealand located 4 out of the 6 hives with Varroa on Vava'u and everything changed. The hives belonged to a Tongan local who had been working in New Zealand with a beekeeper to gain experience and the queens in the Varroa colonies had yellow queens.

An attempt to eradicate Varroa was undertaken by the New Zealanders and Tongan Livestock Officer in August and November using Apistan and NZ tried to get more funding for surveys' to do an eradication program that didn't go ahead for unknown reasons.

No Varroa were found on the other island groups.



This work was undertaken by Byron Taylor who attended the Merimbula NSWAA State Conference as a guest speaker and Tony Roper.

Chalkbrood was first detected in Tonga in 2000 by Bettesworth.

The New Zealand survey also identified *Nosema apis*, Sac brood, Wax Moth and American foulbrood on the island of Eua with the colony destroyed. We were able to look at both managed and feral colonies and saw evidence of American Foulbrood on Vava'u. However, imported honey was sold in one supermarket that if bees robbed may or may not pose a risk. In 1971 an unknown mite Edbarellus tonganus was identified and NZ was unwilling to allow imported queen from Tonga into NZ where a NZ company Kintail had plans in place to raise and export queens. We haven't been able to Google details on this mite.

Genetic Base.

Honeybees were likely introduced to the Tongan Islands via the early missionaries. This local honeybee has adapted very well to the environment and conditions in Tonga, it is a dark race on Vava'u.

In July the colonies were just starting to raise drones and were below maximum colony strength as evidenced by the amount of comb not covered by bees.

Some feral colonies had some Italian yellow colour in the progeny. There is no doubt Italian stock have found its way to Tonga.

The feral and managed colonies with yellowish progeny had the most stored honey. Interesting where robbing occurred it was the yellowish coloured bees who arrived first.

It is hoped to get the right paper work from the Australian and Tongan Government to get the stock DNA to trace.

Bruce has visited twenty six beekeeping countries and considers the Tongan feral population to be the most non aggressive bees he has encountered. They are so easy to control with little or no smoke.

They appear to have a strong tolerance to Varroa destructor as some colonies had survived this pest as a feral colony for up to 10 years. We removed 16 feral colonies mainly from houses and schools or Government buildings and were told how long the colonies had been in the cavities. No treatment controls are being used by the beekeepers on Vava'u for Varroa.

Flora

Successful beekeeping is all about colony management and flora and for two Australians it was very difficult to evaluate the reward the bees were getting from the flora that is so different from the Australian flora.

A visit to the Botanical Gardens to speak to the Botanist was the first step; he was very knowledgeable about the flora and the Botanical names but not on the nectar and pollen rewards the bees from the various species but did mention he had some eucalypts.

The beekeeper has been given the task of observing the plants visited by the bees to see if they are collecting pollen or both and counting and recording the different colour pollen being collected by the bees and identify it back to the plant and also observing nectar gathers and recording the information.

At the time of our visit in July, the bees were collecting Coconut pollen (yellow) and Farmers Friend, Pitchforks, (Bidens pilosu) a common plant that is also in Australia.

All colonies were storing plenty of protein rich pollen mainly from these two species all day.

Other spices identify Kapok Tree (Ceiba pentandra) pollen in the mornings only.

Other flora that was not flowering but maybe of some value included Avocado, Cucurbits, e.g. Watermelons, Squash, Grammar, Rock Melon, Cucumbers, Pawpaw, Wild Citrus, Banana, Mimosa, Casuarina and Mangroves. The Mangroves are heavily budded in some areas and should flower in the next few months.

With such a short visit and no reference material it was very difficult for us evaluating the flora returns and if honeybee colonies can collect a surplus of nectar to enable honey extraction and still leave sufficient honey for the colonies to not starve over a twelve month period.

Observing Flying Foxes and Blue Crowned Lorikeets maybe of value to the beekeeper to identify valuable flora as both these species feed on nectar and pollen.

Feral Colonies

A total of 16 feral colonies were removed and these colonies were requeened using a grafted queen cell from a selected docile managed colony that showed resistance to Varroa with honey gathering ability.

Feral bee colonies are in high numbers in trees, buildings and caves and would be difficult to eradicate.

Grafting

Both Jonathan and Lena had never grafted, at the first attempt Jonathan obtained an 80% success rate, his wife Lena a 85%. We were very pleased with this result using the Swathmore Method.

Smoke Fuel

We tried all sorts of bark and leaves then found a pine plantation at Houma so our problem was solved as pine needles make excellent smoke fuel, the centre of dry coconuts the next best.

Constraints at the Hive.

The whole business is based on plastic frames and foundation. When coated with beeswax the bees often, with a nectar flow, draw them incorrectly often preferring to not draw out the worker cells building drone comb or burr and brace comb. In one managed hive 30% of the brood combs weren't suitable for being used in the brood nest. This can be overcome by using wax foundation under suitable conditions for brood combs.

White sugar is not available so it is difficult to simulate colonies using sugar if the need arises.

Hive Sites

The maximum temperature gets to a bit over 30°C and the colonies at one site were in the shade so the foliage was cleared to allow in more sunlight so the field bees will fly longer. Some hives were on stands, others we located on the ground and can evaluate the difference.

Jonathan and Lena were given the NSWDPI Ag Guide book Healthy Bees and NSWDPI Agskill Book on Beekeeping. They were given very detail instructions on best beekeeping practices and details were written down and given a number of observations tasks.

A return visit is very possible next year to check up on the colonies and to provide more training.

Jonathan and Lena were excellent hosts and every day that we were in Tonga we spoke about Beekeeping and Sundays were the only days we didn't open colonies.

Jonathan and Lena are keen to expand their beekeeping business and this will depend on how good the flora will produce nectar and pollen over a 12 month period. This will vary from year to year and will require management to suit.

A special thanks to Murray Reid from New Zealand who is in charge of the beekeeping program for Asurequality. He provided valuable reports and comments on the previous work done by the New Zealand Apiary Officers in Tonga in 2000 and 2006.



Working Johathan's managed hives



Feral bees on brood with good stored pollen even when Varroa is present



Yellow bees robbing honey



Feral colony in a cave



Lamorna and Jonathon grafting queen cells



Lena with a swarm that absconded from a cavity



Lamorna and Bruce examining brood from a feral colony with Lena and the Botanist at the Botanic Gardens



Plastic frame with drone and burr comb



Lena and Jonathan with finished queen cells

BEE, SCORPION AND SNAKE VENOM MAY HOLD CANCER CURE

Jen Christensen, CNN - 12 August 2014

Venom from snakes, scorpions and bees may have an element that could stop cancer cell growth.

It's ancient medicine with a sci-fi-sounding twist.

- Ancient healers used bee, snake and frog venom to treat a variety of ailments
- Venom itself can hurt all cells, but can also be synthesized to target cancer cells
- Early lab tests show promising results using proteins from venom and nanotechnology

A scientist at the University of Illinois, Dipanjan Pan, and his team say they may have found a way to stop cancer cell growth, according to a paper presented at the American Chemical Society conference this week.

The work is in very early stages, but has shown success in stopping breast cancer and melanoma cell growth in lab tests. Pan's technique uses nanotechnology to deliver a synthesized element similar to the venom found in bees, snakes and scorpions.

Ancient texts show doctors have used venom to treat aliments for years. In 14 BC, the Greek writer Pliny the Elder described the use of bee venom as a cure for baldness. Doctors used beestings to treat the Emperor Charlemagne's gout in the 700s. Traditional Chinese medicine has used frog venom to fight liver, lung, colon and pancreatic cancers. Alternative doctors in Cuba have used scorpion venom to fight brain tumors.

Old drugs, new cancer cures

The general problem with injecting someone with venom is that there can be harmful side effects. Beestings, for example, hurt and become inflamed because melittin, the main toxin in a bee's venom, destroys cell membranes. It can also cause blood to clot, damage the heart muscle and hurt healthy nerve cells.

The properties in venom that destroy cancer cells can have the same effect on healthy cells -- much in the same way chemotherapy causes cell damage, and painful side effects, while treating cancer.

But Pan's lab has developed a technique to separate out the important proteins and peptides in the venom so they can be used to stop cancer cell growth. His lab has found a way to synthesize these helpful cells.

"Since it is synthetic, there is no ambiguity" in what the substance contains, Pan said.

The synthetic material is then delivered to cancer cells using nanotechnology. In "camouflaging the whole toxin as a part of the nanoparticle," Pan said, it bypasses healthy cells and is attracted to only the cancer cells. In other words, it's so tightly packed into the nanoparticle it doesn't leak out and cause other problems.

Attached to the cancer cells, these nanoparticles with the synthesized venom can either slow down or stop cancer cell growth, and may ultimately stop the cancer from spreading. Particles in bee venom seem to specifically stop the cancer stem cells

"That's what we are interested in -- those are the cells responsible for metastasizing and also responsible for having the cancer cells grow back," Pan said. "If we can target better using this technique, we potentially have a better cancer treatment."

Unlike chemotherapy, this more targeted technique would, in theory, only affect cancer cells. If it's successful, this natural agent found in venom could become the basis for a whole legion of cancer-fighting drugs. Pan's research builds on a growing body of scientific research that has shown toxins in venom can fight cancer cells without harming healthy cells. For example, Dr. Samuel Wickline at Washington University in St. Louis helped develop "nanobees" that are also being tested to see if they can deliver a synthesized version of the toxin found in bee venom to cancer cells in prostate cancer.

Next Pan's lab will try the synthesized venom and nanotechnology combination on cancer cells in rats and pigs. If successful, they'll then try the technique on humans. He predicts that step could happen in the next three to five years.

Jz's Bz's QUEEN CAGES

Money & Time SaverImproves Queen acceptanceQuick & easy to place in hive

Banking Bars - Queen Cell Cups Easy Fit Cell Protectors Queen Candy



SUNDERLAND APIARIES

'GAMBOL PARK' MINORE ROAD, MS6 DUBBO NSW 2830 PH: 02 6887 2202 FAX: 02 6887 2255

AUSTRALIAN DISTRIBUTORS

The Cost Effective Queen Shipping & Introduction System

Manufacturers of
Wire Queen Excluders
Tobin Escape Board Corners
Gal Lid Covers
Metal Vents
Tobin Hive Tools
Gal Cut to Size

COTTESBROOK HONEY

David and Tracey Parker Fitzgeralds Mt Blayney 2799

Ph: 02 6368 5889 Fax: 02 6368 5989

Email: cotbrook7@bigpond.com

This business was previously owned by EC Tobin and Son

SICK BEES

PART 18d - AG EXPOSURE Colony Collapse Revisited

by Randy Oliver - ScientificBeekeeping.com



Originally published in ABJ november 2012

"It's what you know for sure that keeps you from learning" And I'm all about learning. I'd like to make it perfectly clear that I do not consider myself to be the final arbiter on any matter! In investigating many of these controversial subjects, my brain feels like a GPS unit, repeatedly saying, "Recalculating" and sometimes even "Turn around when possible." This is why I take care to hold no positions, and appreciate being intelligently challenged on any point. If something comes to my attention that makes me rethink or correct anything I've written, I am more than happy to rebut myself on these pages.

Updates Geomagnetic Flux

In my last article I dismissed geomagnetic flux as the cause of CCD, but also said that I was corresponding with proponent Dr. Tom Ferrari. A point that he recently made is that the timing of a flux event is critical—it must occur during, or immediately before flight hours. Although I still have a healthy skepticism about solar flares causing colony collapse, I am keeping an open mind that they may indeed affect bee homing ability, and could plausibly contribute to forager loss.

Driftwatch

In a recent article, I put in a good word for Purdue's Driftwatch program [1], based upon the positive feedback that I had gotten from some beekeepers. However, I wish to thank beekeeper Jeff Anderson for bringing to my attention legitimate concerns about its uncritical promotion by state agencies.

First, some background on pesticide regulation. Pesticides are registered and labeled at the federal level by the EPA. States must follow those labels--they may impose further restrictions, but not fewer. In general, the state has primary authority for monitoring pesticide applicators to ensure that they comply with label restrictions, and is charged with the responsibility to take enforcement action in the case of violations (as in those resulting in bee kills). The EPA refers to the states as "primacy partners"; each of which may use a "state lead agency" (such as its department of pesticide regulation, agriculture, or environment to enforce the law [2].

A problem may occur when a state writes pesticide use guidelines for the protection of honey bees (and other pollinators). Pesticide applicators may put pressure on the local primacy partner to shift the responsibility of pollinator protection from the EPA and the applicator onto the shoulders of the beekeepers. If guidelines are written to suggest that beekeepers should register their apiary locations, and that applicators about to spray should then notify those beekeepers, the applicators may get the misimpression that such notification absolves them from their responsibility to carefully adhere to label restrictions, especially if there is any wording about the beekeeper moving or covering his hives.

Commercial beekeepers strongly object to any suggestion that they be forced to "duck and cover"! And, a beekeeper may be adverse about putting his prime locations into a public database, which might result in some unscrupulous beekeeper moving in right on top of him!

In many places, conscientious applicators do indeed work constructively with beekeepers, and I've had them give me courtesy calls to discuss potential spray issues. As much as I

appreciate that sort of cooperation, a large commercial beekeeper simply has too many locations, and not enough time to negotiate with every applicator who might be spraying within flight range of every one of his yards. It's not the beekeeper's job to be a pesticide expert—that's the responsibility of the applicator!

The fact is that the EPA label restrictions are designed to protect pollinators, and if the restrictions are carefully followed, the beekeeper theoretically should need not ride herd on every pesticide applicator (Fig.1).



Figure 1. A grower spraying fungicide onto almond trees, and the understory weeds, each in full bloom.

This sort of application is permitted by the label, and generally has only minor impact upon bees. However, EPA is closely following recent research on adverse effects of both fungicides and their adjuvants upon colony health.

Practical application: voluntary programs in which beekeepers may register their apiary locations to be notified by applicators can be of benefit (it works for me in my county), and a beekeeper may well wish to negotiate with an applicator about to make a lawful application. But beekeepers must be careful about allowing any "hot button" words involving the moving or covering of hives to be institutionalized in state guidelines, lest applicators get the misimpression that they can then ignore restrictions such as "Do not use on flowering crops or weeds" if they have notified the beekeeper, or that it is then the beekeeper's responsibility to protect his hives from pesticide misapplication.

Back to the Suspects for CCD

AG EXPOSURE

Biological plausibility: plausible due to nutritional or pesticide issues.

Honey bees and farming have one major aspect in common—they both prosper on fertile, moist land. Prime bee forage land and prime agricultural land are one and the same. As it is, much of the world's best acreage for bee forage has been converted to intensive agriculture, often dedicated to the cultivation of a single species of plant.

I've had beekeeper after beekeeper tell me how colonies summered on agricultural cropland often go downhill, or don't make it through the winter. These anecdotal reports are supported by data from at least two studies:

I mentioned a couple of months ago Dr. Erickson's demonstration that colonies exposed to permethrin-sprayed corn died during the following winter.

The Coordinated Action Project's data for 2009-2012 [3] found that the proportion of land in intensive agriculture within 2 miles of the apiaries correlated with colony mortality. Although pesticides were obvious suspects, the study surprisingly did not find any particular correlations between pesticide levels in trapped pollen and amount of Ag exposure, nor any correlations between pesticide exposure and colony mortality!

Curious as to whether recent colony losses (Fig. 2) correlate with the degree of exposure to commercial agriculture (Fig. 3), I checked the National Agricultural Statistics to find which states had the greatest percentages of their land areas in various crops.



Figure 2. Recent colony mortality rates for surveyed states. Compare the apparent correlation between those areas with high loss rates (dark states) with the types of cropland in the following map. Copyright the International Bee Research Association. Reproduced from [4] the Journal of Apicultural Research (2011) *Issue 50(1): 1-10 by the permission of the Editors.*

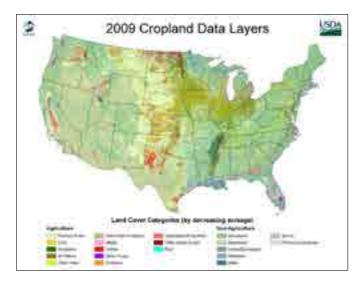


Figure 3. The scope of the impact of farming practices is staggering--roughly 2/3rds of the land area in the entire states of Iowa and Illinois, and half the footage of Indiana and North Dakota, are planted to principal crops (a small amount is pasture). Source http://www.nass.usda.gov/research/Cropland/ cdl09_l.jpg

It's hard to compare the two maps above directly, since beekeepers move hives, and the colony mortality data is very crude by comparison (only to the state level) to the cropland map. However, one can't help but see that colony mortality appears to be higher in corn, soy, and cotton areas.

As an aside, in researching this subject, I found that even more detailed interactive maps are available from the NASS (Fig. 4):

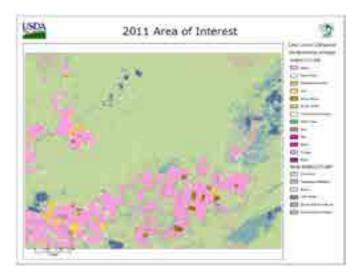


Figure 4. I created the above map to scout for alfalfa locations (in pink) in a small area of Nevada. The detail of these maps is amazing!

Check it out at http://nassgeodata.gmu.edu/CropScape/.

NUTRITION

The first thing about agricultural land and bees that generally comes to mind is the impact of pesticides, which I will return to later in this series. However, one must not ignore another important effect of crop monoculture—its impact upon bee nutrition:

"One impact of large-scale agriculture with extended expanses of a single cultivated crop species to honey bees is the availability of pollen, which is the only source of proteins and lipids in the bee diet and thus crucial for their survival and development. Agricultural trends toward larger monoculture farming systems can place pollinating honey bees in situations where they have a restricted choice of dietary pollen" [5].

So what is wrong with a "restricted choice" of pollen? Some "monolectic" species of solitary bees are specialized to feed solely on a single type of pollen (mono = single; lect = to gather). Honey bees, on the other hand, need to collect pollen throughout the season, so must by necessity be "polyletic" since no single plant species blooms for that long. Some pollens (almond, mustards, apples, red gum, etc.) are plentiful and nutritionally complete, but a number (corn, sunflower, blueberry, citrus, and pumpkin) are not. If you've ever trapped pollen, you've noticed that pollen foragers bring home a medley of pollen types, thus increasing their chance of obtaining all necessary nutrients.

In agricultural areas, despite there being vast fields of single species of plants in bloom, bees still go out of their way to collect a diversity of pollens. Dr. Jerry Bromenshenk (in prep) has surveyed pollen loads in agricultural areas for the past few years. In corn country during tassling, he found that on average, corn pollen still constituted less than 25 percent of pollen loads.

This is not surprising if you think about it, since if the bees in those areas are producing honey, they sure aren't getting it from corn, so must have located other forage! When I visited apiaries in the Midwest, I surveyed their surroundings from the ground and via Google satellite maps--it appears that bees are remarkably efficient in finding little patches of good forage scattered among vast seas of corn and soybeans!

Another aspect of commercial crops is that plant breeders select for yield per acre, not for plants that produce nectar or nutritious pollen. Beekeepers report vast differences in bee response to different cultivars of several crops.

Practical application: Colonies may go downhill on certain crops due to poor pollen nutrition; they then need better forage in order to recover. Recent research found that colonies subsisting solely on corn pollen rear less brood, and have shorter worker lifespans [6]. Such colonies cannot be expected to winter well.

However, so long as alternative forage is available, bees may fare well in agricultural areas, provided that they don't take a hit from pesticides.

A PESTICIDE-FREE CONTROL GROUP

I will return in a subsequent article to the impact of pesticides, but for now let me say that the few studies that have looked at pesticide levels in beebread do not clinch the case for pesticides being the only problem for bees in ag areas [7].

My apiaries often serve as a "control group" with regard to pesticides; since I avoid (other than in almonds) areas in which pesticides are used. Yet I still experience, in some locations, poor buildup, late summer dwindling, and poor winter survival. A case in point is a pumpkin pollination contract that I had for several recent years in an area of Nevada surrounded by desert (Fig. 5).



Figure 5. Ipollinated 40 acres of pumpkins grown in this irrigated oasis in the middle of the desert. The only other "green" is a sod farm (most of the rectangular checks) and some center pivot alfalfa. No pesticides were used in this valley, yet colonies still fared poorly. Imagery from Google maps, ©DigitalGlobe, GeoEye, USDA Farm Service Agency, TerraMetrics.

The only forage available was 40 weedy acres of pumpkins, quite a bit of irrigated alfalfa, and natural Rabbitbrush in fall. Pesticides were not used anywhere in the valley. I'd move strong colonies in each July, heavy with stores, treated for mites, and with a 3-lb chunk of pollen supplement. The poor bees experienced boom and bust situations (mostly bust). The colonies simply starved on the forage provided by the pumpkins and weeds between alfalfa blooms (typically two blooms), and I generally had to resort to emergency open drum feeding and pollen supplement to keep them alive. Depending upon how much alfalfa was under irrigation that year, they might be able to rally and fill the combs with honey, or not. Some years they would rebound somewhat when Rabbitbrush came into bloom, but generally not enough to build up for winter.

In the above example, my 40 colonies were the only ones on about two square miles of irrigated green cropland. But there is no way that they could have survived on their own. There simply wasn't enough consistent mixed forage to support them.

Living at the Edge and on the Edge

Unlike in natural areas, in which pollen and nectar flows transition fairly gradually, on agricultural lands they can be cut off in a matter of hours (just watch how fast a modern swather takes down a field of alfalfa in full bloom—breaks your heart). A flow can suddenly end when fields are tilled, when flowering weeds are mowed or burned off with an herbicide, or when every plant in a crop finishes blooming all at the same time. The bees are then forced to forage at the edges of the fields (Fig. 6).

Such a sudden cessation of food intake can also quickly bring a colony to the edge of serious protein deficit (not to mention the lack of nectar). The nurse bees in such a stressed colony must immediately deal with all the protein-hungry brood and foragers, and the colony must shift to survival mode.

The more I study bees, the more it appears to me that colonies are often living right on the edge of disaster. As I pointed out with my growth rate graphs [8], normal colony growth requires phenomenal production of brood, with a complete turnover of the summer population about every 5 weeks. Colonies can go from boom to bust in a matter of days if nutritious pollen and nectar become unavailable. Colony immunocompetence falters and broodrearing is curtailed, setting up conditions for varroa, nosema, or viruses to explode.

Practical tip: Here at Samemistaketwiceagain Apiaries, we find that as with many management issues involving bees, being proactive is much more cost effective than being reactive—it's easier to maintain colony momentum than to restart them after they've come to a halt! A little supplemental feeding during dearth can go a long way towards healthier colonies.



Figure 6. The bee in the center of this photo is foraging at the edge of a cornfield that is weed-free after being sprayed with Roundup. The clover on the margins, and whatever grows in the patches of woods, is the only forage between here and the horizon. Modern farming practices greatly reduce the amount and diversity of bee forage. Photo courtesy of beekeeper Larry Garret.

Now add the pesticide component

When the forager force suffers attrition due to pesticides—although perhaps not enough to cause piles of dead bees in front of the hives—this will both reduce incoming nectar and pollen, plus force younger bees to take the places of the poisoned foragers. A strong colony full of sealed brood may be able to rebound from one hit to the foragers, but not from repeated hits, or from a hit late in the season.

Or, pesticide residues in stored pollen or nectar might negatively affect brood survival, harm the nurse bees (due to their eating so much pollen), decrease resistance to parasites, or shorten winter bee longevity. This may be especially true with the cocktail of insecticides, fungicides, and surfactants sometimes found in beebread.

During dearths (and in fall), a colony that shuts down into survival mode due to lack of pollen can generally stick it out until it can rebound when another nectar and pollen flow starts. However, the beekeeper should be aware that when a colony cuts back its population, the *relative* rate of infestation by varroa can quickly skyrocket! And if a colony in such a condition is then exposed to what would normally be a minor hit by pesticides, the negative effects can be greatly exacerbated.

Practical application: if, due to lack of alternative flora, bees are forced to forage solely on agricultural crops, then they may be exposed to pesticide residues that they would normally avoid, or store larger proportions of nutritionally-incomplete pollens (such as from field corn). Extension

apiculturists have long pointed out that feeding colonies pollen supplement may help to mitigate the above problems. This is especially true in late summer as colonies suffer from the triple whammy of normal downsizing, poor nutrition, and rapidly rising varroa infestation rates.

CRP LANDS

Beekeeper Zac Browning explains that large-scale commercial beekeepers are having a tough time finding safe places to park their hives during the summer: "We're limited to the fringes of rural America, where we can stay away from pesticides, where we can find wildflowers."

One of the most popular places to look for locations has been on Conservation Reserve Program lands, for which farmers are paid by the government to convert cropland to long-term vegetative cover for the benefit of the environment. These lands in the northern states are often planted to clover or legumes, thus providing excellent forage for pollinators. As a result, commercial migratory beekeepers flock there during summer (Fig. 7).



Figure 7. CRP lands often provide good bee forage. Over a third of commercial hives spend the summer in just three states—Montana and North and South Dakota [9]. Map from USDA [10].

But with the high prices currently being offered for agricultural commodities, farmers are converting bee-friendly CRP land to monoculture cropland, putting the hurt on beekeepers. I don't expect this situation to improve.

GOOD NEWS

Press release: August 29, 2012

Portland, Ore.--- Last Friday Agriculture Secretary Tom Vilsack announced that the Xerces Society for Invertebrate Conservation, along with collaborating bee researchers, will receive a \$997,815 USDA Natural Resource Conservation Service Conservation Innovation Grant to improve pollinator habitat on farms and ranches across the US.

Through this project the researchers and conservationists hope to answer questions such as how to best manage wildflower meadows on the edge of farms as long term pollinator habitat, how to control weeds in such pollinator meadows using organic techniques, and how to quantify the effectiveness of various types of flowers in supporting crop-pollinating wild bees and honey bees. Another part of the project will work with native plant nurseries to mass-produce wildflower seed for plants with high pollen and nectar value that are not currently available among the nursery industry.

OK, the above sounds pretty idealistic, but beekeepers can certainly encourage these sorts of efforts to increase pollinator habitat on agricultural lands. Europe has a leg up on us in this direction, and can serve as an example [11]. Many landowners are willing to manage their lands for the benefit of wildlife, including pollinators. There is currently great support for such efforts across the political spectrum; beekeepers should certainly get on board the bandwagon!

Ag Exposure and CCD Conclusion

Colonies in agricultural lands often do not fare as well as those in favorable natural settings. It is not yet clear how much of the problem is due to pesticides or other factors, but the lack of diverse nutritional sources is a prime suspect.

Small-scale beekeepers may have thriving hives in agricultural areas in which large-scale beekeepers report problems. This observation suggests that hobbyists may have better luck in finding good apiary locations, perhaps since they don't need to unload truckloads of hives.

Agricultural exposure does not fulfill Koch's postulates as being the cause of CCD, but may well be a contributory factor in colony mortality and collapse.

To be continued...dare I broach the subject of GMO's?

ACKNOWLEDGEMENTS

As always, I am immensely indebted to my partner in research, Peter Loring Borst. I wish to thank the hardworking members of our national associations (the National Honey Bee Advisory Board and the AHPA/ ABF/EPA beekeeper pollinator protection work group members) who are representing beekeepers' interests in Washington and at the state level. Darren Cox, Jeff Anderson, Dave Mendes, Steven Coy, and Rick Smith have been especially generous with their time in explaining the politics to me.

REFERENCES

http://www.driftwatch.org/

[2] http://www.epa.gov/opp00001/enforcement/monitoring.htm
[3] Drummund, F, et al (2012) The First Two Years of the Stationary Hive Project: Abiotic Site Effects. http://www.extension.org/pages/63773/ the-first-two-years-of-the-stationary-hive-project:-abiotic-site-effects

[4] vanEngelsdorp, D, et al (2011) A survey of managed honey bee colony losses in the USA, fall 2009 to winter 2010. *Journal of* Apicultural Research 50(1): 1-10.

[5] Chauzat, M-P, et al (2009) Influence of pesticide residues on honey bee (Hymenoptera: Apidae) colony health in France. Environ. Entomol. 38(3): 514-523

[6] Höcherl, N, et al (2012) Evaluation of the nutritive value of maize for honey bees. *Journal of Insect Physiology* 58(2): 278–285.

[7] Thompson, HM (2012) Interaction between pesticides and other factors in effects on bees. http://www.efsa.europa.eu/en/supporting/ doc/340e.pdf

http://scientificbeekeeping.com/sick-bees-part-17-nosema-the-[8] smoldering-epidemic/

http://usda01.library.cornell.edu/usda/current/Hone/Hone-03-30-2012.pdf

[10] http://www.fsa.usda.gov/Internet/FSA File/crpenrolloct11dot.pdf [11] Wratten, SD, et al (2012) Pollinator habitat enhancement: Benefits to other ecosystem services. Agriculture, Ecosystems & Environment 159: 112–122. Good bibliography of research papers on the subject.

These articles were originally published in the American Bee Journal. All of Randy's bee articles may be found at: www. Scientificbeekeeping.com. If you find these articles of use. Randy appreciates donations to fund his efforts.



'FLYING DOCTOR' BEES

Australian researchers are considering the role 'flying doctor' bees can play in combating cherry brown rot. What if you could outsource some of your spraying to bees? It might sound a bit far-fetched, but it's already happening in strawberry crops in Europe, and now Australian researchers are looking at whether it could be used to target brown rot in cherry trees.

The practice is known as ectomovectoring and is being studied by researcher Katja Horgendorn, from Adelaide University's School of Agriculture, Food and Wine. But she prefers to call it 'flying doctor' bees. "The beekeeper fits a dispenser in front of the hive, the grower gets a mix with beneficial spores in it, and those beneficial spores need to go to the flowers," she said. "Normally growers spray for it, but you can use bees to do that. You sprinkle the spores in the dispenser and the bees will then pick them up between their hairs and bring them to the flowers."

Dr Horgendorn says growers have to spray twice a year for cherry brown rot, which can enter during the flowering stage. She says the concept has been working successfully in Europe with strawberries. "It was just as effective as spraying, but here we don't yet because this is the first year we're doing it. We're assessing whether the bees deliver the spores and to what level."

There are several benefits to using bees to tackle cherry brown rot rather than using sprays, Dr Horgendorn says. "Spraying means driving heavy equipment through the orchard, which causes soil compaction, and of course [it requires] fuel and a lot of time, because spraying is quite labour intensive.

"In this case, you just walk up to the hive every morning and sprinkle some of the powder. "One of the advantages is when you spray you'll miss some flowers that aren't open yet, and most people don't work on Sundays either, so bees work every day so they won't miss any flowers."

Dr Horgendorn says the fungus used to counter cherry brown rot is already in the soil and will have no adverse affects on the tree. She recently presented the idea to growers at a field day in the Adelaide Hills and producers are very interested in the project.

"One of the benefits that came up from the industry was they have very steep, slippery slopes. They are an occupational health and safety issue really, but bees will just deliver on them regardless. "I'm running a trial on 10 orchards. I had no problem getting 10 participants for the project at all."

APIARY COTS

Manufacturers and Suppliers of Beekeeping equipment

TA & FH Bradford

PO Box 5, Mt Nebo Road, Mt Nebo QLD 4520

Buy Australian Made

Hoop Pine Woodware - Frames - Supers Queen Cages etc

Or your special requirements

Phone: 07 3289 8181 Fax: 07 3289 8231

THE HONEY BEE AND POLLINATION PROGRAM

Research & Development News

As foreshadowed in the previous newsletter, RIRDC is streamlining its management processes and moving to reduce administration costs. To increase efficiency the Honey Bee and Pollination Programs have been amalgamated to form the Honey Bee and Pollination Program and RIRDC will keep the Program's administration costs as low as possible.

Other measures the Program will adopt to minimise costs will be to favour fewer and larger projects, and not calling for projects every year (where enough suitable projects have been submitted in one year to use the budget for two years).

The members of the new committee, which is called the Honey Bee and Pollination Advisory Panel are:

Michael Hornitzky – Chair; Ben Hooper - Beekeeper, South Australia; James Kershaw - Beekeeper, New South Wales; Ben Brown – Almond Board of Australia; Angus Crawford – Apple & Pear Australia Ltd; Saul Cunningham – Pollination Researcher, CSIRO; Boris Baer – Bee Researcher, University of Western Australia; Greg Murdoch - Horticulture Australia Limited (HAL) representative; and Dave Alden – Senior Program Manager, RIRDC.

The members have been appointed for three years.

To accommodate the merger of the Honey Bee and Pollination Programs, a Five Year Plan has been developed which was published as a draft in July. The Five Year Plan draws heavily on the Honey Bee RD&E Plan 2012-2017 and the review of the Pollination 5-Year R&D Plan 2009-2014. The Plan has been prepared in consultation with HAL, the Australian Honey Bee Industry Council (AHBIC) and members of Honey Bee and Pollination Advisory Panel. It is available for download on the RIRDC website at https://rirdc.infoservices.com.au/items/14-057

www.rirdc.gov.au - Ph: 02 6271 4100 - E: rirdc@rirdc.gov.au

PROPOLIS WANTED

I am a researcher at UWS, Campbelltown and have recently started a project where we want to investigate the beneficial properties of propolis.

We are working in collaboration with a NSW based Complementary medicine company who is currently sourcing their propolis from China.

Long story short—we are therefore looking to replace the Chinese supplier of propolis with an Australian supplier given that the chemical properties (and hence the bioactivity) of the Australian propolis are similar or better.

To do this we need to get our hands on as many as possible raw propolis samples from local suppliers.

Please contact: Frank van der Kooy

Phone: (02) 4620 3136 or Mobile: 0410 911 636.



3-Pierre Mercader

Ph: £13 5474 \$292 Mobile: 0412.451.060 Erral composuetees.com.au

The Revolutionary BLUEBEES Brood Box Bottom Boards for 8 or 10 Frame Hives

If Made in Australia to Professional Beekeeper Standards √ Winter 2012 Bendigo Inventor Award for Agriculture and: Environment sustainability.

Producers

Supresses humidity and deprives the Small Hive Beetle (SHB) breeding conditions in the hive.

The hive environment's sustainability is preserved because it:

- · Facilitates dry and clean hives with strong and healthy bees
- . Empowers bees to hunt and eject interloping pests such as: SHB, Wax Moth and Varroa (not yet in Australia), and debris from the hive
- Curails chemical use honey remains pure and natural

Prevention is Better Than Care'

Premise Medically to Names Seri (Innex & Roy ADS 70 to 1472 felt

Steven and Jodie Goldsworthy 38 - 40 Hammersley Road Corowa NSW 2646

Phone: (02) 6033 2322 Mobile: 0419 559 242

info@beechworthhoney.com.au



AIR UP, AIR DOWN On the Run from the Cab AIR CTI Saves You Time, Saves You Money

Truck go up impossible sand dunes, and tow a trailer. Its just remarkable the difference AIR CTI makes

Ian Oakley-Desert Country

AIR CTI is excellent in sand, is great for traction, and smooths out the rough bits on rocky roads. Also doesn't chop up the tracks in National Parks. And No Loss of Bees whilst Transporting.

Allen Cotton-South Australia Extra Traction Opens up rougher tracks Bees Less Stressed Smoother Ride

Aussie Tough for Aussie Conditions





AIR CTI www.aireti.com PH: 03 5127 6128

Sales: 0437 517 423

CANADIAN BEEKEEPERS CLAIM PESTICIDE DAMAGE

Courtesy "Catch the Buzz"

Canadian beekeepers have launched a class action lawsuit against the manufacturers of popular crop pesticides for more than C\$400 million (US\$367.3 million) in damages, claiming the pesticides are responsible for the deaths of bee colonies.

The Ontario Beekeepers' Association, which is not directly involved in the suit, says in a statement the class action has been filed by law firm Siskinds LLP to recover damages suffered by beekeepers due to the widespread use of neonicotinoid pesticides.

If successful, beekeepers who join the suit could recover losses and damages from as far back as 2006.

The statement of claim alleges that Bayer CropScience Inc. and Syngenta Canada Inc. and their parent companies were negligent in their manufacture, sale and distribution of neonicotinoids in Ontario that caused beekeepers to suffer significant losses and damage.

The London, Ontario-based law firm says in a statement it is seeking in excess of C\$400 million in damages over the use of neonicotinoid pesticides, specifically those containing imidacloprid, clothianidin and thiomethoxam, designed, developed, marketed and produced by Bayer and Syngenta.

The losses include killed or weakened bees; non-productive queens and bee colonies; breeding stock; contaminated wax, combs and hives; reduced honey production and lost profits; costs incurred to meet honey and pollination contracts; and increased labour, equipment and supply expenses.

The class action seeks to recover these losses as well as C\$50 million (US\$45.9 million) in punitive damages.

"In the circumstances of this case, the defendants applied callous and reckless disregard for the property of the plaintiffs and class members," the claim states.

The OBA says beekeepers or companies in the business of honey production, queen bee rearing and/or pollination services who are interested in participating should contact Siskinds directly.

"While the OBA is not directly involved in this action, we support any effort that could help beekeepers recover losses caused by the overuse of neonicotinoids," OBA vice president Tibor Szabo says. "This action puts the blame where it belongs – on the pesticide manufacturers."

Neonicotinoid pesticides are applied to corn, soybean and canola seeds, among others, planted in Canada. The pesticides are designed to travel throughout the plant and attack the nervous systems of insects that come into contact with the roots, stems, leaves, flowers, fruit, pollen and nectar of the plant.

The Canadian Broadcasting Corp. reports the pesticides were also found in 70% of dead bees tested by Health Canada in 2013.

"This class action relates to the impact of these pesticides on the bee population and, consequently, on beekeepers who produce honey, provide pollination services and raise queen bees essential to the continued production of fruits and vegetables," it says.

The statement of claim alleges as a result of neonicotinoid use queens, breeding stock and colonies were damaged or died; beeswax, honeycombs and hives were contaminated; honey production decreased; and beekeepers lost profits, and incurred unrecoverable costs.

Siskinds partner Paula Lombardi says honeybees are of critical importance to the food chain:

"Without a vibrant and healthy bee population, so many of the foods we enjoy will simply no longer grow," she says. "We cannot afford to take the bees' important work for granted, nor can we ignore threats to their survival as a species."

The suit specifically names two big Ontario beekeeping operators, Sun Parlor and Munro Honey, as members of the suit.

Sun Parlor is a family owned and operated business that has been in existence for about 89 years and is one of the largest honey producers and hive product distributors in Ontario.

The statement of claim says that between 2006 and 2013, Sun Parlor incurred losses of \$2,112,200 (US\$1,939,728) from lost bee hives and lost honey production.

Munro Honey is a family owned business that has been in operation for 100 years. It is also one of Ontario's largest producers and distributors of honey and hive products and is Ontario's first commercial meadery, producing international award-winning honey wines.

Between 2006 and 2013, its losses are put at \$3,001,712.50 (US\$ 2,756,742.25).



Prices include GST:

1 - 10	\$24.00 each
11 - 49	\$21.50 each
50 - 100	\$19.50 each
OVER 100 (in total)	\$19.00 each
200 and over - Discounts apply	

Package bees available September to March

Terms: Payment prior to delivery

FOR ORDERS OR ENQUIRIES CONTACT: WARREN & ROSE TAYLOR / ROWANA

1800 024 432 FREE CALL *from anywhere in Australia* (Call from anywhere in Australia for the price of a local call)

IF UNANSWERED: (02) 6368 3788

Or write: 58 Marshalls Lane, Blayney, NSW 2799 Email: aqbe@bigpond.com.au / Fax: 02 6368 3799

HUNTER VALLEY APIARIES

Col & Linda Wilson PO Box 180, KURRI KURRI NSW 2327 Ph/Fax: (02) 4930 4950

FOUNDATION

PLASTIC

The Best Plastic Foundation
You Can Buy
Dominates Sales in
USA and CANADA
Sizes, FD, WSP, Manly, Ideal

Full PLASTIC FRAMES available

WAX

We can mill to the thickness you require Have your own wax milled or exchanged for foundation in stock

DRONE COMB FOUNDATION available

Wax bought or exchanged for bee goods

FRAMES Mahurangi NZ Premium Quality

For Plastic and Wax Foundation

BEE BOXES

WEATHERTEX Lids & Bottom Boards

QUEEN EXCLUDERS
FRAME FEEDERS
QUEEN CELLS

AFB

TEST KITS

Quick and easy to use Results in just 3 minutes

SWARM ATTRACTANTS

APITHOR for Small Hive Beetle

NOZEVIT

HIVES CAN BE TREATED FOR LESS THAN \$1

Healthy bee colonies build brood faster in the Spring, and will winter extremely well when their intestinal integrity is intact. By using all natural Nozevit as a food supplement for intestinal cleansing for internal ailments.

i.e nosema

For All Your BEEKEEPING SUPPLIES

Email: honeybee100@skymesh.com.au

Phone: 02 4930 4950



Laurie and Paula Dewar

T/as DEWAR APIARIES

2157 Lake Moogerah Rd Kalbar Q 4309 Phone 07 54635633

Email: <u>beebuild@optusnet.com.au</u> <u>dewarqueens@optusnet.com.au</u>



BEE BUILD: Complete pollen replacement

Bee Build has been formulated to meet the profile of the near perfect pollen chemical composition. Including 10 Amino Acids essential for bees. Protein 60%

 10 Kg Bags
 20 kg Bags
 25kg Bags

 (Post/collection)
 (For post only)
 (Road Freight or Collection)

 \$80.00 * ea
 \$154.00 * ea
 1-9 Bags \$192.50 * ea (\$7.70kg)

 (\$7.70kg)
 10+ Bags \$180.00 * ea (\$7.20kg)

Bulk/Pallet (25kg bags) 32 ba

32 bags \$165.00 * ea (\$6.60kg)

ALSO AVAILABLE WITH POLLEN ADDED

Add \$1.10* per kg to the Bee Build pricing.

Please note: postage / freight additional. GST Included

BEE BUILD PROTEIN SAUSAGES

Our new product is our Bee Build with Pollen blended in a sugar syrup and formed into sausage casings. This product has been developed after a great deal of consultation with beekeepers. We recommend that you do not overfeed as it is a moist product and any surplus left after 3-4 days will be an issue if Small Hive Beetle is not under control.

Bee Build Protein Sausages come in 500gm and 1 kg packs.

Also available at good Beekeeping Supply Businesses

500 gms \$12.00* ea

1 kg \$23.00* ea

Discounts apply for bulk orders



Queen Bees:

Up to 10 \$ 24.00* Up to 50 \$ 18.00* Over 50 \$ 17.00*

Queen Cells: \$ 5.00*ea

Bee BOOST:

A Probiotic especially formulated for honeybees

(When bees require a boost e.g. nosema)
1-2 teaspoons per hive depending on strength

\$ 44.00* (500gm)

Goldfields Honey Bee & Pollination Service Pty Ltd



2319 Mitchell Hwy, Vittoria N.S.W 2799

Ph: 02 63687160 Fax: 02 63687164

Email: goldfieldshoney@bigpond.com

QUEEN BEES

Available November to March



1 to 10 - \$23.50

11 to 49 - \$21.00

50 to 100 - \$18.00

100 + - \$16.50



Includes GST | Postage additional

* Increased quantities of queens available this season

MAKING HARD WORK EASIER













Healy Group - Manufacturers & Distributors Tel (02) 9525 5522 - info@healygroup.com.au www.healygroup.com.au (HEALYGROUP)

Scales and Labels



■ Laboratory Balances: 0.001g - 3kg
■ Create brand awareness

■ Bench Scales: 3kg - 30kg

■ Platform Scales: 30kg - 600kg

■ Pallet Scales: 600kg - 6,000kg

■ Trade Approved Scales

■ Label Printing Scales



- Cost-effective labels
- Create & print your own labels
- Ingredients & nutritional information
- Leading supplier of labels Roll Labels, Sheet Labels, Gloss Labels, Matt Labels, Paper Labels or Poly Labels

■ You name it, we make it!!









www.wedderburn.com.au grantw@wedderburn.com.au 29 Branches Australia and New Zealand wide Call Grant or Adam (02) 4954 6411 for your nearest branch





BEEKEEPING SUPPLIES ABN 27 009 052 155

72 Munibung Rd Cardiff 2285 NSW Australia

Suppliers of Beekeeping and **Honey Processing Equipment**

Boxes, Frames and all Woodware Excluders - Welded Wire and Plastic Stainless Steel Extractors Honey Tanks and Pumps

Weathertex - Covers and Bottom Boards, Special sizes available

Veils, Gloves, Overalls, Bee Suits and Jackets, Hive Tools, Brushes Hats, Smokers, Knives, Pails, Jars etc. all your beekeeping needs

We have a very extensive selection of books on all aspects of beekeeping

We buy and exchange wax for foundation. Good prices paid

MAIL ORDER IS OUR SPECIALITY - PHONE FOR A PRICE LIST Ph: (02) 4956 6166 Fax: (02) 4956 6399

TIRED OF REPLACING PLASTIC TRAPS?

Silver Bullet

BEETLE TRAPS

FOR SMALL HIVE BEETLES

BUILT TO LAST

Recommended for use with Diatomaceous earth

- Strong watertight folded aluminium construction.
 Secure spill resistant sliding lid sheds moisture keeping earth dry and working for extended periods.
 - · Easily cleaned and reused again and again.



For all enquiries contact John, Kerry and Sam Hawkins TEL: 02 65671598 EMAIL: billybyang@bigpond.com.au

CHEMICAL FREE

AUSTRALIAN MADE

Honey Containers

Col Baker & Associates ABN: 68 768 503 674



Clear plastic pails with tamper evident lid Sizes available: 3kg, 1kg (pails) & 500g (jar)

3kg pail - \$1.35 Ea. (Box of 300) (Box of 150)

1 kg pail - \$0. 81c Ea.(Box of 256) 500g jar - \$0.40c Ea. (Box of 200)

All prices include GST

Prices are ex Lismore - Northern NSW

Contact: Col Baker - 0409 580 298 Email: ck.baker@bigpond.com



It doesn't take a genius to tell you about the dangers of AFB & EFB

American Foulbrood and European Foulbrood are two devastating diseases that cause significant issues for beekeepers.

Steritech provides Gamma Irradiation to eliminate both American Foulbrood and European Foulbrood so that treated bee equipment can continue to be used.

Steritech continually works with the beekeeping industry to ensure the service we offer meets their needs.

Contact us to find out how our services can benefit you.

Steritech is a proud and long standing member of the NSWAA

NSW - JAMIE CRIGHTON National Business Development Manager Tel: 02 8785 4400

Email: jcrighton@steritech.com.au

VIC - RAYMOND BRYDEN Sales Executive - Victoria Tel: 03 8726 5566

Email: rbryden@steritech.com.au

QLD - GLENN ROBERTSON General Manager - QueenslandTel: 07 3293 1566

Email: grobertson@steritech.com.au



AUSTRALIAN HONEY BEE INDUSTRY COUNCIL

Executive Director: Trevor Weatherhead Phone: 07 5467 2265

Mailing Address: PO Box 4253 Raceview QLD 4305 Email: ahbic@honeybee.org.au FOR THE LATEST NEWS GO TO THE AHBIC WEBSITE: www.honeybee.org.au

AHBIC NEWS

Excerpts - September 2014

LATEST ON HONEY LEVY REFORM AND INCREASE

There are meetings coming up at the end of October to look at the draft copies of the National Biosecurity Plan and the Code of Practice. Looking at and examining these drafts are the member bodies of AHBIC and also the National Biosecurity Committee nominees.

There is planned to be a final meeting to look at these documents in April next year. The Business Case is still with the Department and the period for any objections finished on 30 September. To date AHBIC has received no objections.

All going to plan things should be in place by 1 July 2015.

SENATE INQUIRY INTO LEVY THE SYSTEM

An Inquiry by the Senate Standing Committee on Rural Affairs and Transport has been announced.

Details can be found at:

http://www.aph.gov.au/Parliamentary Business/Committees/ Senate/Rural_and_Regional_Affairs_and_Transport/ Agriculture_levies

AHBIC will be putting in a submission. If you have any points that you wish put forward please let me know.

SMALL HIVE BEETLE IN ITALY

On September 11 2014, the Italian National Reference Centre for beekeeping confirmed the first detection of the presence of Small hive beetle (SHB) in South West Italy, in the port city of Gioia Tauro. The samples were taken from a bait trap belonging to the University of Gioia Tauro. Since its discovery, urgent measures are underway to measure the extent of the outbreak, complete tracings (sales and movements of bees from the area) and eradicate and control its spread in line with EU legislation and safeguards. Measures include that in all apiaries where the beetle is found colonies are destroyed and all soil surrounding the land is ploughed in and treated with a soil drench. It will be interesting to see the reaction within the EU to this find. Currently the eastern States of Australia are not able to send queen bees or packages to the EU because of their requirements on small hive beetle. AHBIC has been in contact with Canberra on this matter.

DISALLOWANCE MOTION

News has come through that the disallowance motion proposed by Senator Leyonhjelm has been withdrawn for the Senate. This is good news.

The upshot of this discussion is that we now have the Senate Inquiry into the levy system which AHBIC is preparing a submission for.

BIOSECURITY FARMER OF THE YEAR

Unfortunately it was not third time lucky for Lindsay Bourke. Lindsay is to be congratulated for making the finals for three (3) years in a row. Will Lindsay submit for a fourth time?

DRONE SEMEN IMPORTATION

There was a teleconference recently to discuss the Import Risk Analysis (IRA) for drone bee semen.

This has been on the books now since 2002 and needs to be progressed. AHBIC is collating some data to send in to have this IRA reactivated.

Drone bee semen importation is a crucial part of making sure that Australia tries to develop stock that is "varroa resistant"

before varroa gets here. If we do not, then the agricultural and horticultural industries that rely on honey bees for pollination will be the big losers. Recent studies show the high reliance of these industries on feral bees for pollination. Those feral bees will disappear when varroa gets here.

TURKISH HONEY

It has been reported to me that there are now two (2) new "honey" products from Turkey out there in the market place. One is Garden Honey the other is Forrest Honey.

For Garden Honey the ingredients on the label says "Glucose (60%), Fructose, Honey, Honey Flavour, Emulsifier (471), Colour (102)". A complaint has been submitted to the ACCC as AHBIC would contend this is in contravention of the Australia New Zealand Food Standards Code 2.8.2 which has a definition for honey which this product does not conform to. Honey is a prescribed name.

AHBIC has also written to the Food Import Section at the Department of Agriculture complaining that this product has obviously either not been checked or was overlooked. AHBIC believes it has mounted a strong enough case for every product from Turkey to be inspected not just the 5% as honey is currently inspected.

Photos of the label for Forrest Honey have arrived and a further complaint has been lodged.

Thanks to those beekeepers who found these products and let me know. It is crucial that everyone keeps an eye out for these types of products and lets me know.

ANNUAL MEETINGS

AHBIC will be holding its AGM on Saturday 4 July 2015 at the Penrith Panthers Leagues Club at Penrith. This will follow the NSWAA Conference. More details on the AHBIC AGM later.

NEW BEE APP

CropLife Australia has developed a new bee app called BeeConnected. It will serve beekeepers by improving the communication between beekeepers, farmers and spray applicators. The idea of the app is to be able to find out where possible spraying could take place and thus be able to protect your bees.

This will only work if beekeepers are prepared to go online and put in details. If you find any glitches please let CropLife Australia know. Below is the press release.

B-QUAL Industry Owned Quality Assurance



Train at home

- Audit every two years*
- Group Accreditation
- Practical quality assurance designed by beekeepers for beekeepers
- Industry trained auditors
- Free assistance hotline
- International recognition Packer premiums*
- **Conditions Apply**

For all enquiries call 1800 630 890 or go to www.bqual.com.au

CLASSIFIEDS

FOR SALE

Billett Ezyloader 200MH Earlier model All Electric Good working order.

Ph: 0438 200 038

WANTED

10 frame FD honey supers preferably with frames without lifting cleats.

Ph: 0438 200 038

If it's stainless, we can make it!

Horizontal Extractors 36 - 192 frame

Wax Melters

Capping Spinners

Reducers & Conveyors

Large Radial Extractors

Centrifuge - Heat Exchange

We also custom build to your requirments

Prestige Stainless

PO Box 187, 1994 Finley Rd, TONGALA VIC 3621 Phone: 03 5859 1492 Fax 03 5859 1495 Mob 0407 547 346 www.prestigestainless.com.au

FARM/COMMERCIAL INSURANCE

Seeking another option for your insurance renewal Want to speak to someone who knows and understands the rural way of life

Has 40 years General Insurance knowledge that covers all aspects of General & Rural Insurance Provides personal service

If **YES** is the answer

Please call John Leask on 02 4821 8786 or 0428 875 683

Email enquiries to: qbninsurance@westnet.com.au QBN Insurance Services/NAS Insurance Brokers

BEEKEEPING JOURNALS

AMERICAN BEE JOURNAL

For beekeeping information read the American Bee Journal Editorial emphasis on practical-down-to-earth material, including questions and answers.

1 year US\$50.00, 2 years US\$96.00, 3 years US\$138.00 Digital Edition price US\$16.00

Please inquire for airmail - VISA, MasterCard accepted For more information or free sample copy, write to: 51 South 2nd Street, Hamilton, Illinois, 62341

Tel: (217) 847 3324 Fax: (217) 847 3660 Email: abj@dadant.com

Website: www.americanbeejournal.com
The American Bee Journal is the largest monthly
apiculture magazine in the world.

BEE CULTURE

A. I. Root Co, 623 West Liberty Street

Medina OH 44256 USA Attn: Kim Flottum
Published monthly - Subscription rates:
international - 1 year US\$38.50 - 2 year US\$75.00
(Discount for beekeeping association members)
international - 1 year US\$34.00 - 2 year US\$66.00

Digital Edition AUS\$15.00

No Postage, No Delay, No Surprises
Go to www.BeeCulture.com for
sample and subscription information.

AUSTRALIAN BEE JOURNAL

The Journal of the Victorian Apiarists' Association Inc.

Published monthly

Annual subscription: \$78 Australia / \$120 overseas

For more information and a free sample copy

Contact: The Editor PO Box 42, Newstead VIC 3462

Email: abjeditors@yahoo.com

THE BUZZ!

South Australian Apiarists' Association Newsletter
Published 5 times annually
Included in annual membership subscription to SAAA
(minimum subs \$88.00)
For further information please contact:
The Secretary, SAAA
1 Parma Street, Pt. Broughton SA 5522
Phone: (08) 8635 2257 Email: secretary@saaa.org.au

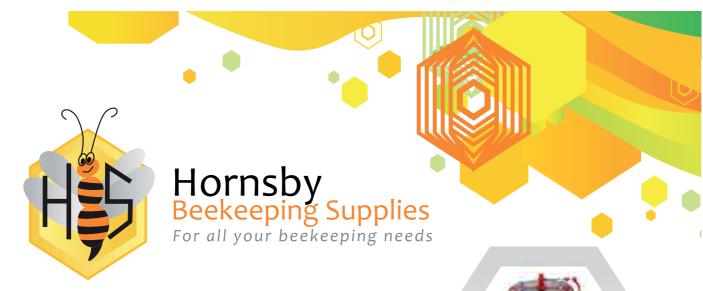
THE AMATEUR BEEKEEPER

Bi-monthly newsletter for THE AMATEUR BEEKEEPERS' ASSOCIATION INC. Editor: Robyn Alderton Ph: 0401 897 730 Email: robyn.alderton@live.com.au

THE NEW ZEALAND BEEKEEPER

Magazine of the National Beekeepers' Association of New Zealand - www.nba.org.nz
Subscriptions: Jessica Williams
PO Box 10792 Wellington 6143 New Zealand
Phone: 04 471 6254 Fax: 04 499 0876
Email: secretary@nba.org.nz
Advertising: Leonie Young

Ph: 03 455 4486 Fax: 03 455 7286 Email: sales@southcityprint.co.nz



- ••• Assembled boxes and frames
- ••• Beetek plastic frames and top feeders*
- ••• Beetle traps
- ••• Books
- ••• Boxes and frames (Alliance)
- ••• Extractors (electric and manual)
- ••• Foundation (plastic and wax)
- ••• Hive Tools (10" and 12")
- Honey tanks and strainers
- Jenter rearing kits*
- ••• Sherriff protective clothing*
- ••• Smokers (Italian and Kelley)
- ••• Wire and plastic queen excluders etc

Beetek *longer lasting* Full Depth Frames and Foundation *sheets!!**

- ••• Food grade resin
- ••• Highest quality manufacture
- ••• Strength and reliability
- 20 years of innovation and service to the industry
- ••• The choice of professional beekeepers

BULK PRICES AVAILABLE!

* Exclusive rights of import in Australia



HORNSBY BRANCH

63-A Hunter Lane, Hornsby, NSW 2077 Tel: (02) 9477 5569, Fax: (02) 9477 7494

Trading hours

Mon – Fri 9am 'til 5pm, Sat 9am 'til 4pm

MT. DRUITT BRANCH

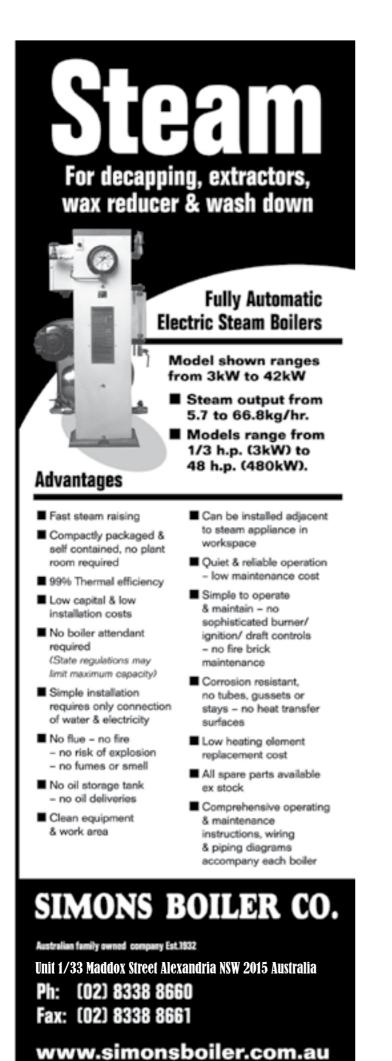
Unit 11, 71 Kurrajong Ave, Mt. Druitt, NSW 2770 Tel: (02) 9625 5424, Fax: (02) 9625 7589

Trading hours

Mon – Fri 10am 'til 6pm, Sat 10am 'til 5pm

You can also shop online at

www.hornsby-beekeeping.com



ADVERTISERS

AIR CTI	36
Apiary Cots (TA & FH Bradford)	35
Aussie Hives	26
Australian Queen Bee Exporters	37
Australian Queen Bee Line	26
Avant Equipment	7
Bee Engineering	6
Beechworth Honey Pty Ltd	36
BeePlas Australia	27
Bindaree Bee Supplies	2
Blue Bees Producers	36
B-QUAL Australia Pty Ltd	43
Browns Bees Australia	13
Burnett Bee Keeping Supplies	13
Capilano Honey Ltd	17
Col Baker - Honey Containers	42
Cottesbrook Honey	30
Covey Queens	2
Dalrymple View Apiary Supplies	34
Denmar Apiaries	2
Dewar Apiaries/Bee Build	39
Donkey Beekeeper	16
Farm/Commercial Insurance	44
Goldfields Queen Bees	40
Healy Group	40
Honey Down Under	2
Hornsby Beekeeping Supplies	45
Hummerbee Forklifts	9
Hunter Valley Apiaries	38
Hydes Creek Woodworks	10
John L Guilfoyle Pty Ltd	22
JZs BZs Queen Cages	30
Kangaroo Island Queen Bees	18
Learn About Beekeeping	23
NUPLAS - Plastic Hives	24/25
OAMPS Insurance Brokers	19
Penders Beekeeping Supplies	41
Prestige Stainless	44
Propolis WANTED	35
Redpath's Beekeeping Supplies	19
SA Beekeeping Supplies	10
SCHÜTZ DSL	48
Silver Bullet Beetle Traps	42
Simons Boiler Co	46
Spitwater	20
Steritech Pty Ltd	42
Superbee	42 47
Valley Industries Ltd	13
Wedderburn	41
www.candlemaking.com.au	6

As one of Australia's largest packers of pure Australian honey, Superbee Honey Factory is **LOOKING FOR SUPPLIERS** to support our increasing demand for Australian Honey



CONTACT US TO REQUEST A QUOTE OR BOOK A DELIVERY T. 02 6851 1155 KARLA HUDSON M. 0421 620 419 - E. karla@superbee.com.au BEN SMITH M. 0427 524 151 - E. ben@superbee.com.au

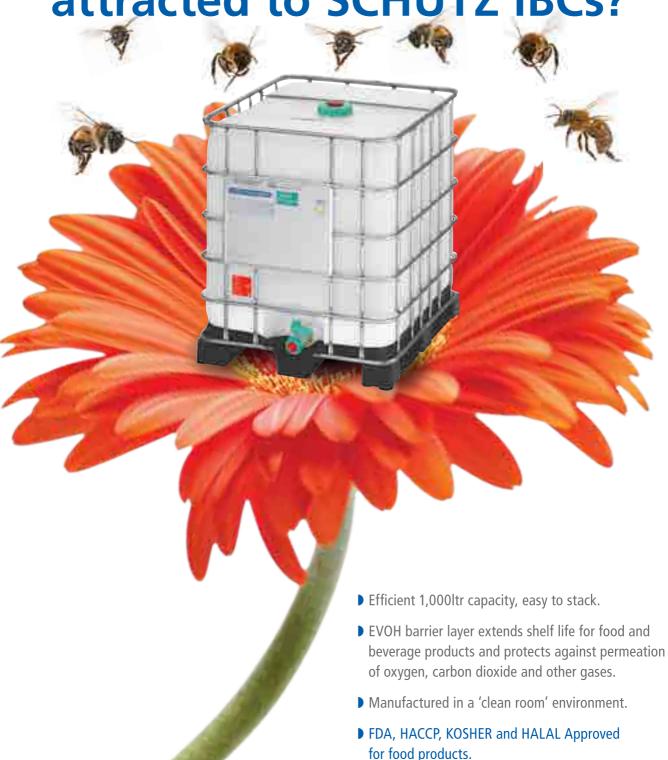
WE HAVE NEW IBC'S FOR SALE TO OUR SUPPLIERS AT \$325 (INCL).

We can deduct the price directly from your honey delivery,
so you can take them home when you drop off the honey!

PAYMENT IN 30 DAYS OR LESS



Why is the honey industry attracted to SCHÜTZ IBCs?



SCHÜTZ DSL (Australia) Pty Ltd