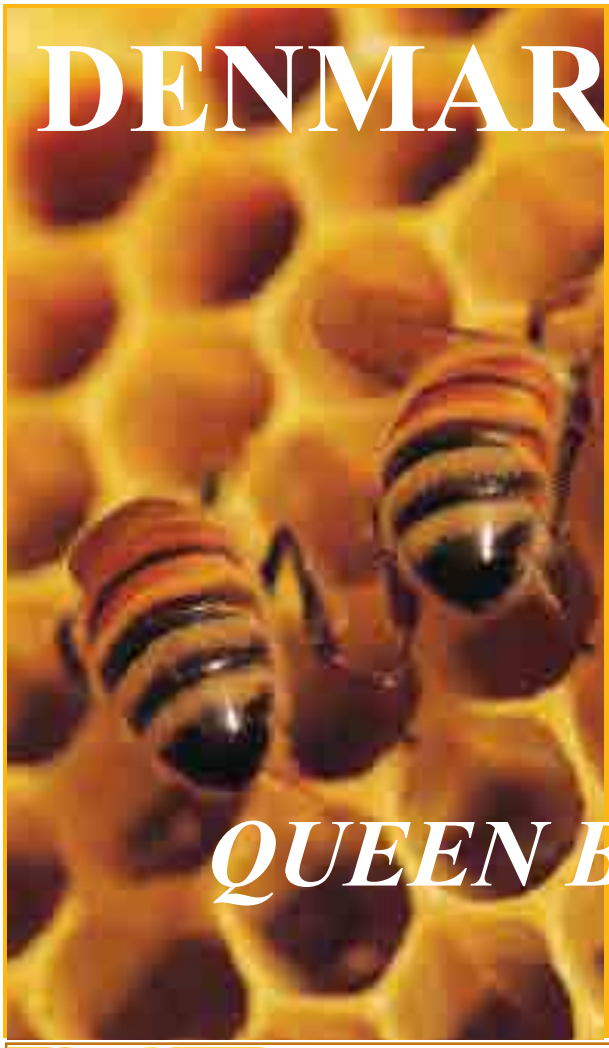
AUSTRALIA'S

HONEYBEE NEWS

"The Voice of the Beekeeper"

Volume 7 Number 4
July-August 2014

NSW Apiarists' Association: www.nswaa.com.au



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COVER: Honeybee pollinating Almond flower PHOTO: Stephen Targett

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PRESIDENT'S REPORT

As we are moving towards spring many of our members would usually be moving their bees onto canola to build them up. However, I would like to remind everyone that we have to be even more careful than usual about spray events at the moment. Unusually warm and humid weather has led to a higher than usual number of aphids in some canola growing areas. As these aphids transmit a virus that infects canola and leads to reduced yields, farmers are being advised to spray for aphids. As well they are using insecticide that, by definition, will kill bees if they come in contact with the chemicals either directly on the plants or via spray drift.

Make sure any farmers know you are in their area, and if any spray incidents do result in bee losses for you – contact the EPA immediately.

SENATE INQUIRY

On July 16 the report from the Senate Inquiry into the *Future of the beekeeping and pollination service industries in Australia* was released. Although the recommendations from this report would be helpful for industry if they were enacted, the report is disappointing in its general approach and "stance", which does not argue strongly for significant government support, particularly in an actual monetary sense to assist with crucial issues such as biosecurity. The Executive and I will be discussing this at our upcoming meeting later in August.

INDUSTRY REPRESENTATION

Neil Bingley and I attended the VAA, FCAAA and AHBIC conferences recently. The motion, which was carried at the NSWAA Conference in Narrabri this year, to have the FCAAA wound up and its contingency funds transferred to AHBIC (and managed by the current producer member bodies and operated under current guidelines), has now been passed nationally.

The Best Management Practice for the Transportation of Open Entrance Beehives was passed unopposed. I hope that all beekeepers will follow this guide when transporting bees, and thereby minimise the significant reputational risks to our industry and the safety risks to public that are caused by the opportunity for bees to leave their hives at truck stops and the like.

LEVY REFORM

All of the 2014 State Conferences have been held and the votes have all been counted – the Australian beekeeping industry has voted "yes" to the proposed levy reform. Now the Industry Working Group will be busy moving to the next stage of implementation. The extra funds from the increased levy will be timely, especially in light of the lacklustre support shown for industry as seen through the Senate Inquiry report. It's more obvious than ever that government is moving away from meaningful support, and that industry will have to do all it can to protect itself from the many serious threats we face.

BIOSECURITY IN NSW

On June 16, Councillor Lamorna Osborne and I went to the NSW Parliament House in Sydney to attend the State Government's forum to discuss the proposed Framework to Protect NSW. This new framework is intended to transform the way plant and animal pests, diseases, weeds and contaminants are managed in NSW. Feedback received during the forum is going to be used to direct the future development of the NSW Biosecurity Act.

Our presence there meant that we could make sure the beekeeping industry is on the State Government's radar during their preparation of new biosecurity legislation. We need to wait to see the outcome, but are hopeful that issues for our small but crucial industry will be considered in preparation of areas of the legislation that will affect us.

Finally this month, it was very sad to hear of the deaths of Ned Marriot, a former member, and Marla McIlvride, wife of the late Keith McIlvride. On behalf of the Executive and all of our members, I would like to offer sincere condolences to their family and friends.

Casey Cooper
State President

WHEEN BEE FOUNDATION NEWS

The Wheen Bee Foundation supports research to tackle the Small Hive Beetle

The Wheen Bee Foundation (WBF) is providing financial support for an exciting project looking at new ways of controlling the small hive beetle (SHB).

This serious pest probably entered Australia via the Richmond Air Force Base around the year 2000 – which is, coincidently, next to the Foundation's property. The beetle spread rapidly along the eastern seaboard, and it didn't take long for beekeepers to realise that they had yet another major pest to contend with.

As a consequence, Apithor was developed, tested and patented by the Rural Industries Research and Development Corporation (RIRDC) and NSW Department of Primary Industries (NSW DPI), after extensive work by NSW DPI entomologist Garry Levot. Apithor (which is based on the insecticide, Fipronil) is certainly effective in reduce the impact of SHB on apiaries. However, there is still a need for additional options to help manage this pest, particularly in looking for ways to control this pest without having to treat each individual hive – a big task (and expense) for many commercial beekeepers.

This is where Dr Diana Leemon, Dr Andrew Hayes and Steven Rice from Department of Agriculture, Fisheries and Forestry, Queensland, enter the picture. Preliminary findings by Diana's group, as well as overseas researchers, have been sufficiently promising to interest RIRDC and the Wheen Bee Foundation in investing in a new research project investigating a different approach to managing SHB. RIRDC is the principal funder of this project, and the WBF is topping up the grant with an extra $30,000 over three years.

Diana and her team will be working to develop an external trap for SHB, to assist beekeepers in monitoring, managing and controlling this apiary pest. The project will involve looking for substances that are attractive to the adult SHB. Those that pass muster will be tested in various combinations and concentrations to optimise the composition of a SHB lure.

Once the ideal recipe for a SHB attractant is established, fieldwork trials will test the effectiveness of an external small hive beetle trap containing the lure. The Wheen Bee Foundation will be providing material for the laboratory component of the project and a fieldwork site, as well as the top-up grant.

An important component of this work will be to ensure that the research findings make their way as quickly as possible to beekeepers, and this aim is strongly backed by the WBF.

The Foundation is proud to support this project because we recognise the impact of the SHB on many beekeeping operations. We see the huge value to industry of an effective trap that does not have to be placed in individual hives.

If you would like to help the Wheen Bee Foundation bolster its resources to fund more critical research projects on other pests and diseases, such as the Asian honey bee and varroa, then you can make a tax deductible donation to our R&D Trust Fund.

We are committed to supporting research and innovation to safeguard a viable and prosperous Australian beekeeping industry. What better way is there to guarantee food security?

For further details visit our website:
www.wheenbeefoundation.org.au

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REAPING THE BENEFITS OF HONEY BEE POLLINATION

The Hon. Barnaby Joyce MP
Minister for Agriculture
11 July 2014

MEDIA RELEASE

Minister for Agriculture, Barnaby Joyce, welcomed the development of a new website designed to help crop producers get the full benefit from honey bee pollination.

The *BeeAware* site is one of the tools Plant Health Australia has developed to protect honey bees through promoting the increased yield honey bee pollination provides crops.

"BeeAware lets farmers know what level of bee activity their crops need. For instance, hives are essential for almond production, while avocados need about four hives per hectare to achieve optimum results," Minister Joyce said.

"It's easy to take for granted pollination provided by honey bees because we currently have good numbers of healthy bees.

"One of our greatest protections is our farmers' observations. There are many countries now where pollination in horticulture is not the natural state of affairs.

"However, exotic pests pose a constant threat. Producers in countries overseas know that some pests of honey bees, such as the varroa mite, can reduce the honey bee population dramatically, and with it crop yields.

"In February I launched a statement of research and development priorities for the honeybee and cropping industries. It is good to see two of those priority themes reflected through the information on the website.

"For beekeepers, there is information about established and exotic bee pests and advice on how to keep honey bees healthy.

"For farmers, there is information on the many different crops that benefit from honeybee pollination, together with management techniques on how best to employ honeybee hives.

"The *BeeAware* website is an excellent example of what can be achieved through industry-government partnership."

Contributors to the project include the Australian Government, the honey bee industry and pollinator-reliant industries, through the Pollination Program, managed by the Rural Industries Research and Development Corporation and Horticulture Australia Limited.

Visit the *BeeAware* website at www.beeaware.org.au

Media contact: Brett Chant, 0477 744 614

BEEAWARE WEBSITE

How to boost crop yields with Honey Bee Pollination

A new website launched this week aims to help farmers boost productivity of crops they grow by optimising honey bee pollination. BeeAware is the latest honey bee biosecurity initiative developed by Plant Health Australia (PHA), the coordinator of the industry-government plant biosecurity partnership in Australia. The site was launched by PHA Chairman, Dr Tony Gregson, at the Victorian Apiarist Association Conference in Melbourne on 8 July.

According to Rod Turner, PHA's Risk Management Manager, BeeAware is a comprehensive resource with a dual purpose. It helps beekeepers to keep hives healthy and helps farmers to understand the yield benefits that pollination by honey bees can bring.

Some, but not all, crops depend on pollination to get good yields of fruit or seeds. "The importance of pollination is often poorly understood. Pollen can be moved by various means, including wind, birds and other insects. But honey bees are the most important insect pollinator for a range of cultivated agricultural and horticultural crops," said Mr Turner.

"At the BeeAware website, farmers can find out how to boost yields by placing hives of honey bees near production areas. Crops that see the largest benefits include almonds, cherries, avocados, melons blueberries, some vegetables, legumes, oilseeds, apples and macadamias."

Mr Turner said that wild bees pollinate a lot of crops at the moment, but should an exotic pest such as varroa mite gets through border controls and become established in Australia, their numbers would drop and with it, crop yields.

Mr Turner said: "Our strong biosecurity system has so far protected us from many of the pests of bees that have hit hives hard overseas. But pollination experts agree that if one of these pests should make into the country, farmers will increasingly need to use commercial honey bee pollination services."

Existing pests like small hive beetle, which are uncontrolled in wild bee populations, already reduce pollination of crops in some areas. The site includes information on how beekeepers can manage pests to keep apiaries healthy.

Minister for Agriculture, Barnaby Joyce, welcomed the new site saying that it supports two of the themes identified in a statement of research and development priorities for honey bee and cropping industries that he released in February.

The site received an enthusiastic response at the conference. It was developed by a partnership between the Australian Government, the honey bee industry and pollinator-reliant industries through the Pollination Program which is managed by the Rural Industries Research and Development Corporation and Horticulture Australia Limited.
Visit the BeeAware website at www.beeaware.org.au

For further information, an interview or hi-res image, contact media@phau.com.au

THE FROST REPORT

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FAT BEES HYGIENIC BEES

While editing and updating the NSW DPI Queen Bee Breeding Course, I am ever on the lookout for areas in need of expansion. How to select breeder queens and drone mothers is an area only touched upon in the current Course notes, yet is of utmost importance once a beekeeper has the knowledge, tools and passion to rear high-quality queens.

The ideal colony for most would be a good producer of both bees and honey, of gentle temperament, and resistant to diseases. While it's second-nature to identify top-ranking field colonies in regard to brood and honey production and gentleness, ranking colonies for disease resistance takes more effort. Obviously any colonies with foulbrood symptoms or chalkbrood (*Ascosphaera apis*) mummies littering the entrance are out of the running. The fastest way to seed disease resistance into one's stock is to test and select for hygienic behaviour.

BACKGROUND

Hygienic behaviour is a genetic trait of honey bees that confers resistance to chalkbrood and AFB (*Paenibacillus larvae*) as well as limited resistance to *Varroa* mites. Bees that carry the hygienic behaviour trait detect and remove dead and diseased brood before it reaches the infectious stage, thereby preventing the spread of disease within the colony.

This behaviour is heritable, transferred from parents, queen and drone, to their offspring. Breeding for hygienic behaviour in one's beekeeping operation can increase colony population by way of decreasing chalkbrood incidence, increase colony numbers by way of decreasing AFB incidence and provide an initial step toward *Varroa*-preparedness. The easiest way to start selecting for hygienic behaviour is to adopt a strict "no chalkbrood" policy when selecting breeder queens and drone mothers from amongst your top-performing colonies.

Every beekeeper has the ability to test for hygienic behaviour in their stock. As with most things a beekeeper does, success is won with the proper tools and know-how within the context of environmental conditions. In the case of hygienic testing one shouldn't test during a heavy nectar flow, periods of very high or low temperatures or prolonged drought. In a US context, queen breeders would ideally test potential breeder colonies once in the **s**pring and a second time toward the end of **s**ummer, going into fall. In either of these time frames there might be a light nectar flow on or the beekeeper might be supplementally feeding. What I'm trying to get at is, you shouldn't test for hygienic behaviour when environmental conditions tell you not to open colonies.

TESTING

The two methods of testing are known as the **freezer-killed brood test** or the **liquid nitrogen-killed brood test**. For either test a small portion of capped brood must be frozen then returned to the colony. 24 hours later the freeze-killed portion is checked to see how much dead brood the colony removed. The percentage of brood removed shows how hygienic that colony is. For example, if you freeze a section of brood with a solid pattern (no empty cells) and, after 24 hours in the colony, the workers removed 100% of the cappings and dead pupae, that colony would be considered 100% hygienic. If you want to select for hygienic behaviour this colony would be part of your breeder pool.

To follow are the materials and methods for performing the **liquid nitrogen-killed brood test** only. This is the preferred method as the **freezer-killed brood test** requires an additional day to freeze a 5cm x 6cm section of comb which must be cut out of a brood frame.

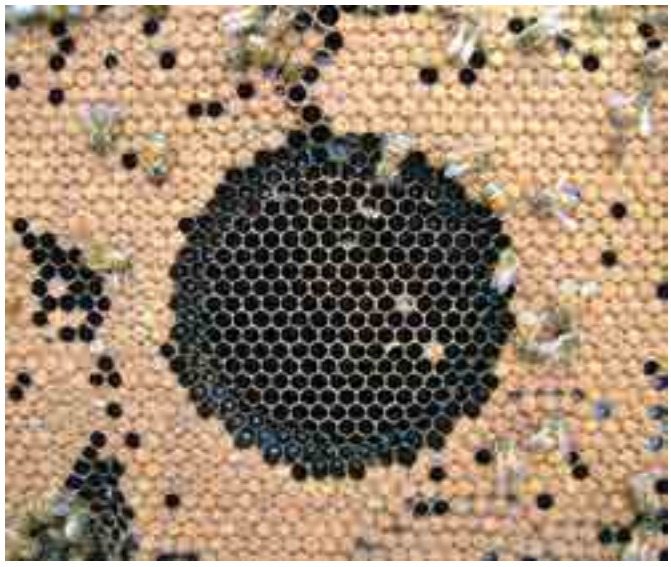

Figure 1. A hygienic colony 24 hours after liquid nitrogen-killed brood test. Photo: Katie Lee, Courtesy of University of Minnesota.

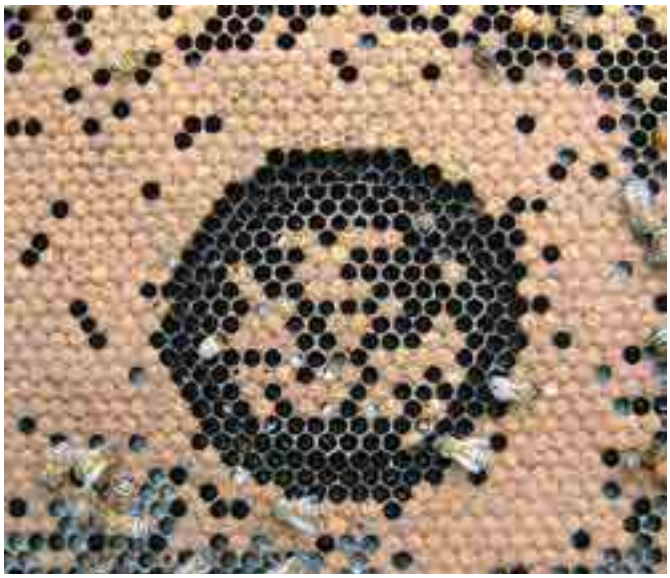

Figure 2. A non-hygienic colony 24 hours after liquid nitrogen-killed brood test. Photo: Katie Lee, Courtesy of University of Minnesota.

LIQUID NITROGEN-KILLED BROOD TEST

This is a 2 day test. All frame types can be tested in this way. The process requires the use of a liquid nitrogen tank, personal protective equipment (PPE) and proper transport and handling of liquid nitrogen which can cause cold burns similar to frostbite upon contact with skin and asphyxiation in unventilated areas. Search for the liquid nitrogen **MSDS (Material Safety Data Sheet)** online for further precautionary guidelines.

QUICK CAUTIONARY TALE

Disclaimer: I did not work for NSW DPI at this time.
On one occasion where I had an abundance of liquid nitrogen after testing colonies I decided to put on my PPE (gloves, eye protection, waterproof boots) and pour some liquid nitrogen in a metal bowl with a small chunk of bbq'd meat in it. After all the liquid nitrogen had evaporated I picked up the chunk of beef (in my glove-protected hand) and threw it as hard as I could at the ground. You guessed it. It shattered into several pieces, like a block of ice. Good thing that piece of meat wasn't my finger and I wore all that PPE! Now back to business.

MATERIALS

- **Thumb tacks**/drawing pins or permanent marker
- **PVC or metal tubes**, 100mm long, 80mm(3inch) outside diameter (10 tubes/60 colonies)
  -Base cost: $20/metre PVC pipe (+ fee if cut at store)
  -Check your shed, local irrigation supply or hardware store
- **Liquid nitrogen tank** (20L capacity, will test ~60 colonies)
  -Base costs: $25 rental/delivery fee and $50 return freight or $650+GST purchased new*****
  -Check with regional cattle Artificial Insemination (AI) suppliers or gas supply store
- **Liquid nitrogen** (300ml per colony)
  -Base costs: $4.50+/kg, ~$75+/20L liquid nitrogen*****
  -Check with regional cattle AI suppliers or gas supply store
- **Polystyrene cup** (300ml capacity) fashioned with a long handle. Mark 300ml level inside cup.
- **Gloves** (leather/insulated and waterproof)
- **Splash-proof eye-wear**
- **Safety boots** (waterproof)
- **Record book**
- **Liquid nitrogen cost and tank hire varies by region and state/territory. Costs shown are low due to widespread use of liquid nitrogen for livestock AI in regional NSW.**

METHODS

Select and label colonies to be tested.

1) Colony labels should withstand the elements and be located on a permanent component of the colony, for example front face of brood box or hive cover.

2) **Select frame to be tested.** Search for frame with the best brood pattern (least amount of empty cells). Avoid frames with lots of uncapped brood or emerging brood. Uncap a few cells to find pupae between 3-10 days old (from just pupating to white to light tan with purple eyes). Any pupae within this range can be tested. Label top-bar of selected frame with thumb tack or scrape messy top bar with hive tool and mark with permanent marker. This will aid in locating the frame later on.

3) **Place frame on flat surface (upturned cover, empty super, etc.) and insert PVC tube.** Press and twist the PVC tube into the selected brood area. Press until the midrib of the comb is reached.

4) **Pour 300ml of liquid nitrogen into polystyrene cup.** An initial small pour (~50ml) into the PVC tube will allow a seal to form at the base of the tube if there are gaps. When the first pour is nearly evaporated pour the remaining liquid nitrogen into the tube.

5) **Move onto the next colony while the liquid nitrogen evaporates and the test thaws. Repeat steps 1-4.** Thawing is dependent on weather. On a cool/cloudy day the frames may need to thaw for 10 minutes or more. Depending on foraging conditions it may be necessary to keep thawing frames in a screened tent to prevent robbing.

6) **Gently twist the PVC tube off once thawed and record #unsealed cells.** Count and record the number of unsealed/uncapped cells in the tube area after twisting off the PVC tube in case a cell capping is damaged during removal. This number is your **Uncapped Count (0HR)**.

7) **Return the frame to the colony and record the time of return.** Recording the time helps keep the pace on the 2nd day of testing, ensuring that one doesn't speed up and check tests before 24 hours has passed.

8) **24 hours later check the comb section for test results.** Count cells still capped or still containing dead pupae (whole and parts). This number is your **24HR Count**. A colony is hygienic if it has cleaned out 95% or greater of the frozen pupae and cappings within 24hrs.

9) **Return frame to colony (remove thumbtack if used).** Removing thumbtack will prevent confusion during future hygienic testing.

10) **Calculate hygienic behaviour.** You will need your **Uncapped Count (0HR)**, **24HR Count** and **total number of cells within the PVC tube**.

    First, calculate the **total number of cells within your PVC tube**. Within an 80mm/3inch PVC tube my average count was 150 cells. For increased accuracy, in **Step 6)** count all whole cells (capped and uncapped) within the area your PVC tube from three different tested frames and then get the average of the three. This average is the **total number of cells within the PVC tube**.

    Next, calculate **0HR Count** by subtracting **Uncapped Count (0HR)** from the **total number of cells within the PVC Tube**. Subtract **24HR Count** (remaining capped cells and pupae parts) from the **0HR Count**. Divide this sum by the **0HR Count**. Move the decimal over twice to the right to get Total % Removed.

EQUATION:
([0HR Count] – [24HR Count]) / [0HR Count] = ___% Removed

EXAMPLE:
Total # Cells in PVC: 150
Uncapped Count (0HR): 12
0HR Count: 138 (That is, 150 total cells minus 12 uncapped)
24HR Count: 4

Given the equation and counts above:
([138] – [4]) / [138] = .97
This colony removed 97% of the liquid nitrogen-killed brood and is considered hygienic.

DISCUSSION
At this point you may be rationalizing why you can't test your colonies for hygienic behaviour. If you're already selecting for brood and honey production and gentle temperament, among other traits, it's time to take the next step. If you can train someone to mark and cage queens and fix up nucs you can train yourself to test for hygienic behaviour. Ask yourself these questions: How would my operation be affected if chalkbrood and AFB incidence decreased? Could I add value to queen sales with this additional beneficial trait? If *Varroa* came tomorrow is my stock as healthy as it could possibly be?

For additional information on hygienic behaviour and success stories read:

"A Sustainable Approach to Controlling Honey Bee Diseases and Varroa Mites" by Marla Spivak and Gary Reuter

http://www.sare.org/Learning-Center/Fact-Sheets/A-Sustainable-Approach-to-Controlling-Honey-Bee-Diseases-and-Varroa-Mites/Text-Version/Breeding-for-Resistance

"New Direction for the Minnesota Hygienic Line of Bees" by Marla Spivak and Gary Reuter
http://beelab.umn.edu/prod/groups/cfans/@pub/@cfans/@bees/documents/asset/cfans_asset_317501.pdf

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Senate Inquiry Results

"Future of the beekeeping and pollination service industries in Australia"

Rural and Regional Affairs and Transport References Committee

The Senate Standing Committee on Rural and Regional Affairs and Transport released their report on the inquiry into the "Future of the beekeeping and pollination services industries in Australia" in July.

The report contains ten (10) recommendations from the committee, plus a supplementary 7 recommendations specifically from Senator Nick Xenophon. The recommendations are as follows, with a few comments on each – the way I see it unfolding.

Recommendation 1
2.35 The committee recommends that the Government should, in consultation with relevant industry participants and with consideration to world's best practice, develop and establish a national honey bee colony survey scheme to collect reliable and comprehensive data about the industry and inform future decisions. The survey should include the establishment of a residue monitoring project to analyse pesticide residues in plant and bee media.

This is asking for a "survey scheme" to be implemented by "the Government, in consultation with industry". Surveys of various aspects of the industry have been conducted in the past by the Honey Bee Research & Development committee on RIRDC. The recommendation doesn't spell out what will go into this survey or how frequently it should be conducted.

The inference (in point 2.31 and 2.32 of the full report) is that it should be designed around honey bee health, although economic aspects including pollination and honey prices could be a useful statistic over time. The problem I foresee with this recommendation is who is ultimately paying for this project?

This cost will probably fall back on the beekeeper levy-funded Honey bee program in RIRDC. The last part of the recommendation is curious, as it suggests that residue testing of bee media be conducted. Honey is already tested under the National Residue Survey, again paid for from beekeeper levies. Bee media may include comb or some other item which is not clear.

Recommendation 2
2.50 The committee recommends that the Government liaise with state and territory land management agencies to establish relevant guidelines to clarify access to public lands for beekeepers within the next 12 months.

Although this is possibly one of the most important areas of concern for the commercial beekeeping sector, it is sort of written in the context of wishing for 'world peace'. How this recommendation will be handled will be of interest to all commercial beekeepers because a similar recommendation was published in 2008. In that case, the federal department of agriculture brought it up for discussion with all the state departments of agriculture. The problem with this approach was, in general, the various state departments of agriculture do not directly manage any public land.

The majority of public land sites used by beekeepers are on state forests or national parks land. In the NSW context you could also throw in town commons; RTA land, Water Board, travelling stock routes and reserves, plus crown reserves. Having a consistent policy and approach across all these government agencies, even within the one state, will require a massive effort across the whole country – well, good luck!

An approach may be to draw up suitable guidelines for the use of public lands in general, then for the national beekeeping body and Australian Government to do the hard sell to seek continuity across the country. Certainly a worthwhile activity of the highest priority, but not a task for the faint-hearted.

Recommendation 3
2.64 The committee recommends that the Government ensure that beekeeping and pollination services are considered as an integral part of free trade agreement negotiations, and consider the impact current agreements have on the industry.

This is a straightforward recommendation. The evidence supplied in the report indicates that Australia does not impose tariffs on imported honey, yet the European Union adds 17.3%, South Korea 253%, Japan 25%, China 15% and India 60% to honey imported from Australia – hardly a level playing field.

Recommendation 4
2.77 The committee recommends that AHBIC, Pollination Australia and the Commonwealth government enter into discussions about the best way forward to enable the pollination industry to make a contribution for pollination services to research and development, and to biosecurity.

This recommendation may already have a response with the recent amalgamation of the Honey bee R&D committee and the Pollination R&D committee within RIRDC. The mention of Pollination Australia fails to acknowledge that, in practice, this body does not exist.

Recommendation 5
3.22 The committee recommends the categorisation of varroa destructor be completed as a matter of urgency to provide industry with funding certainty in case of an incursion.

This is a matter already tabled for action by the Australian Honey Bee Industry Council and Plant Health Australia (PHA). This recommendation is stating a matter of 'fact'.

Recommendation 6
3.35 The committee recommends that the Commonwealth government confirm, and consider enlarging, its commitment to the National Bee Pest Surveillance Program.

The National Bee Pest Surveillance Program has been limping along in one form or another for several years. Under the management of Sam Malfroy and PHA and a one-off handout from the Federal government, it has been strengthened and expanded.

There has been no commitment from the Federal government to continue funding this program in the long term. In fact, the recent vote by the beekeeping industry to impose a biosecurity levy will probably be the source of funds to continue this program.

Recommendation 7
3.36 The committee recommends that the Commonwealth government give urgent consideration to facilitating efforts by the industry to import suitable varroa-resistant breeding material into Australia, subject to stringent biosecurity safeguards being put in place.

This is an interesting recommendation as the government is not in the business of importing any livestock to my knowledge; this is a business/industry activity. The Federal government supplied the quarantine facility currently at Eastern Creek in Sydney for the safe importation of queen bees. This facility will close in August 2015, but an alternative facility will be opened in Melbourne, Victoria.

There have been two attempts at importing breeding stock in recent times, with limited success. A review of this process, along with a reasonable risk assessment of the current arrangements for mated queens and drone semen, needs to occur to facilitate this process. A job for AHBIC to lobby the Commonwealth Department of Agriculture to ensure this is achieved.

Recommendation 8
3.56 The committee recommends the Department of Agriculture consult with relevant industry groups to ensure quarantine concerns are addressed, either as part of the proposed facility relocation or through the establishment of a specific bee-centric facility.

As per the discussion with recommendation 7, an appropriate purpose-built quarantine facility is required for the safe importation of queens. The consultation process that I was involved in for the new facility was unimpressive. Either the industry goes with the new facility at Melbourne, or nothing. The fact that the major producers of queen bees and historically the main users of the current Eastern Creek facility are based in New South Wales seems to have been irrelevant in the decision making process.

It is a highly skilled process to keep and maintain bees in cages. The new facility will require staff appropriately trained in this matter for there to be any successful importations.

Another alternative would be to review the risk assessments for drone semen and live queens. After a period of quarantine and the appropriate tests, queens could be released. There is a low level risk in this scenario, but Australia is importing 'live' horses, dogs, and cats almost daily. They are kept in quarantine for an appropriate time period then released. Zero risk means no imports, managing risk at an appropriate level is far more desirable rather than creating incentive for someone to import queen bees illegally and bypass all the quarantine checks.

Recommendation 9
3.71 The committee recommends the Department of Agriculture, in consultation with industry groups, review the Import Risk Analysis for honey bee commodities, with a view to protecting the Australian industry and its 'clean, green' reputation.

The language and discussion leading up to this recommendation is confused and misses the point. Australia has all the major diseases that are transmittable through honey. Thus any importation of honey is not a new biosecurity risk. What the committee missed was the potential for imported honey to have chemical contaminants. Only 5% of the current honey imported is tested by the Federal government. No doubt some of the importers of this honey will be testing honey for contaminants to protect their own brands and reputation. Even so, the reputation of the "Australian" brand as contamination free is potentially at risk, while the official test rate is so low.

Recommendation 10
3.74 The committee recommends that the Commonwealth government, in consultation with the AHBIC and other relevant stakeholders, investigates the viability and benefits of producing an annual industry report in the terms outlined in paragraph 3.73.

This is an ideal – but it will take dollars and time to compile. Again this will most probably fall back on the beekeeping industry to pay.

Nick Xenophon
Interestingly, Nick Xenophon has his own section with seven recommendations. He states that "I am generally supportive of the comments in the committee report" but goes on to say that "general statements and suggestions rather than firm recommendations" have been offered by the committee. Also "given one of the main reasons behind calling for this inquiry was a lack of action from previous inquiries".

You get the impression that Nick is not impressed with the statement that "it lets the industry down by not issuing sufficiently firm recommendations or acknowledging that previous inquiries have not been acted on".

My experience as a witness
I was asked to be a witness at the hearing on the 15 April at Murrays Bridge in South Australia. The hearing program went from 9.00am until late in the afternoon, with each witness having 40 minutes to present their case or be questioned by the Senators present. For my sins I was the last witness for the day, which in hind-sight was probably not that brilliant.

Those present on the committee included Senator Glenn Sterle, Senator Alex Gallacher, Senator Peter Whish-Wilson, Senator Anne Ruston and Senator Nick Xenophon, plus the Committee Secretary Ms Toni Maiuluick. I was generally underwhelmed with the day, thinking I've got out of bed at 3.00am, driven to Canberra, flown to Adelaide, driven to Murrays Bridge and witnessed the whole day's proceedings.

Many of the questions asked by the Senators lacked basic understanding of many of the issues discussed. A lot of the

witnesses were also asked questions that were inappropriate for their expertise or organisation they represented. May I say, one stand-out presentation was that by Ian Zadow, the current Chair of the Australian Honey Bee Industry Council (AHBIC).

Ian provided a very succinct case for a few of the major issues being confronted by the beekeeping industry and handled himself very well with the questions from the senators that followed. This is not to say all the other witnesses at the hearing didn't perform well – they did.

One interesting witness, Warrick Thorpe, the current Chair of Lucerne Australia, the peak industry body for the production of lucerne seed, gave a very interesting presentation. He stated that honey bees are a critical factor in lucerne seed production and if the Australian beekeeping industry collapsed, then the lucerne seed industry wouldn't be far behind.

Apparently the imminent threat of varroa mites and their impact on bees within Australia has received significant coverage by the lucerne peak body, occupying discussions at meetings of that organisation. As a side-line Warrick described lucerne as a big hydroponic broad acre crop, this referred to their extensive tap root system. Once sown, the crop has a seven-year life before it is re-sewn. Another interesting piece of information was that 60% of lucerne seed exports are shipped to Saudi Arabia.

Some of the Senators had their pet subject area and no matter what the background of the witness, they consistently asked certain questions. Senator Nick Xenophon was constantly asking for examples of why the labelling laws were broken in relation to "Made in Australia" or "Product of Australia". Senator Peter Whish-Wilson was out to build a case against European wasps and wanted any skerrick of information to support this quest.

Being the last witness for the day wasn't possibly the best position in the queue. The chair of the committee made himself absent for much of my '40 minutes' and the questions I received were not strictly within my scope. I had stated in my submission that the 5% inspection for imported honey was not consistent for the international honey arriving in Australia compared to other honey importing countries. Chinese honey particularly continues to receive a bad wrap for contaminants on the international stage.

I was asked to provide a list of all the chemicals that should be tested for in any imported honey. Does that mean I can now add chemist to my list of expertise?

One point gets lost in discussion when talking scientifically in relation to honey. There are three areas of concern for the Australian beekeeping industry: biosecurity risks, food safety issues and product integrity. Australia has all the main known microbial diseases that are potentially transmittable in honey – AFB, EFB, chalkbrood and nosema, thus we can test to our heart's content but cannot preclude imports based on these diseases.

Food Safety in honey refers to chemical contaminants that are reported from time to time in the world media. There have been a few cases in Australia associated with imported honey. These are a real concern for public safety, and also potentially if any of this honey is re-exported in any form, there is potential for the receiving country to test so-called honey from Australia and find unwanted contaminants.

The third point of concern is that of product integrity. A product is imported and it is labelled as honey, but really is corn syrup or another artificial sweetener and not the labelled "honey"!

The second piece of homework the Senate committee gave me was to report on all of the 25 listed recommendations in the 2008 Senate Inquiry Report. It is too easy to generalise about what wasn't done and there was a consistent theme at the inquiry by witnesses that "nothing" was done as a result of this inquiry. The committee asked my opinion on this matter and I had to disagree with previous witnesses in this respect. As a result the senate committee asked me to provide a report on what had been done, resulting from the 2008 inquiry. A copy of this response was published in the last Honeybee News .

Some general observations about this whole process: AHBIC desperately needs to construct issues and position papers on all the main areas of concern to the Australian beekeeping industry. Most of the witnesses at the senate inquiry were beekeepers, but there was a consistent lack of understanding across all speakers on key subjects affecting the industry. The construction of position papers, then placed on the AHBIC website, would provide beekeepers from all parts of the country the ability to speak with one voice.

The other point which I find tiring is the consistent cop-out to bash government and public servants for the world not being perfect. As stated, there was a significant amount of this at the hearing, and I guess it's a form of therapy for those who indulge in this sport.

My question is this: who is responsible to report to the beekeeping industry on the outcomes of the recommendation of "any" inquiry? Is it industry (AHBIC)? Or government? Who in government?

It's too easy to whinge and knock without careful consideration as to who or whom is ultimately responsible for that elusive action "communication".

In summary the release of the United Kingdom National Pollination Strategy for bees and other pollinators in March this year and the Presidential Memorandum from the White House in the United States of America in June this year, suggests an international crisis unfolding. It will be interesting to see what happens as a result of our Federal Government's Senate Inquiry into honey bees in Australia.

THE WHITE HOUSE - MEDIA RELEASE

Office of the Press Secretary June 20, 2014

Fact Sheet: The Economic Challenge posed by Declining Pollinator Populations

Pollinators contribute substantially to the economy of the United States and are vital to keeping fruits, nuts, and vegetables in our diets. 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. The problem is serious and poses a significant challenge that needs to be addressed to ensure the sustainability of our food production systems, avoid additional economic impacts on the agricultural sector, and protect the health of the environment.

Economic Importance of Pollinators:

- Insect pollination is integral to food security in the United States. Honey bees enable the production of at least 90 commercially grown crops in North America. Globally, 87 of the leading 115 food crops evaluated are dependent on animal pollinators, contributing 35% of global food production.
- Pollinators contribute more than 24 billion dollars to the United States economy, of which honey bees account for more than 15 billion dollars through their vital role in keeping fruits, nuts, and vegetables in our diets.
- Native wild pollinators, such as bumble bees and alfalfa leafcutter bees, also contribute substantially to the domestic economy. In 2009, the crop benefits from native insect pollination in the United States were valued at more than 9 billion dollars.

The Challenge of Pollinator Declines

- The number of managed honey bee colonies in the United States has declined steadily over the past 60 years, from 6 million colonies (beehives) in 1947 to 4 million in 1970, 3 million in 1990, and just 2.5 million today. Given the heavy dependence of certain crops on commercial pollination, reduced honey bee populations pose a real threat to domestic agriculture.
- Some crops, such as almonds, are almost exclusively pollinated by honey bees, and many crops rely on honey bees for more than 90% of their pollination. California's almond industry alone requires the pollination services of approximately 1.4 million beehives annually—60% of all U.S. beehives—yielding 80% of the worldwide almond production worth 4.8 billion dollars each year.
- Since 2006, commercial beekeepers in the United States have seen honey bee colony loss rates increase to an average of 30% each winter, compared to historical loss rates of 10 to 15%. In 2013–14, the overwintering loss rate was 23.2%, down from 30.5% the previous year but still greater than historical averages and the self-reported acceptable winter mortality rate.
- The recent increased loss of honey bee colonies is thought to be caused by a combination of stressors, including loss of natural forage and inadequate diets, mite infestations and diseases, loss of genetic diversity, and exposure to certain pesticides. Contributing to these high loss rates is a phenomenon called colony collapse disorder (CCD), in which there is a rapid, unexpected, and catastrophic loss of bees in a hive.
- Beekeepers in the United States have collectively lost an estimated 10 million beehives at an approximate current value of $200 each. These high colony loss rates require beekeepers to rapidly, and at substantial expense, rebuild their colonies, placing commercial beekeeping in jeopardy as a viable industry and threatening the crops dependent on honey bee pollination. The loss rates have driven up the cost of commercial pollination: for instance, the cost of renting honey bee hives for almond pollination rose from about $50 in 2003 to $150-$175 per hive in 2009.
- Some of the viral agents that are impacting honey bee colonies are also now reported to be adversely affecting native pollinators, such as bumble bees, and the pollination services they provide.
- Population declines have also been observed for other contributing pollinator species, such as Monarch butterflies, which migrate from Mexico across the United States to Canada each year, returning to overwinter in the same few forests in Mexico. The Monarch butterfly migration, an iconic natural phenomenon that has an estimated economic value in the billions of dollars, sank to the lowest recorded levels this winter, with an imminent risk of failure.

Administration Actions

- In response to the challenges to commercial bee-keeping, the President's 2015 Budget recommends approximately $50 million across multiple agencies within USDA to: enhance research at USDA and through public-private grants, strengthen pollinator habitat in core areas, double the number of acres in the Conservation Reserve Program that are dedicated to pollinator health, and increase funding for surveys to determine the impacts on pollinator losses.
- Building on this budget initiative, President Obama today issued a Presidential Memorandum on *Creating a Federal Strategy to Promote the Health of Honey Bees and Other Pollinators* that takes a number of important steps to tackle the problem of pollinator declines, including:
- Directing the Federal Government to use its research, land management, education, and public/private partnership capacities to broadly advance honey bee and other pollinator health and habitat;
- Establishing a new Pollinator Health Task Force, co-chaired by United States Department of Agriculture and the Environmental Protection Agency, to develop a National Pollinator Health Strategy. The Strategy will include: a coordinated research action plan to understand, prevent, and recover from pollinator losses, including determining the relative impacts of habitat loss, pesticide exposure, and other stressors; a public education plan to help individuals, businesses, and other organizations address pollinator losses; and recommendations for increasing public-private partnerships to build on Federal efforts to protect pollinators;
- Directing Task Force agencies to develop plans to enhance pollinator habitat on federal lands and facilities in order to lead by example to significantly expand the acreage and quality of pollinator habitat, consistent with agency missions and public safety; and
- Directing Task Force agencies to partner with state, tribal, and local governments; farmers and ranchers; corporations and small businesses; and non-governmental organizations to protect pollinators and increase the quality and amount of available habitat and forage.
- In line with these efforts, the Federal Government will also work to restore the Monarch butterfly migration using research and habitat improvements that will benefit Monarchs as well as other native pollinators and honey bees. These actions support the February 2014 Joint Statement by President Obama, Prime Minister Harper of Canada, and President Peña Nieto of Mexico to renew and expand collaboration between North American nations to conserve the Monarch butterfly.

AUSTRALIAN HONEY BEE INDUSTRY COUNCIL INC

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BEST MANAGEMENT PRACTICE FOR THE TRANSPORTATION OF 0PEN ENTRANCE BEEHIVES

In the interests of public safety, the Australian Honey Bee Industry Council Inc. (AHBIC) recommends that the following guidelines be followed, except in the case of emergency e.g. fire or flood.

- Where possible, only transport open entrance beehives between sunset and sunrise;

- When securing beehives, equipment or machinery onto transport vehicle ensure LOAD RESTRAINT GUIDES as set down by the National Transport Commission of Australia are adhered to.

- After completion of loading of beehives, wait until most bees have stopped flying before departing site.

- Even in cooler weather, travel through built up areas and road works should be avoided during daylight hours

- Ensure adequate fuel is carried on the vehicle to complete the journey without the need to enter a refuelling depot when transporting open entrance beehives.

- If absolutely necessary that a break in the journey has to occur, then ensure vehicle is located far enough away from lights as not to attract bees.

If the above guidelines cannot be met, AHBIC advises beehives should be screened, netted or closed entrance to prevent escape of bees from transport vehicle.

July, 2014

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INTERNATIONAL NEWS

New Zealand says no to a Neonicotinoid

Courtesy: Catch The Buzz

The New Zealand Environmental Protection Agency has refused an application to import Ortus, an insecticide containing thiamethoxam, because of its threat to bees.

Adria New Zealand Ltd proposed using Ortus as a seed treatment.

The active ingredient is a neonicotinoid which is toxic to bees.

The EPA declined the application because it had concerns that Ortus would not adhere properly to seeds and that dust would be produced during sowing.

"The dust would pose high risks to bees," the EPA said.

"The risk assessment showed risks to bees were non-negligible."

The decision came as the *New Zealand Farmer* magazine reported the NZ EPA is to require a higher level of scientific evidence regarding the safety and effects of new pesticides before considering them for approval.

"We are updating our requirements of applicants seeking our approval to allow new pesticides to be used in New Zealand, the EPA told the magazine. "We are demanding a high level of scientific evidence about the safety and effect of such products before considering them for approval."

Adria wanted to use Ortus to treat maize and sweetcorn seeds to control Argentine stem weevil larvae.

Seven submissions were received by the EPA with five opposing any approval.

They noted the high toxicity of thiamethoxam to bees and questioned whether the EPA should be approving substances containing neonicotinoids given the international concerns which have resulted in a prohibition of the sale of seeds treated with thiamethoxam in the European Union.

The technical committee of the National Beekeepers Association complained in its submission that the application was incomplete.

"This application has absolutely no discussion on the risks of using this product and the effects on bees," the association said. "What is worse the application does not discuss the environmental effects at all of thiamethoxam and apparently dismisses them. It does not go onto recognize that thiamethoxam degrades to the metabolite clothianidin, another systemic neonicotinoid insecticide. There is no discussion of the effects of thiamethoxam and its metabolites.

"Without access to the draft label recommendations which have been submitted to the EPA, beekeepers have every right to be concerned about the use of this systemic insecticide thiamethoxam, the subject of this application.

"There is no discussion at all about the systemic properties of Ortus when used and its possible effects on bees through contact with pollen, nectar and guttation fluid from the plant.

"There has been no discussion about the persistence and lack of biodegradation of neonicotinoid chemicals in the environment and their long term environmental ecotoxic effects."

The EPA committee handling the application said the environmental risk assessment showed that Ortus is very hazardous to terrestrial invertebrates, including bees.

"The applicant was not able to produce acceptable evidence to show that Ortus adheres properly to the seed or any information on the level of dust production," it said. The committee found the positive effects of Ortus do not outweigh the adverse effects, "Therefore, the application is declined."

Northern Europe hit by most Bee deaths - EU Study

There is much concern about the widespread collapse of bee colonies.

A new study covering 17 EU countries says that far more honeybees are dying in the UK and other parts of northern Europe than in Mediterranean countries.

The European Commission says it is Europe's **most comprehensive study** so far of bee colony deaths.

Winter mortality was especially high for bees in Belgium (33.6%) and the UK (29%) in 2012-13. But in spring-summer 2013 France was highest with 13.6%.

Bumblebees and other wild bees were not studied, nor were pesticide impacts.

The study, called Epilobee, described 10% as an acceptable threshold for bee colony mortality - and Greece, Italy and Spain were among the countries with rates below that threshold.

The mortality percentages are national estimates based on representative samples. All 17 countries applied the same data collection standards, the report says.

The survey covered almost 32,000 bee colonies. But there is also much concern about death rates among wild bees, which are vital pollinators too.

Last year the EU introduced a ban on four chemicals called Neonicotinoids which are used in pesticides.

They are believed to be linked to the collapse of bee colonies across Europe, though there is a heated scientific debate over the chemicals' impact and many experts say further studies are needed.

The Commission wanted pesticide impacts to be included in the Epilobee study, but it was overruled by member states' governments.

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SICK BEES

PART 18c

Colony Collapse Revisited

by Randy Oliver - ScientificBeekeeping.com

In the previous article of this series, it seems that I hurt the feelers of some beekeepers by irreverently dismissing some of their pet suspects for Colony Collapse. Unlike during the peak of CCD, when researchers were desperately following up every possible lead, I have the advantage of retrospection, as well as now having had the opportunity to observe and study sudden colony depopulation again and again.

However, before I get to the real meat of CCD, I feel that it would be to the benefit of the reader to cut through the muddle of all the various things that have been blamed for being the cause of the disorder by evaluating each of them using scientific logic.

Although most named suspects are biologically plausible, a number can be quickly ruled out by the application of Koch's postulates—either that suspect i*sn't always* present during collapse events, or doesn't always cause the problem when it *is* present. I'll address the suspects in the following order (spoiler: I'm saving the best for last).

1. Beekeeper management practices
2. Environmental factors
3. Chemical exposure
4. Biological agents

Although my focus will be upon determining the "proximate causative agents" of sudden colony collapse, I'll also examine how the various suspects may contribute to colony mortality or morbidity in general. In order to pick up the thread of this series, and to review the terms that I'll be using, you may wish to reread the previous installment (available at my website[1]).

Beekeeper Management Practices

Due to his being a government employee, Colony Collapse researcher Dr. Jeff Pettis, unlike me, must be careful that his public statements are politically correct. But in his presentations on CCD, he can't help but candidly note that 25% percent of beekeeping operations accounted for fully 75% of total colony losses. And any apiary inspector will tell you that it was usually the same beekeepers over and over. This fact certainly suggests that beekeeper management practices may be related to the degree of colony mortality in an operation.

Let me be perfectly clear here—CCD can happen to anyone, and there is nothing funny about it. If you've never watched the film "The Last Beekeeper," you should. In it, hard working beekeepers are brought to tears as they watch their operations collapse from CCD just prior to almond bloom—leading to their financial ruin. I've experienced CCD myself, and wouldn't wish it upon anyone!

That said CCD also quickly became an excuse for absolving oneself of the consequences of PPB (Piss Poor Beekeeping). I've heard many a beekeeper who knew damn well that his colonies died from varroa or some other form of neglect, later piously tell a reporter that they were hit by CCD!

Here's the thing: I've visited beekeepers all over the country. Even in areas in which some "noisy" beekeepers blame their elevated colony losses upon pesticides, the weather, the alignment of the stars, or some other factor, there are always other "quiet" beekeepers who experience very low losses under the same conditions. The difference could be luck, but more often appears to be due to better management.

Biological plausibility: Allow me to quote from the original CCD report, back when it was still called "Fall Dwindle Disease"[2]:

"All [affected operations] experienced some form of extraordinary "Stress" at least 2 months prior to the first incidence of "die off" associated with "Fall dwindle disease". The nature of this stress was variable but included nutritional stress (apiary overcrowding, pollination of crops with little nutritional value), dramatic pollen and nectar dearth, or varroa mite pressure."

Honey bee colonies can handle a lot of insults so long as they get enough high-quality forage (Fig. 1) to maintain vigorous broodrearing, and are not hamstrung by parasites. Those beekeepers who make sure that their colonies are always well fed, especially with protein, and never allow varroa infestation to exceed a few percentage points, appear to have far fewer problems than others. In some areas, treatment against nosema also appears to help.

Figure 1. One common denominator for healthy colonies is that they have year 'round access to high quality forage. A profusion of pollen sources promotes strong broodrearing and a robust immune system. In the arid West, patches of irrigated pasture such as this are precious, and you'd no more tell other beekeepers where you found them than you'd brag about where your favorite fishing hole was.

Analysis:

Transportation stresses from migratory beekeeping—non beekeeper bloggers love to blame CCD on our "unnatural" moving of bees from one location to the next. In truth, bees, due to their innate ability to reorient to a new location after swarming, seem to take being moved in stride. In my own operation, I follow the bloom up the mountains during the season, akin to moving other livestock to better pasture, and my colonies are the better for it. Even colonies moved from the East Coast to California and back do not appear to suffer greatly from transportation.

Multiple pollination contracts—if bees are moved from one pollination contract to another, they may suffer from poor nutrition and exposure to pesticides. This problem can generally be mitigated by supplemental feeding (Fig. 2) or by "resting" them on natural pasture to rebuild.

Figure 2. One management practice that beekeepers learned from the CCD experience is the value of feeding supplemental protein. There are several high quality pollen supplements now on the market. Not only can good nutrition boost the bees' immunocompetence, but the colony can convert this protein into replacement bees to take the place of those lost due to disease or pesticides.

Feeding of high-fructose corn syrup--HFCS has been blamed with little supportive evidence. Granted, HFCS can become toxic to bees due to the formation of hydroxymethylfurfural if it is overheated or stored for long periods in metal containers, but most commercial beekeepers are now aware of this. No correlation has been found between the feeding of HFCS and CCD.

Overcrowding of locations—just as other livestock cannot thrive if they are overstocked onto insufficient pasture; too many hives in one area compete for limited resources. If a beekeeper places a hundred hives into an apiary that has adequate forage for only two dozen, he can expect those colonies to have problems.

Holding yards—the need to stockpile semi loads of hives at certain times of the year can create serious problems due to:

1. The nutritional stress due to inadequate forage as mentioned above.
2. The behavioral stress caused by the robbing pressure between overstocked colonies.
3. The fact that crowded bees all "share spit" in nearby flowers and at water holes. Need I explain the consequences?
4. Easy transmission of virulent strains of pathogens (especially the constantly-mutating viruses) that may spontaneously arise in one or more hives (the more hives, the more chance of the evolution of a new strain). Drifting, robbing, and hitchhiking varroa mites can quickly spread that pathogen throughout the entire yard (Fig. 3)! In a number of instances, beekeepers observed CCD spreading from one group of sick colonies to adjacent holding yards.

Figure 3. Perfect conditions for the spread of an epidemic. In this almond orchard, as with many monocultures, there is virtually no bee forage prior to, or immediately after the bloom, resulting in colony nutritional stress. Even in good honey locations, beekeepers must keep in mind the forage conditions at times other than during the flow.

Other commercial beekeeping practices—some "natural beekeeping" advocates have blamed the use of antibiotics, synthetic miticides, or sugar feeding for CCD, but these practices were common prior to CCD, and are used in many operations that have not experienced CCD, so the charges simply don't stick.

Verdict: I'm not buying the notion that CCD can be blamed on commercial beekeeping practices per se, since no particular practice is always associated with colony collapse, nor does any particular practice always create it. But poorly managed colonies--whether in a large commercial or small organic operation--appear to be more susceptible to mortality or collapse. Good bee husbandry—including proper nutrition and parasite management—goes a long way toward keeping colonies healthy. One need only note how commercial beekeepers were able to ramp up their colony numbers for almond pollination when the growers made it financially worthwhile for them to invest in good management practices!

Environmental factors

Ozone and air pollution

Biological plausibility: Ozone is highly reactive chemically, and oxidizes organic molecules. "The scent molecules produced by flowers in a less polluted environment, such as in the 1800s, could travel for roughly 1,000 to 1,200 meters; but in today's polluted environment downwind of major cities, they may travel only 200 to 300 meters…This makes it increasingly difficult for pollinators to locate the flowers."[3]

Analysis: Although the negative effect of ozone upon bee foraging success is biologically plausible, neither the timing nor location fit the sporadic occurrence of CCD. The timing is wrong, since ozone levels (and general air pollution) in the U.S. have actually been dropping since the early 1990's and ozone levels showed a notable decline after 2002.[4] Neither does location fit, since CCD occurred in rural areas with little ozone, and conversely is not normally a problem in my area of the Sierra foothills, which often (and unfortunately) has one of the highest ozone levels in the country due to the smog blowing up from Sacramento (easy to confirm, since the ozone quickly destroys anything made of rubber).

Verdict: Although a high ozone levels certainly doesn't make life any easier for bees (or beekeepers), it does not appear to be the cause of colony collapse.

HAARP (The High Frequency Active Auroral Research Program)

HAARP is a favorite of conspiracy theorists, and one website[5] presents a convincing case that the high frequency transmissions are the cause of CCD. The hypothesis is that the transmissions are interfering with the bees' navigational ability. I'm not being frivolous here--some earnest beekeepers implored me to investigate the facts.

Biological plausibility: In brief, the HAARP antenna array in Alaska is a cooperative military/academic experimental station that shoots strong electromagnetic pulses into the ionosphere. Either the resulting wavelengths of light produced in the ionosphere above the station, or the extra low frequency (ELF) radio waves transmitted around the globe could plausibly interfere with the bee navigation system.

Analysis: The emitted electromagnetic energy pulses from HAARP are dwarfed by the natural atmospheric electromagnetic radiation variation from the sun, and their strength drops off according to the inverse square law. At only 150 ft away from the antennas, it already falls within human safety standards. When

I did the math, the strength of the signal by the time it finally reaches my apiaries in California would be less than a billionth of the intensity of that typically found near AM broadcast station antennas in many urban areas[6].

Similar ELF waves are created by lightning bolts, which strike the Earth some 100 times per second. A single bolt can produce far more electromagnetic radiation that the entire 3600kW output of HAARP.[7] And as far as the timing, HAARP started intermittent testing in 1994, but did not actually begin transmitting at full power until 2007, long after CCD started to be reported.

Verdict: The laws of physics and the timing appear to let HAARP off the hook as being the cause of CCD (the math doesn't support it being the cause of earthquakes either).

The next two factors come under suspicion based upon the hypothesis that CCD is caused by bees being unable to find their way back to the hive, thus leading to sudden colony depopulation.

Cell phones/Electromagnetic radiation (EMR)
Biological plausibility: Bees produce tiny molecules of magnetite in their bodies, which they appear to use in navigation.[8] Electromagnetic fields could plausibly disrupt their ability to find their way back to the hive. Alternately, some bee tissues may resonate with certain wavelengths of EMR, leading to biological effects.

Analysis: The intermittent appearance of CCD does not match the steady proliferation of cell phone and other electromagnetic transmissions. More importantly, CCD occurred in areas in which you couldn't get cell reception; conversely, plenty of apiaries thrived immediately adjacent to cell phone and radio towers, and under electrical transmission lines.

Verdict: Although the cell phone hypothesis certainly resonated with the public (and gave beekeepers fodder for a lot of jokes), there are more cell phone transmissions today than when CCD made the press, yet CCD has largely gone away. One thing to keep in mind with any alleged cause of CCD is that it should also explain the historical appearances of colony depopulations in the older literature—cell phones were not around then.

Geomagnetic flux
Natural solar flares cause "geomagnetic storms" on Earth. Dr. Tom Ferrari[9] has proposed that such storms may be the cause of CCD due to their effect upon bee magnetoreception, causing bees to lose the ability to find their way home.

Biological plausibility: The hypothesis that geomagnetic flux affects bee navigation is biologically plausible, and I have been corresponding with Dr. Ferrari, and have seen his supportive (unpublished) experimental data that forager return takes longer during solar flare events. Solar storms have also occurred as long as the Earth has existed, so could possibly explain historical colony depopulation events.

Analysis: The question boils down to whether CCD is actually caused by the inability of foragers to find their way back to the hive. If solar storms were indeed the cause of CCD, one would expect them to affect all colonies equally over a wide area in which the flux occurred during daylight hours, which does not happen. And since I began correspondence with Dr. Ferrari, I've paid particular attention to any news reports of major solar storms to see whether I could observe the resulting geomagnetic flux causing any noticeable depopulation of my apiaries—I haven't.

Verdict: Although I find Dr. Ferrari's experimental data to be of great interest, since it appears to indicate that bee navigation is indeed affected by aberrations in the geomagnetic flux, I do not find it to make a compelling case for being the cause of CCD. I do look forward, however, to seeing more research on this aspect of bee navigation.

Chilling
In many recent and historical instances of unusual colony mortality, an unexpected spring or fall chill preceded the event.

Biological plausibility: The unexpected chilling of a colony with brood requires the colony to ramp up its metabolism, which stresses bees already suffering from nosema or virus infections. Such chilling may also suppress the bee antiviral response.[10] In addition, should the colony already have a low bee: brood ratio due to a virus or nosema infection, then a cold snap could result in the chilling of the brood, which can greatly shorten the subsequent life spans of those workers.[11]

Analysis: Dr. Bill Wilson observed in 1979 how "Disappearing Disease" tended to be associated with chill events:
"In the case of [Disappearing Disease]… the colonies frequently have gone through a period of nectar and pollen collection with active brood rearing. Then the weather has turned unseasonably cool and damp and remained adverse for from about 3 to 14 days. Such a situation usually occurs in early spring. During the inclement weather, the bee populations dwindle because the worker bees disappear from the hive leaving a "handful" of bees and the queen." [12]

A similar correlation between chill events and the occurrence of sudden colony depopulation has been noted again and again in the historical record, as it was with the first reports of CCD.[13] In my own experience, I have repeatedly observed unseasonable chills to precipitate the sudden collapse of colonies infected with either nosema or viruses. [14]
Verdict: There is a strong case to be made for unexpected chilling to contribute to colony collapse. The chilling is not the proximate cause of the exodus of the bees from the hive, but tends to precipitate the chain of events leading to colony collapse (see Sick Bees, Part 2).[15]

WEATHER AND CLIMATE CHANGE
Naysayers aside, the Earth's climate appears to be warming, and such change is reflected in shifting weather patterns, which may affect bee forage. Dr. Eric Mussen[16] has noted that in some areas of the California foothills, previously common native plants no longer supply fall forage.

Biological plausibility: The weather is well known to be a huge factor in colony survival, due to its indirect effect upon plant production of nectar and pollen, and the ability of bees to forage for them. Temperature extremes (hot or cold) also stress colonies. In addition, the weather appears to affect the levels of nosema and varroa. Climate change affects plant communities, which may then have either positive or negative effects upon pollinator populations—a drier climate may eliminate bee forage, whereas a warming climate would expand favorable bee habitat northward.

Analysis: Dr. Gordon Wardell[17] gave an excellent presentation shortly after the first reports of CCD, in which he used weather maps to show how unusual weather patterns appeared to correlate with subsequent increased colony mortality. In certain areas, warm winter weather led to fruitless foraging and the using up of precious stores; in other areas, prolonged spring rains prevented necessary foraging for pollen. On the other hand, this year's warm January appeared to be very beneficial to bees.

Verdict: Weather and climate change may well be associated with pollinator decline in certain areas, directly affect colony survival, and could well be contributing factors to CCD.

HABITAT CONVERSION
Biological plausibility: The seasonal buildup of colonies, and their health over the rest of the season, is largely a function of the availability of good mixed forage, which is best provided by the diverse plant communities naturally present in areas with fertile soil and ample water.

Analysis: Unfortunately, honey bees are in direct competition with humans for such habitats, as people convert fertile lands into cropland and towns. Habitat loss directly and clearly affects many species, including honey bees. This fact sets it apart from bee-specific factors such as varroa or beekeeper management practices.

It strikes me odd that when people think of the impact of

farming upon bees that they focus upon pesticides. In truth, the most destructive annihilator of natural ecosystems is the act of tillage—the mechanical preparation of land for the growing of crops (Fig. 4).

Figure 4. Humans are the bees' worst competitor, in that we destroy sustentative plant communities, and replace them with artificially-maintained monocultures that are virtual "bee deserts" for most or all of the year. Note the absolute annihilation of the natural plant and animal communities in the tilled cropland behind the tractor (which takes place even in organic agriculture).

I keep bees on several organic farms, and they are lovely to look at. But I choke when someone starts to wax poetic about organic agriculture being in harmony with nature. Try to explain that illusionary harmony to the unfortunate former denizens of the diverse ecosystem that existed previous to the clearing and tillage of that fertile land! In an acre of the former natural ecological community, there may have existed hundreds of species of plants and animals. When converted to farmland, you may be able to count the number of reestablished species on your fingers and toes. And those species of plants that are favorable to bees we generally refer to as weeds!

Habitat conversion to agriculture has changed the face of the most fertile lands on Earth. Unfortunately for the honey bee, the flora of converted lands, rather than being replaced with bee-friendly plants, are largely planted to crops that offer scant nutrition for pollinators (Fig. 5).

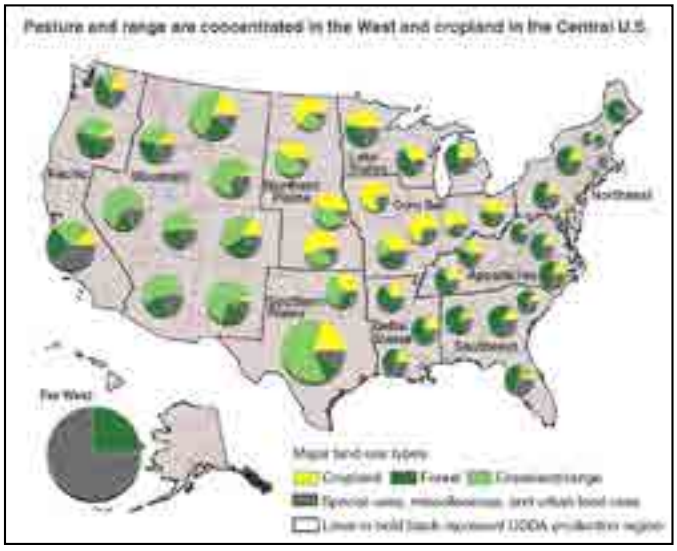

Figure 5. Land use in the United States. The yellow pie slices indicate the proportion of each area allocated to cropland--the most biologically productive acreage. Fully two thirds of that cropland is planted to only a handful of crops-- corn, soy, hay, wheat, and cotton, which produce forage for bees for only brief periods, if ever. Sources: USDA, Economic Research Service calculations based on data from Major Uses of Land in the United States, 2007; http://www.census.gov/compendia/statab/2012/tables/12s0858.pdf.

Only a tiny proportion of cropland actually requires pollination by bees, but even that fact hardly makes it good bee habitat. Take almond orchards, for instance. Over half of all managed hives in the country are transported to supply the pollination needs of this crop. Why? Because bees can't survive on land converted to almond orchards when the trees are not in bloom! The almond orchards represent over 1000 square miles of fertile California Central Valley land that becomes a "bee desert" for the 49 weeks of the year that the trees are not in bloom.

Farmers today are also moving away from their previous rotations of legume-rich (and bee friendly) pasture, upon which livestock were formerly put out to graze. The new model is to keep beef and dairy cattle in feedlots, bringing their food—in the form of hay, silage, and corn—to them. Compare the photos below that I took of two dairies in Indiana (Figs. 6 and 7).

Figure 6. Dairies, such as this one in Indiana, traditionally allowed the cows to graze on legume-rich, bee friendly pasture, often rotated with corn or other crops. Compare the bee forage potential of this ground to that of the dairy below.

Figure 7. At this "modern" dairy corn will be grown for silage, and brought to confined animals in the name of "efficiency." Note the distinct lack of bee forage in the foreground.

Newer beekeepers may not notice the effects of land use change due to the "shifting baseline syndrome"—in which we take for granted the current state of affairs, not knowing or remembering how it used to be. In this matter, the old timers (once you get past the "the older I get, the better I was" part) are a valuable resource of historical knowledge to which we can compare the situation of today. For example, I ran my hives to irrigated alfalfa for some 25 years, until the demand for high protein "dairy hay" caused the farmers to start cutting it at the slightest hint of bloom, greatly reducing the honey crop. Even so, since summer bee pasture is at such a premium in the West, it got to the point that I could throw a rock and hit another beekeeper's hives at any of my long-held locations. So even though one would not see any particular change in land use in the area, those fields went from being my most productive locations to not being worth the effort to move bees to.

Verdict: Although habitat conversion is not likely the proximate cause of colony mortality, colonies stressed by lack of good forage are less able to cope with parasites, pesticides, overcrowding, and other insults. The conversion of meadows and other biologically productive lands to monocultures, the practice of fencepost-to-fencepost tillage and the elimination of hedgerows, "clean farming" requirements by food processors to remove extraneous animal habitat, the shift away from pasturing livestock, and the placing of fallow lands into cultivation, have all resulted in loss of bee forage. Such habitat change is the scientific community's number one suspect for pollinator decline in general.[18] It doesn't directly cause CCD, but colonies that suffered from CCD often came from areas of poor forage. This physical elimination of food sources is likely a major cause in increased colony mortality worldwide, since malnourished colonies cannot thrive.

It will be difficult to reverse the trend, but land management practices can make farmland more pollinator friendly. A number of organizations worldwide are promoting such practices, and public pressure will greatly help to promote the conservation of biodiversity. See References for more information.

Summary so far
None of the above discussion is revelatory, since this series is largely retrospective. However, I felt it necessary to grant some myths a dignified death. Next I'll move onto some more contentious issues, such as agricultural exposure, GMO's, and pesticides.

Acknowledgements
Thanks as ever to my friend and collaborator Peter Loring Borst for his untiring help in literature review. And thanks to all the researchers who perform the tedious hard work of investigating colony mortality—it is only through their efforts and helpful correspondence that I could attempt my methodical analysis of this subject.

All would be academic if it were not for the smart and hardworking professional beekeepers who keep me informed. My sons and I are continually learning how to better manage our own hives. My articles are simply a reflection of what goes through my head each day as I try to digest all the scientific research, and then apply it in a practical manner to our own operation.

Most importantly, thanks for the appreciation and support that I get from beekeepers large and small worldwide. We are all in this together.

Further Reading
OPERA (2011) Bee health in Europe - Facts and Figures http://www.pollinator.org/PDFs/OPERAReport.pdf One of the best overall objective reports, from a European think tank called OPERA. I highly recommend.

AFSSA (2009) Mortalités, effondrements et affaiblissements des colonies d'abeilles (Weakening, collapse and mortality of bee colonies). http://www.afssa.fr/Documents/SANT-Ra-MortaliteAbeilles.pdf This free download, translated into English, is an excellent overall review of colony mortality in Europe by the French Food Safety Agency.

Landscape enhancement for bees

Support beekeeper Kathy Kellison's nonprofit Partners for Sustainable Pollination http://pfspbees.org/

Project Apism is working to get growers to plant bee forage in California

http://projectapism.org/content/view/142/61/

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An excellent download for increasing pollinator habitat on farmland can be found at ftp://ftp-fc.sc.egov.usda.gov/NH/WWW/New%20England_NRCS_Pollinator_Tech_Note_FINAL.pdf . And to their credit, Syngenta has a program! http://operationpollinator.com

(Endnotes)

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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.

HONEY JUDGING TUTORIAL AT SYDNEY SHOWGROUND

The Royal Agricultural Society of NSW Agriculture Committee is pleased to announce that they will once again be holding a one-day honey judging tutorial at Sydney Showground on Monday 13 October, 2014. There is no cost to participate in this very interesting tutorial.

Mr Bruce White OAM will lead the judging procedure of honey, comb honey, queen bees and pollen. Cate Burton will enlighten guests on the technique of judging beeswax, wax moulds and candles

The purpose of this tutorial is to teach anyone that is interested in judging honey or honey products, or who would like to become more competent in judging. Bruce, who will be conducting the tutorial, spent 43 years providing services to the beekeeping industry as an employee of the NSW Department of Agriculture. In his retirement, Bruce continues to be very generous with his time and knowledge, passing on his extensive experience and enthusiasm for honey bees.

Bruce is the beekeeping teacher for the Open Training and Education Network of TAFE and also co-wrote educational packages for the Australian beekeeping industry. He has also judged at the Sydney Royal Apiculture Competition for 29 years, which has now grown to become the Sydney Royal National Honey Show.

Cate Burton took up candle making as a hobby a decade ago and began selling her products under the Queen B brand. Her products are handmade from pure beeswax candles. Cate has been a very successful Exhibitor at the Sydney Royal National Honey Show for many years. At the 2014 Show, she judged candles, beeswax and wax moulds for the first time. Cate is also an urban beekeeper.

If you have any questions, or would like to be sent a booking form so you can enrol for this tutorial, please don't hesitate contacting: Elaine Rogers on 9704 1449 or erogers@rasnsw.com.au

AUSTRALIAN HONEY BEE INDUSTRY COUNCIL

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LATEST ON HONEY LEVY REFORM & INCREASE
The ballot for the levy reform process has been finalised. The final vote was 86% in favour of the levy increases and 92% in favour of lifting the threshold.

The process now moves on to the next phase where the Business Case is being finalised before submitting to the Department of Agriculture. After processing within the Department it moves on to other Departments such as Treasury and then onto the Minister.

Further drafts of the Biosecurity Plan and Code of Practice are currently being prepared. It is expected that these documents will be distributed to all of AHBIC's member bodies and state and commonwealth government representatives by the end of August. AHBIC is intending to hold a meeting in October to further discuss the development of the National Bee Biosecurity Program and the Code of Practice

AHBIC AGM
A very successful AGM was held in Melbourne on 9 July 2014.

In the ballot for the two (2) Executive there were three (3) nominations. Trevor Morgan, Peter McDonald and Ken Gell. Elected were Peter McDonald and Trevor Morgan.

Thanks to Ken Gell for his work on the Executive.

For Chairman there was only one nomination, Ian Zadow and the Executive for 2014-15 is:

Chairman	Ian Zadow
Deputy Chairman	Rod Pavy
Executive members	Neil Bingley
	Craig Klingner
	Peter McDonald
	Trevor Morgan

Trevor Weatherhead was appointed Executive Director, for another 12 months, by the Executive.

AHBIC AWARD OF EXCELLENCE
The 2014 AHBIC Award for Excellence was presented to Dr Garry Levot at the dinner at the VAA Conference on 8 July 2014.
The citation is as follows:

DR GARRY LEVOT
The Australian Honey Bee Industry Council Inc. (AHBIC) is pleased to award the 2014 Award of Excellence to Dr Garry Levot, Principal Research Scientist with the New South Wales Department of Primary Industries. Garry has been responsible for the development of the harbourage for the small hive beetle which was commercialised as the Apithor trap. It has been a boon to the beekeeping industry in keeping the small hive beetle under control.

Garry has always been willing to attend beekeeping conferences, field days and meetings to report on his work. The beekeeping industry has certainly gained a friend in Garry for his approachable style.

AHBIC Chairman Ian Zadow congratulating Dr Garry Levot

A time line of his research is as follows:

- April 2003 – Commenced a 2 year RIRDC funded project '***Insecticidal control of Small Hive Beetle***' which aimed to: "*Identify the most appropriate insecticides and insecticide application method to control small hive beetles in hives*". The anticipated outcome was for bee keepers to have a registered insecticide for the control of small hive beetles.

- March 2005 – Final report was submitted. This marked the completion of the '***feasibility***' stage of work aimed at producing a refuge trap based on fipronil-treated corrugated cardboard.

- 2005-07 – New RIRDC funded '***research and development'*** project – '***Insecticidal control of small hive beetle – developing a ready-to-use product***' was undertaken. The aim of this project was to produce a final harbourage design and to field test it in commercial hives.

- February 2007 – Called for ***Expressions of Interest*** from pest control companies interested in and able to commercialise the harbourage.

- March 2007 – Received formal letter from BASF requesting that we withdraw from all activities involving fipronil.

- September 2007 – final report submitted to RIRDC. Reported project results at **APIMONDIA 2007** (Melbourne).

- January 2008 – New Zealand patent granted for the harbourage.

- November 2008 – finalist in **NAB Agribusiness Awards for Excellence** for work to produce the harbourage.

- May 2009 – Australian patent granted for harbourage.

- July 2009 – Following the lapsing of certain fipronil patents a second call for **Expressions of Interest** was published in the national press in the hope of finding

a commercial partner to develop and register the harbourage (with financial and technical backing from NSW DPI and RIRDC). Two companies were short-listed but one withdrew following threats of legal proceedings by BASF.

- June 2009 - A new two year long RIRDC funded project – '***Commercialisation of the small hive beetle harbourage device***' commenced and included funds to retain a regulatory affairs consultant to deal directly with the APVMA.

- August 2009 - **Ensystex Australasia Pty. Ltd.** entered into a commercial agreement with NSW DPI and RIRDC to produce, market and distribute the product. A royalty was to be paid to RIRDC.

- September 2010 - The APVMA, acknowledging the favourable data that had been generated in the **feasibility** and **R&D projects** and knowing of the desperate need for an effective control strategy for the beetle, granted a **general use permit** that allowed bee keepers to use APITHOR™.

- December 2009 – injection mould for the harbourage were delivered to Ensystex (Thailand) for branding and manufacture of APITHOR™.

- July 2010 – USA patent granted for the harbourage.

- In November 2010 following the commercial arrangement with Ensystex, APITHOR was named a finalist in the **NAB Agribusiness Awards for Excellence**.

- In May 2011 **Minister for Agriculture Katrina Hodgkinson** launched APITHOR™ at the NSW Apiarists' Association Annual Conference in Dubbo.

- June 2012 -After a protracted assessment period APVMA announced its intention to refuse registration of APITHOR™ due to insufficient data on its 'long-term' effects on the bee health. A request for a small amount of supplementary funding was submitted to RIRDC to conduct a final field trial that would run for six months and which would be conducted according to the principles of ***Good Laboratory Practice*** and include residue analyses of honey and wax.

- October 2012 - Honey and wax residue analyses and statistical analyses were completed and the whole trial written up and submitted to APVMA by 31 May 2013. Results demonstrated again that adult beetles were effectively controlled and that deployment of APITHOR™ according to label directions had no deleterious effects on bee health and did not leave any detectable residues in honey or wax even if the product is used continuously for six months.

- 11 December 2013 - The APVMA accepted the advice of an independent review and granted APITHOR® full product registration.

VISIT BY NEW ZEALAND MINISTRY OF PRIMARY INDUSTRIES

On Friday 25 July, two (2) officials from the New Zealand Ministry of Primary Industries came to Brisbane and I took them to see Steritech and Capilano.

They will be the ones who write the Import Health Standard (IHS) for honey going into New Zealand. Australia has been trying to have the Kiwi market opened for many years now. The obstacle has been the fact that New Zealand does not have European foulbrood (EFB). Australia has put forward the fact that honey goes from the eastern States to Western Australia but must be heat treated.

Another recent development is, will this heat treatment also kill Israeli Acute Paralysis Virus (IAPV)? New Zealand does not have IAPV and the fuss that the USA has made about IAPV in recent years has focused on this virus. There is work being done on this at the moment to find out if IAPV will be killed by the heat protocol for EFB.

At Steritech they saw how the beekeeping equipment is sterilised. At Capilano they saw how the process for heat treating is carried out and the QA process that goes with the treatment.

What they saw will be part of our Government to Government negotiations for having the IHS put in place. This then will give Australian packers the opportunity to export to New Zealand under the IHS. I suspect this will be a long process as it is expected that the New Zealand beekeepers will lodge objections to the IHS once it is published.

INQUIRY INTO COUNTRY OF ORIGIN FOOD LABELLING

I appeared before the House of Representatives Standing Committee on Agriculture into Country of Origin Food Labelling. This was in Brisbane on Thursday 3 July 2014.

AHBIC had put in a submission. In evidence the Committee asked about products being exported from Australia labelled Made in Australia when the main ingredient was imported.

ASIAN BEES FOUND ON HORN ISLAND

The Queensland Department of Agriculture, Fisheries and Forestry (QDAFF) with the help of Dr. David Guez found two (2) nests of Asian bees on Horn Island after the initial finding of foraging bees back on 14 May, 2014. Examination of these nests have not revealed any mites either internal or external. This is good news. Not so good is the QDAFF's advice that they do not intend to do any more on Horn Island. AHBIC will be taking this up with QDAFF.

CHANGES AT RIRDC

The Honey Advisory Committee and the Pollination Advisory Committee have been combined into one Committee. This is in response to the Rural Industries Research and Development Committee (RIRDC) looking at full cost recovery for the running of the Advisory Groups. ***The new Committee membership is:***

Dr. Michael Hornitzky – Chairman
Ben Hooper – beekeeper
James Kershaw – beekeeper
Ben Brown – Almonds Australia
Angus Crawford – Apple and Pear Australia Ltd
Dr. Saul Cunningham - researcher- CSIRO
Dr. Boris Baer – researcher – University of Western Australia
Peter Whittle or Greg Murdoch – HAL
Dave Alden - RIRDC

MISLABELLED HONEY

Most beekeepers would be aware of the ongoing problem with honey coming into Australia from Turkey

that is not honey. There was the case of the Victoria Honey that was the subject of a recent ACCC fine. A corrective notice has been placed on the Basfoods website and I believe will also appear in bee journals. It can be found at http://www.basfoods.com.au/d_about.asp?id=34&t=Corrective+Notice

AHBIC has a further three (3) cases of imported honey from Turkey not being honey and recently added another one to the list. We have been told that there is more imports on the way.

We would urge beekeepers to keep a look out in fruit shops and service stations for any honey on sale, particularly if it comes from Turkey. The brands which we have complaints with ACCC are: - HiHoney, Sunshine Honey, Hecham Honey and Golden Honey. Despite the ACCC fine and the undertaken given to have all Victoria Honey removed off the shelves, a new appearance of Victoria Honey in Brisbane recently has been reported to the ACCC. So if you see Victoria Honey let the ACCC and AHBIC know. If you see other brands of honey, particularly from Turkey, on the shelves let AHBIC know.

AHBIC has been making representations to the Import Food Section at the Department of Agriculture to have 100% of honey from Turkey checked. Currently there is only 5% of all imported honey checked. AHBIC believes it has made a good enough case to warrant the 100% inspection of any honey from Turkey. They will let us know next week what action they propose.

AHBIC has also written to the Federal Minister for Health, Peter Dutton, asking him to agenda at the next meeting of Health Ministers the need to enforce the Australian and New Zealand Food Standard 2.8.2. AHBIC argues that it is not good enough to say that it is not a threat to public health therefore nothing will be done. The standard needs to be enforced. AHBIC has also asked the Minister for Agriculture, Barnaby Joyce, for his assistance in this imported honey issue.

STOP PRESS

AHBIC had a phone hook-up with ACCC yesterday (1 August) and I can report the following:-

- ACCC have contacted those distributors of the imported honeys that AHBIC has complaints with ACCC about. Outstanding are four for Turkey, one from Italy and one from Serbia
- ACCC is happy with the responses from those distributors who have agreed to remove the products from the market place. This includes on supply customers as well as their own stock.
- The distributors have indicated they will not be ordering these products again.
- Re the complaint about the reappearance of Victoria Honey on the shelf in Brisbane after the fine and undertakings to remove it from the shelves, ACCC believe they are close to resolving this and AHBIC looks forward to hearing what action has been taken.

So from here on these products should disappear from the shelves. So if you see any of the brands, mentioned earlier in this newsletter, on the shelves let AHBIC know. Details would be brand, location and date. Also if you see any new products, particularly Product of Turkey, also let us know with the same details.

As been mentioned earlier in the newsletter, the focus of AHBIC now will be to have all Products of Turkey checked by the Food Import Section of the Department of Agriculture as this will stop these mislabelled products before they reach the shelves.

There will be another phone hook-up with ACCC at a later date to further inform as to what has happened.

AHBIC AGM ATTENDEES

Front Row: AHBIC Executive Members - Neil Bingley, Craig Klingner, Chairman Ian Zadow, Deputy Chairman Rod Pavy, Trevor Morgan, Peter McDonald and Executive Director Trevor Weatherhead , along with Representatives from State Associations and producer member bodies Photo: Neil Bingley

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A warm welcome to the following new members:

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Ted Lowick	Nemingha

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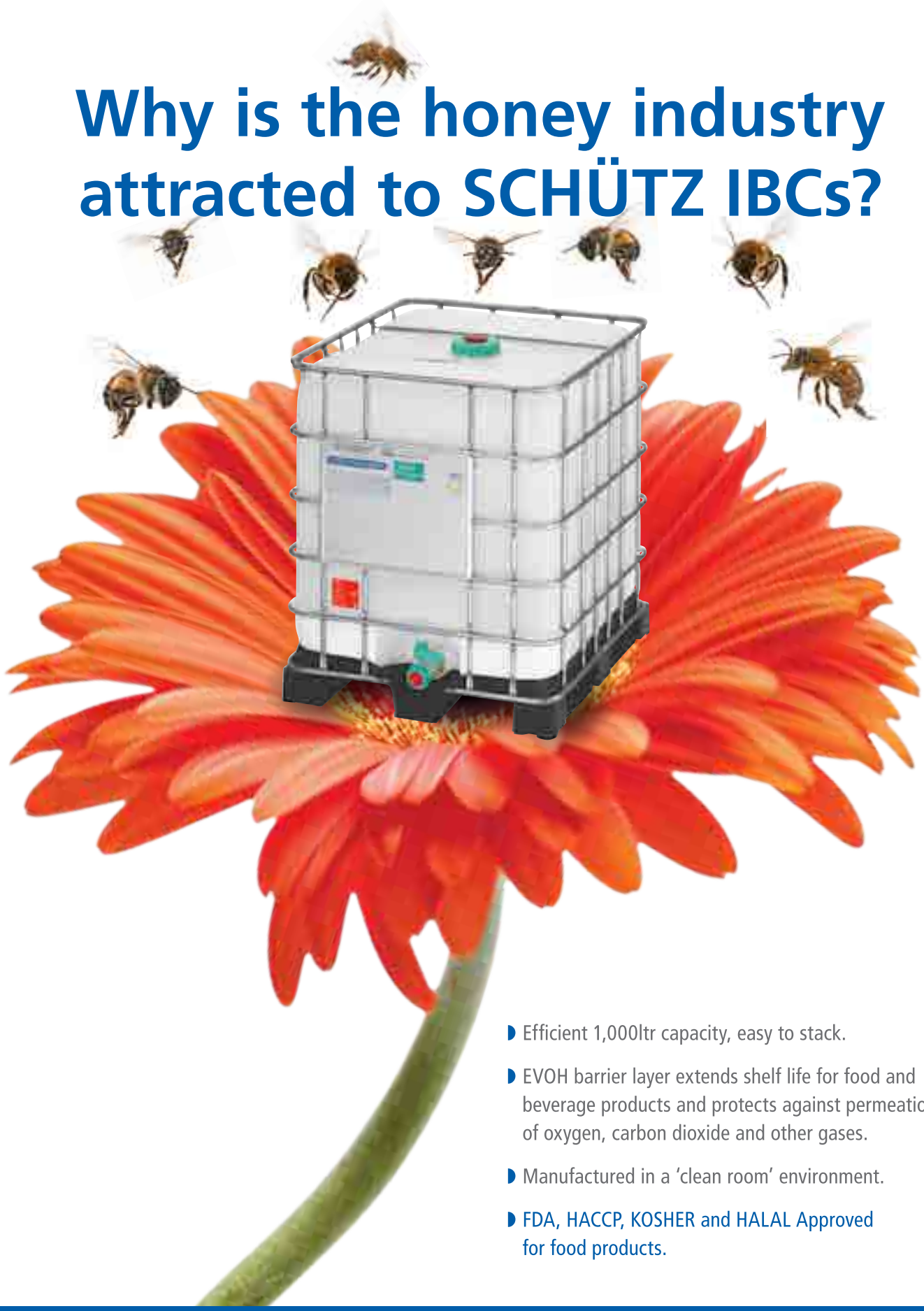

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