

The Bee Cause



Volume 7, Issue 4

April 2010

- Next general meeting is **7:30** Tuesday, **April 13th** at the **River Heights Community Centre, 1370 Grosvenor Ave., Winnipeg.**
- (in room right of main-door)
- **Speaker: David Ostermann**
Current industry issues, splitting hives etc.

Reminder April
Is the last day to renew your
2010 Registration

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High Levels of Miticides and Agrochemicals in North American Apiaries: Implications for Honey Bee Health

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Abstract

Background: Recent declines in honey bees for crop pollination threaten fruit, nut, vegetable and seed production in the United States. A broad survey of pesticide residues was conducted on samples from migratory and other beekeepers across 23 states, one Canadian province and several agricultural cropping systems during the 2007–08 growing seasons.

Methodology/Principal Findings: We have used LC/MS-MS and GC/MS to analyze bees and hive matrices for pesticide residues utilizing a modified QuEChERS method. We have found 121 different pesticides and metabolites within 887 wax, pollen, bee and associated hive samples. Almost 60% of the 259 wax and 350 pollen samples contained at least one systemic pesticide, and over 47% had both in-hive acaricides fluvalinate and coumaphos, and chlorothalonil, a widely-used fungicide. In bee pollen were found chlorothalonil at levels up to 99 ppm and the insecticides aldicarb, carbaryl, chlorpyrifos and imidacloprid, fungicides boscalid, captan and myclobutanil, and herbicide pendimethalin at 1 ppm levels. Almost all comb and foundation wax samples (98%) were contaminated with up to 204 and 94 ppm, respectively, of fluvalinate and coumaphos, and lower amounts of amitraz degradates and

chlorothalonil, with an average of 6 pesticide detections per sample and a high of 39. There were fewer pesticides found in adults and brood except for those linked with bee kills by permethrin (20 ppm) and fipronil (3.1 ppm).

Conclusions/Significance: The 98 pesticides and metabolites detected in mixtures up to 214 ppm in bee pollen alone represents a remarkably high level for toxicants in the brood and adult food of this primary pollinator. This represents over half of the maximum individual pesticide incidences ever reported for apiaries. While exposure to many of these neurotoxins elicits acute and sublethal reductions in honey bee fitness, the effects of these materials in combinations and their direct association with CCD or declining bee health remains to be determined.

Citation: Mullin CA, Frazier M, Frazier JL, Ashcraft S, Simonds R, et al. (2010) High Levels of Miticides and Agrochemicals in North American Apiaries: Implications for Honey Bee Health. PLoS ONE 5(3): e9754. doi:10.1371/journal.pone.0009754

Editor: Frederic Marion-Poll, INRA - Paris 6 - AgroParisTech, France

Received December 22, 2009; **Accepted** February 26, 2010; **Published** March 19, 2010

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Presidents Comments --- April 2010**President's Comments --- April 2010**

It is often a common topic in many coffee shops in Manitoba, and this same topic---- the Weather --- is now just as common a topic here in Sanchez Mira in NE Luzon, one of the largest islands in the Philippines. It is not supposed to rain at all until late April or May in this area. Yet the last 5 days have been rainy with a few days of cloud preceding the intermittent drizzles and no signs of the normal +30 sunshiny days that early March presented. AND the situation here is that this is supposed to be peak honey flow time for this area, which is what the beginning beekeepers have been preparing for since January. The hives are quite strong, the shallow supers are on, but it is raining frequently day and night. There is no shortage of capped brood frames, pollen, nor of field bees, but the scale hives are not showing much weight change the last several days.

And bringing this concern back to Manitoba, my Internet connections show that your areas are showing unseasonable temperatures on a regular basis. Do you unwrap the bees early, move them from indoors, put on pollen patties, start a feeding program or just wait it out and hope the bees will manage the unexpected higher than normal temperatures. A test of the beekeepers fortune telling capacity is now taking place. To move bees outside or remain indoors, take off some winter wraps, cover up hives with snow if possible, start feeding, don't feed, thus these are some of the new questions in beekeeping management.

The new government support program for the improvement-exchange of your beekeeping equipment from galvanized to stainless steel or the old dark comb exchange for new foundation program is a good opportunity to modernize-make more food safe- have new foundation etc. available in your operation This is a very positive direction for the beekeeping community as well as a good use of the Agriculture budget. It indicates that there is a concern for the quality of food available in the market, as well as a reminder to all beekeepers that they are at the beginning of the food production chain for honey. For more details or application forms, contact your Provincial Apiarists- Rheel LaFraniere, or David Ostermann. There is a time frame to this program, so do not wait too long before gathering information and applying.

The continuing flow of negative news in regard to honey bee populations in the U.S.A. certainly confirms that the high mortality rates of the honey bee populations will continue to make news and be of concern not only to beekeepers, but also to the general public. Beekeepers in general are receiving more questions on the health of the honey bee as they, like the general public, realize the importance of the pollinators in the natural environment.

There is a real concern that the buildup of a variety of pesticides and herbicides in the food chain is leading to unexpected negative results for the insect world. Are we forgetting-ignoring the warnings first clearly heard in Ms Rachel Carson's book **Silent Spring** that first appeared in the late 1950's.

If so, we do it at our children's' peril, as they will be suffering the consequences of the unexpected mix/blending of a variety of dangerous chemicals that are now part of the Agro-Food industry. For them **Profit** seems to more important than doing the essential cross study effects of their continued introduction of new chemical mixes into the food growing world.

It is time that our food safety regulators are given greater powers in enforcement that force the manufacturers to prove to an unbiased body that their latest chemical is safe at all levels of the food chain. If this proof is not available, then there should not be any license to market the product anywhere in Canada. I would like to include the larger world in this decision, but realize that jurisdictions will vary according to the country of sale.

The general public has begun to be aware of the capacity of the natural world to quickly become resistant to the poisons/chemicals being used in large scale food production and are asking for better regulation of the multi-national

food giants. The long term effects of these dangerous cocktails of chemicals are beginning to be recognized, and the general public is beginning to take action.

The world wide recognition **Day of the Honeybee** on Saturday May 29th is continuing to gather support all over North America. Our planned display at The Forks is underway, and RRAA has been given permission to make suitable plans for that day in the south aisle area of The Forks. There will be equipment displays, live frames of bees and a few vendors promoting and selling containers of honey. If RRAA members are able to come down for a few hours to meet with the public, it would be appreciated. Please contact me by telephone, 284-7064 or by email at Charles Polcyn, <charles_polcyn@ymail.com>.

Our speakers' topic at the April Meeting will be on spring management as well as a survey of the honeybee industry. That should be a timely topic for all of us as most of our hives should have been opened for inspection and our wintering success will be known.

The hopes for good weather and a good honey crop are high on our list of a Wish list for the Summer of 2010.

All the best --- Charles Polcyn --- RRAA President
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Minutes of the RRAA General Meeting River Heights Community Club – March 9, 2010

7:30 PM: Jim Campbell welcomed twenty-two members to the March RRAA meeting.

Minutes of the February 9th meeting approved: Moved by Ken Fehler and seconded by Ted Scheuneman to approve the minutes as they appeared in the March *Bee Cause*. No errors or omissions were noted.

Announcements: Charles is preparing to leave for the Philippines where he will be working with some of the local beekeepers.

Obsolete Honey Equipment: Jim Campbell outlined MAFRI's program that provides assistance of up to \$1000 to replace galvanized extracting equipment and/or old (black) brood combs. More information is provided by the *Food Safety Program, for Farms* document which will soon be mailed out to each registered beekeeper. The document was also made available at the meeting.

Financial Report: John Speer gave us a report on the Association's membership. Those making late payments will still receive the April *Bee Cause*.

MBA Membership: Jim Campbell explained the different types of membership in the Manitoba Beekeepers' Association (and Canadian Honey Council).

Foreign Workers: Jim explained the problem of having enough summer workers which affects mainly the larger honey producers. The MBA (along with the other provinces) is working with the CHC to have the Federal and Provincial governments rectify this situation.

Hawaiian Queens: Hawaiian queens will soon become available. Since *Varroa* was discovered in Hawaii, the US has had to modify their protocols for export to Canada.

National Day of the Honey Bee: MBA has voted in favor of May 29 as the official day for recognizing honey bees and the work that they do. To celebrate this event, RRAA will have a pollination display at The Forks on May 29th. Two vendors will be on hand to sell honey.

Spring Hive Checks: Ted urged everyone to check on the amount of food left in their overwintered colonies and in his words, "Give them a chance."

Loonie Draw: This month the loonie bin contained \$18.00. Mike Grysiuk had his name drawn on two tickets, one for a cap and the other for a toque. Stan Grysiuk won the other toque and Nelson Szwaluk won the other cap. Linda Marshall won the bee adventure story DVD for children. Brian Smith won the ceramic honey pot. Jeff S. won the jar of Chocolate Flavored honey and Stan Huzey's ticket was pulled for a jar of Brazilian honey. Ken Fehler got a jar of "Express" brand honey. Thank you to those who donated the great draw items and also everyone who purchased tickets.

Program: Video Presentation - *The Silence of the Bees*

Ron Rudiak, recorder – RRAA

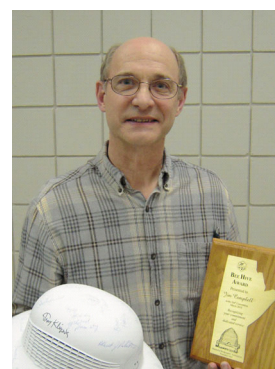
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MBA Honours Campbell

Jim Campbell, of Stonewall, received recognition at the recent Beekeepers Symposium, in Brandon.

The Manitoba Beekeepers' Association (MBA) recognized a long time beekeeper and contributor to the beekeeping industry with its "Bee Hive Award". Ron Rudiak and Lorne Peters presented the award at the March 5th banquet. The award recognized the 30 years of industry support by Jim Campbell, long time member of both local and provincial organizations.

Jim has been a member of MBA since 1976, and Red River Apiarists' Association (RRAA) since 1977. It wasn't long



(from pg 1)

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Funding: Funding was received from the Florida State Beekeepers, National Honey Board, Penn State College of Agriculture Sciences, Project Apis mellifera (PAm), Tampa Bay Beekeepers, The Foundation for the Preservation of Honey Bees, and the United States Department of Agriculture Critical Issues program. The funders had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript.

Competing Interests: The authors have declared that no competing interests exist.

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What should we be doing now?

By popular demand an article republished.

“Give ‘em a Chance”

By Ted Scheuneman an RRAA Apiculturist

After a long winter, beekeepers are anxious to see how their bees survived. Sometimes we find the boxes loaded with



bees. Other times we find very few bees, and this begs the question “What is to be done next?”

Honey Bee colonies can be manipulated in the springtime, after they have had at least three (3) days of good flying weather, or cleansing flight days. There are always some colonies that are really strong, with 8 full frames of bees, and there are some that may have bees on only 1 or 2 frames, yet appear healthy with a live queen. Without some kind of support, weak colonies will not be able to take advantage of the summer honey flow.

When weak colonies are boosted with a frame or 2 of brood and bees from a strong colony, chances are, some of the new bees will fly back to their original colony. At this time, brood on the transferred frames could get chilled and die. To pre-

vent absconding, the colony could be moved to another bee



yard however, often beekeepers underestimate the number of bees required to keep brood warm on cold April or early May nights. This could lead to weakening of the original

strong colony, and prove disastrous to the boosted colony.

Although tempting, combining weak colonies merely means having a larger weak colony, plus one queen will likely be lost. Weak plus weak still equals weak. Better to aim at creating a strong colony.

A method I have successfully used is merely placing a weak, but otherwise healthy colony, on top of a strong colony of 8-10 frames of bees and brood. The key here is to save both queens by placing a queen excluder between the two boxes.

Most of the time, a weak colony has surplus food. It is best to leave 4 frames of food and pollen, with two on each side of the box. The remaining frames are removed and replaced with empty brood frames. The top box with bees and brood nest is to go directly above the bottom box brood nest. If using an inner cover, close off the top entrance, or turn over the cover, in order to conserve energy in the top box.

Prior to placing the weak colony on top, spray the bees with warm 1:1 sugar syrup, containing 4-5 drops of anise per 1 litre of mixture. About 100cc is sprayed equally into the top and bottom box. Give ‘em a Chance continued from pg 1)

Uniting the two boxes should be done late in the day, preferable about 1 hour before dark. Bees are most tolerant in the evening and night, and they have all night to greet and lick each other. The next morning, it is business as usual, with no biting and pushing at the entrance. Acceptance and support of the upper box with the weak colony is astonishing, plus you still have both queens!

The Manitoba Queen Breeders’ Association

(MQBA) is continuing their relationship with the University of Manitoba in the coming year. To build on previous successes and take advantage of new initiatives, they’re happy to accept new members. New membership is \$500. For more information contact Tim at 204-564-2315 or Merv at 204-725-1479.

(Continued from page 4)

In 7-10 days, check your newly created hive. If a half box full of bees, or more, can be seen, everything is OK! Should you find only a few bees in the top box, likely the queen was not strong or healthy enough, and she has been killed.

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This happens in about 5% of cases. If this is the case, remove the queen excluder to permit the bottom queen to expand the brood nest into the top box. By about the middle of May, this hive should have 2 boxes full of bees and brood, and can be split at that time, if desired.

Where everything went as planned, check at 4 weeks from the day the 2 boxes were united. Both upper and lower boxes should be full of bees and about 6 frames of brood. At this time you need to decide whether to leave the bees for another 6-10 days (i.e. if weather is cool), or whether the top box should be removed and taken to another bee yard about 5 km away to avoid bees back drifting.

Should the boxes not be filled with bees, reverse the inner cover to create a top entrance. This permits drones to leave the colony to fly; otherwise the queen excluder traps them inside.

If the boxes are left together for too long, the bees may become overcrowded, with the risk that both boxes of bees may swarm. Remember, bees are being produced at about 4000 per day at this time in your hive. To put this in perspective, about 4000 bees is about one 2-pound package of bees, every second day in your two-story hive.

The next step is **mandatory!** As soon as the boxes are separated, a second box **MUST** be added to each. Otherwise, you will crowd the bees, and they will swarm! As stated before, move the new two-story hive to another location.

This method has proven to be a win-win situation, as it doesn't cost any money (i.e. for a new queen), you make use of the equipment you already have, and it takes very little time and effort. The best part is, colonies you save reward you with a normal honey crop!

What I've discovered, in my many years as a keeper of bees, is that we as beekeepers are likely making mistakes that brought about the weak colony situation. Although often it is hard to admit, beekeepers must acknowledge the fact that bees never do something

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until he was elected to the RRAA Executive in 1980 as Publicity Chair, holding various executive positions for over 25 years. Similarly Jim was elected a director of MBA in 1983, 88 and 1992, and has been the RRAA rep on that board continuously since 1993. In 2004 he was appointed secretary of MBA, a position he retains. Jim is also a member of the Canadian Honey Council since 1981. In addition to promotional activities at the yearly honey show since 1980, more recently Jim was the catalyst for preparations for the MBA Fee/Levy regulation, and support for emergency use registration of Apivar.

Along with a Beekeepers' helmet signed by Executive of RRAA, CHC and MBA, the "Bee Hive Award" plaque, culminated the presentation.

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Food Safety Program, for Farms

The federal, provincial and territorial governments are investing \$1.3 billion over five years into Growing Forward programs, on a cost-share basis. Growing Forward supports a profitable agriculture sector through increased competitiveness, innovation and risk management.

The Canadian Beekeeping Industry's Safety Quality and Traceability Program (CBISQT) is soon expected to be recognized by the Canadian Food Inspection Agency (CFIA) as the national, Canadian, on-farm food safety program for honey. While the CBISQT's safety program is still in the approval process, eligible beekeepers can apply for up to \$1,000 for equipment and good agricultural practices (GAP) through the Growing Forward **Food Safety Program, for Farms.**

All Manitoba producers registered as active beekeepers with Manitoba Agriculture, Food and Rural Initiatives (MAFRI) are eligible for this program. It provides funds to set up, implement and monitor food safety, biosecurity and traceability systems on farms. It helps farmers and producers identify, reduce and manage risks and anticipate ongoing demands for increased food safety practices.

Applicants to the Food Safety Program, for Farms (continued on page 8)

FYI Manitoba Agriculture Food & Rural Initiatives

There is a foot a new partnership event at **Capturing Opportunities 2010 - the Entrepreneur Boot Camp.** We are pleased to work together with:

§ Chad Hughes, President and CEO of ResQ Mobile Services and the 2009 Manitoba Venture Challenge Winner,

§ Bonnie Nay-Draper, Manitoba Entrepreneurship Training & Trade – Western Regional Office and

§ Rob Warren, U of M Asper School of Business and the Stu Clark Centre for Entrepreneurship.

This new 2 day event is a fantastic opportunity for new entrepreneurs or individuals with an idea to come and learn how to pitch their idea to others for financing or to market their enterprise to others. This event is being offered **Free of Charge** for this first year and participants have the opportunity to win three prizes valued at \$2000, \$1500 and \$1000.

The purpose of this Boot Camp is to provide people with the skills and techniques to take their ideas to others. Even if your idea is still in the very early concept stage, we encourage people to attend. It may lead to applying to the Manitoba Venture Challenge in the Future!

There is a limited registration so call now to register or for more information.

Laurie Crowe 761-0551 or Bonnie Nay-Draper 726-6253

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Editor's Note by Ken Rowes

It is a bit discomfoting to find my speculation has come true. In 1998 during my son's science fair propolis project I had enquired at the Freshwater Institute Fisheries Laboratories to have beekeeping products evaluate for pesticides. The analytical assessment could not be done due to conflict of interest and costs. With such contaminants showing up in fish and northern whales and mammals I felt that these chemicals would be in what our bees are digesting. Ultimately a dilemma to our beekeeping industry. We are about to find the impacts as our lead article is bringing to light.

Well as the spring moves along pollen recently showing up on the willows. I suppose everyone's hives are out of wintering wraps or taken out of indoor winter-rooms. Although my outdoor wintering was zip my indoor winter was much better—14 out of 19 (73.6%). Like Ted says in 'Give'm a chance' some colonies are too weak so will need to give them a chance!

Hoping your spring management is off to a great and positive start. If you have questions come to the April 13 th meeting. For those who would like to pick up farm eggs Jim Moir will be selling 'em at the meeting.

CLASSIFIED

1. For Sale: 25 Gallon single walled honey sump. Electric uncapping knife with preset thermostat, like new. 1 complete Top Bar Hive. Also 4 frame nucs available mid to late May. Contact: **Lance Waldner** Home Cell 204- 712-6783 lancewld@gmail.com

2. Wanted: S.S Bottling Tanks Single wall or double wall with water jacket, good condition or repairable. Also needed—Belt Barrel Heater for drums: **call Brian Rich 204 739-5481**

3. For Sale: 30 Frame Maxant Extractor. please call **Javad Niazi At 885-0576 or javadni-azi@yahoo.ca**

4. FOR SALE: Clearance of a variety of Beekeeping Equipment- Honey Supers, Brood Boxes, Wax Dipped Feeder Boxes, Queen Excluders, Bottom Boards, Lids, Empty Shells, Bare Frames, etc. Reasonable Prices on all items. Call Charles Polcyn at 284-7064 or email at: charles_polcyn@ymail.com

The Bee Cause is the official publication of the Red River Apiarists' Association for distribution to its members and their colleagues in the beekeeping industry. It is published eight times a year on a monthly basis except December and the summer months of June, July, and August when membership meetings do not occur.

Articles can be best submitted in word documents as email attachments. Though they may be edited for spelling and basic grammar, no changes will be made to their contents, message and opinions. They are those of their originator and not of the Red River Apiarist Association.

Deadline for any submission to this newsletter is the second Saturday preceding the membership meeting to allow for publishing and mailing delays. Regular membership meetings are normally scheduled 7:30 PM on the second Tuesday of every month at the River Heights Community Centre located at 1370 Grosvenor Avenue in Winnipeg except the months as noted above.

The Red River Apiarists' Association, formed in 1963, represents the beekeepers of the Red River Valley and environs in southern Manitoba. The association provides a forum for the promotion of sound beekeeping practices through education, networking opportunities, meetings, field days, workshops, presentations by local apicultural experts, as well as the dissemination of this monthly newsletter.

We are on the web!
www.beekeepingmanitoba.com

5. For Sale: Downsizing

100 hives and contract with Bee Maid available. Also selling 3,4 and 5 frame nucs available May 15th. Will sell 10 frame honey supers all white frames, June 1- many in new boxes, equipment in excellent condition; and excluders, wintering inner covers, bottom boards etc. Contact Dennis Ross 878-2924 or Rosskr@mts.net

6. For Sale: Equipment for sale, 10 double brood chambered colonies. a 10 frame Maxant extractor, commercial winter wraps, supers and frames, tools, covers, stands, bottom boards, feeder pails, sump pump , refractometer, much more contact Leo Demers 204-379-2518.

7. For Sale: For 2010 well established Strong –Healthy 4-frame nucs with queens bred from my own gentle hardy local stock. No foulbrood, chalkbrood, nosema, tracheal mites, varroa count very very low in my apiary. Also new inner covers made of 3/8" plywood with outer rim 7/8" x 7/8" pine \$7.50. Ph Ted Scheuneman 338-6066, West St Paul

8. Wanted granulated white honey and/or wildflower honey contact **Tom Dixon 475-5059**

Extension Report By David Ostermann

Here's a summary of some extension activities and updates:

Wintering and early spring - Early winter reports suggest lower than normal winter losses, as of late March. This is finally good news after a few bad years in row. The nice days so far have been good for cleansing flights, pollen patties, feeding, etc. Certainly, bee nutrition is very important these days and this spring, beekeepers will be trying to keep their wintered bees as healthy as possible. According to Jake at the Co-op, the demand for pollen patties has increased noticeably the past couple years.

rAFB - Resistant AFB (rAFB) has been confirmed in an operation in the Southwest region of the province for the first time. The results were confirmed late last year. In the past, the disease has also been confirmed in a limited number of operations in the Northwest and Central regions. This latest find doesn't appear to be linked to the other occurrences of the disease; that is, it doesn't appear to have spread, rather it appears to have developed within the operation. MAFRI staff are working with the operation to assess and manage the disease. The general Apiary Inspection Program is scheduled to commence this spring as it has in past years.

Queens – Following the announcement in October 2009 of finding varroa on honey bees on the Kona side of the big island in Hawaii, there was discussion about queen shipments into Canada. Led by Dr. Medhat Nasr, Chair of the CAPA Import Committee, these discussions concluded around the time of the MBA convention in early March and queens are scheduled to be shipped to Canada this spring as scheduled.

Replacement bees – An updated list of “bees for sale” is posted on the MBA website (www.manitobabee.org, bulletins tab). If you have bees for sale and you'd like to be added to the list, please contact David or Rheal. This list is posted on the website each year. There were reports last year of noticeably high supersedure in some packaged bees from New Zealand. Nosema disease appeared to be the main reason. Fumagillin isn't registered in NZ. Therefore, treatment may be required when feeding your packages. You can submit a sample to the Apiculture Diagnostics Lab.

AGM resolution update – In regards to Resolution #4 from the AGM, and further direction from the MBA Pests and Pest Management Committee, Dr. John Gavloski, MAFRI provincial Entomologist, and I have been working with the National Sunflower Association of Canada on information for sunflower seed processors about pesti-

cide risk and the value of insect pollinators. The letter has been completed, forwarded to the MBA Committee, and will be sent from the National Sunflower Association of Canada to the seed processors this spring (2010). MAFRI staff will continue to work with the MBA on this issue and others.

Lab fees – As of the start of calendar year 2010, the cost of Apiculture Diagnostics Lab analysis has increased. This was also announced in the last newsletter. The current fee structure is \$25 for tracheal mite, varroa mite, and nosema analysis; or \$25 for tracheal mite only; \$10 for varroa only; \$10 for nosema only. Samples may come in with inspectors in the spring or may be submitted directly to the Lab year-round. Generally, samples can be turned around more quickly when submitted directly before inspections, but we encourage either, and we encourage monitoring in general.

Varroa and Nosema – Varroa and nosema continue to be serious risks in Manitoba. Both can affect colony build-up, honey production, wintering success, and overall colony stress. Last year, in samples processed at the lab, levels of varroa were generally high and were higher than any prior year. This spring, Apivar is available again, and I mention this because there are reports it's more consistently effective in the spring in Manitoba. It's important to follow the instructions on the label – not doing so may result in damage to bees, ineffective varroa control, and being warned or charged by Federal Government PMRA under the Pest Control Products Act. To sample for varroa mite, we recommend collecting bees from over the brood as this appears to be the most consistently accurate method for varroa analysis. Sampling from the lid may result in finding fewer mites and may give inaccurate results. Screen-bottomboards can also be helpful but alcohol wash is still the most consistently accurate.

Early results from a U of M study this past fall and winter showed the highest levels of nosema were in the Eastern part of the province. The study continues this spring. It's not certain which *Nosema* species are present at this point but in a study in 2007 both *Nosema ceranae* and *Nosema apis* were found in the province with *Nosema ceranae* being more common in that study. Other studies are currently being done on nosema by AAFC, but there are indications that both species of *Nosema* can be reduced well with fumagillin and therefore it's recommended that fumagillin should be used to control nosema disease when necessary. For information on nosema control trials see Hivelihoods 2009 Vol 22 Supplement – there have been a number of inquiries about this information.

Other research – Other research is planned this spring by MAFRI and/or the U of M. This includes other virus work and plans to look at contaminant risks in hive products. Also, the final report on honey bee pollination of saskatoons will be included in the next newsletter. It's been said before, but we very much appreciate those who volunteer and participate in all research projects in the province - thanks! If you have any questions about this Extension Report, contact me David at 945-3861 (Winnipeg).

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are eligible for up to 90 per cent of the total cost of eligible equipment. Currently, the program is available for such things as replacing old equipment and for replacing brood combs.

For example:

- Up to \$1,000 is available to buy new food-grade honey processing equipment (on a 90:10 cost-share basis, with the beekeeper paying 10 per cent). The new equipment must replace similar, old non-food grade equipment and the old equipment must be turned in, to a designated site. It must be obvious that the old equipment has been used recently – old, unused equipment is not eligible.
- Up to \$1,000 is available for exchange of up to 500 dark, undamaged brood combs. Frames with foundation for honey bees can be dropped off at the registered rendering site. A \$2 rebate per comb is available for purchasing new wax or plastic foundation or new frames with foundation.

Based on some comments we have received from producers wanting to fill out the application, it is important to note that this food safety beekeeping equipment project is an interim project till the Canadian Beekeeping Industry's Safety Quality and Traceability Program (CBISQT) has been approved. The funding for the beekeeping equipment project has been set at a \$1,000 maximum. This is different than some of the other commodity projects which have limits of either \$2,000 or \$5,000. The difference being that those commodities have a CFIA approved On Farm Food Safety program and the people accessing that funding have to be subscribed to those programs in order to access the money. For this reason the application form does not easily recognize the uniqueness of the beekeeping equipment project. For example on page three of the Food Safety Program, for Farms application, although you cheque box # 2 (i.e. "Piloting Manitoba's Good Agriculture Practices Program") the maximum amount of funding is \$1,000. On page 5 of the application you only fill out the section on "Materials/Supplies for integrated On-Farm Food Safety, Biosecurity and Traceability Program". Fill out "Start Date:" put today's date and "Finish Date:" put the date you plan to purchase the replacement equipment.

For more questions about the program, please contact:

Dana Gardiner -- On-Farm Food Safety Specialist at 204-391-6616 in Winnipeg; or e-mail Dana.Gardiner@gov.mb.ca

Peter Veldhuis -- Program Co-ordinator, Food Safety Program, for Farms at 204-945-5435 in Winnipeg; or e-mail Peter.Veldhuis@gov.mb.ca

Rheal Lafreniere -- Business Development Specialist/ Provincial Apiarist at 204-945-4825 in Winnipeg; or e-mail Rheal.Lafreniere@gov.mb.ca —//\—

Bees in trouble after bad winter

New study shows pollen and hives laden with pesticides.

Wed., March. 24, 2010

MERCED, Calif. - The mysterious 4-year-old crisis of disappearing honeybees is deepening. A quick federal survey indicates a heavy bee die-off this winter, while a new study shows honey-

bees' pollen and hives laden with pesticides.

Two federal agencies along with regulators in California and Canada are scrambling to figure out what is behind this relatively recent threat, ordering new research on pesticides used in fields and orchards. Federal courts are even weighing in this month, ruling that the U.S. Environmental Protection Agency overlooked a requirement when allowing a pesticide on the market.

And on Thursday, chemists at a scientific conference in San Francisco will tackle the issue of chemicals and dwindling bees in response to the new study.

Scientists are concerned because of the vital role bees play in our food supply. About one-third of the human diet is from plants that require pollination from honeybees, which means everything from apples to zucchini.

Bees have been declining over decades from various causes. But in 2006 a new concern, "colony collapse disorder," was blamed for large, inexplicable die-offs.

The disorder, which causes adult bees to abandon their hives and fly off to die, is likely a combination of many causes, including parasites, viruses, bacteria, poor nutrition and pesticides, experts say.

"It's just gotten so much worse in the past four years," said Jeff Pettis, research leader of the Department of Agriculture's Bee Research Laboratory in Beltsville, Md. "We're just not keeping bees alive that long."

This year bees seem to be in bigger trouble than normal after a bad winter, according to an informal survey of commercial bee brokers cited in an internal USDA document.

One-third of those surveyed had trouble finding enough hives to pollinate California's blossoming nut trees, which grow the bulk of the world's almonds. A more formal survey will be done in April.

"There were a lot of beekeepers scrambling to fill their orders and that implies that mortality was high," said Penn State University bee researcher Dennis van Engelsdorp, who worked on the USDA snapshot survey.

Abandoned hives

Beekeeper Zac Browning shipped his hives from Idaho to California to pollinate the blossoming almond groves. He got a shock when he checked on them, finding hundreds of the hives empty, abandoned by the worker bees.

The losses were extreme, three times higher than the previous year.

"It wasn't one load or two loads, but every load we were pulling out that was dead. It got extremely depressing to see a third of my livestock gone," Browning said, standing next to stacks of dead bee colonies in a clearing near Merced, at the center of California's fertile San Joaquin Valley.

Among all the stresses to bee health, it's the pesticides that are attracting scrutiny now. A study published Friday in the scientific journal PLOS (Public Library of Science) One found about three out of five pollen and wax samples from 23 states had at least one systemic pesticide — a chemical designed to spread throughout all parts of a plant. EPA officials said they are aware of problems involving pesticides and bees and the agency is "very seriously concerned."

The pesticides are not a risk to honey sold to consumers, federal officials say. But the PLOS study found 121 different types of pesticides within 887 wax, pollen, bee and hive samples.

"The pollen is not in good shape," said Chris Mullin of Penn State University, lead author.

None of the chemicals themselves were at high enough levels to kill bees, he said, but it was the combination and variety of them that is worrisome.

University of Illinois entomologist May Berenbaum called the results "kind of alarming."

Despite EPA assurances, environmental groups don't think the EPA is doing enough on pesticides. (continued on page 9)

(continued from page 8)

Bayer Crop Science started petitioning the agency to approve a new pesticide for sale in 2006. After reviewing the company's studies of its effects on bees, the EPA gave Bayer conditional approval to sell the product two years later, but said it had to carry a label warning that it was "potentially toxic to honey bee larvae through residues in pollen and nectar."

The Natural Resources Defense Council sued, saying the agency failed to give the public timely notice for the new pesticide application.

Declining honeybees a 'threat' to food supply

New clue found to disappearing honey bees

Scientists develop 'super' bee to battle parasite

In December, a federal judge in New York agreed, banning the pesticide's sale and earlier this month, two more judges upheld the ruling.

"This court decision is obviously very painful for us right now, and for growers who don't have access to that product," said Jack Boyne, an entomologist and spokesman for Bayer Crop Science. "This product quite frankly is not harmful to honeybees."

Boyne said the pesticide was sold for only about a year and most sales were in California, Arizona and Florida. The product is intended to disrupt the mating patterns of insects that threaten citrus, lettuce and grapes, he said.

Berenbaum's research shows pesticides are not the only problem. She said multiple viruses also are attacking the bees, making it tough to propose a single solution.

"Things are still heading downhill," she said.

For Browning, one of the country's largest commercial beekeepers, the latest woes have led to a \$1 million loss this year.

"It's just hard to get past this," he said, watching as workers cleaned honey from empty wooden hives Monday. "I'm going to rebuild, but I have plenty of friends who aren't going to make it."

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IMPORTANT is your RRAA RENEWAL done?

After April newsletters will go to those who have renewed memberships.

**Red River Apiarists' Association
Winnipeg, Manitoba
2010 MEMBERSHIP APPLICATION**

I apply for membership in the Red River Apiarists' Association. Membership includes one-year subscription to the newsletter "The Bee Cause" (8 issues)- \$25.00.

Name _____ Tel. _____

Address _____

City _____ Prov. _____ Postal Code _____

E-mail address _____

Signature _____

New Member [] Renewal [] Student [] [free 1st year]

Other. Please specify. _____

This completed form may be brought to the meeting or mailed with your cheque to :

**John Speer, RRAA Treasurer
Box 16, Group 555. Winnipeg, Manitoba R2C 2Z2.**

Make cheques payable to Red River Apiarists' Association.
Please do not send cash in the mail.

Manitoba Beekeepers' Report April 2010

Jim Campbell, MBA Rep.

Canadian Honey Council is again seeking emergency use registration for Apivar for 2010-2011 season. MBA is endorsing this process.

Beekeepers are experiencing variable losses again. Although some reports are OK, there are spotty reports of losses in the 90% range. Those using traditional formic treatments are finding cool temperatures after mid September hampered treatment efficacy.

The MBA board received some other disappointing news, as our request for Honey Production Insurance, and Winter Livestock Insurance has been put off another year. With the provincial budget being in the "red", the request for funding has been rejected.

Now for some good news! The recent Beekeepers' Symposium saw a packed house at the Canad Inns, in Brandon. Among the drawing cards was Randy Oliver, Grass Valley, California, who detailed the changing times for beekeepers. In addition, Randy entertained the banquet crowd with a humorous story of spilling bees across a major highway. At the banquet, MBA honoured Doug McRory, recently retired apiarist, Guelph, and formerly provincial apiarist in Manitoba from 1968-1972, and board member in 1976, for his support of the industry. Thanks to Rhéal Lafrenière, Ext. Apiarist, for the informative "toast" to Doug. In addition, Jim Campbell was given the "Bee Hive Award" for contributions to the industry.

As part of the Growing Forward suite from Agriculture and Agri Food Canada, Provincial and Territorial governments, a Food Safety program for Farms is rolling out in Manitoba. Although initially aimed at premise identification for other livestock biosecurity, traceability and food security, we have negotiated a special feature for honey producers. The Canadian Beekeeping Industry's Safety Quality and Traceability Program (CBISQT) is soon expected to be recognized by the Canadian Food Inspection Agency (CFIA) as the national, Canadian, on-farm food inspection program for honey. In the meantime, while this program is still in the approval process, registered beekeepers in Manitoba can apply for up to \$1,000 for each of equipment and good agricultural practices (GAP). Under this program, non-food grade equipment and/or old brood comb can be replaced. Producers can obtain 90% funding, up to the maximum, for each of these pre-approved food safety areas. Information on the program is available in the "Links and Resources" page of beekeepingmanitoba.com. (RRAA web site). —/\—

Bees Can Remember What Human Faces Look Like

Science Daily

If you ever get into a tense confrontation with a bee, and then you have to back down for whatever reason, don't try to salvage it by saying "Remember the face." Because it turns out bees can do that.

It's long been known that bees are capable of recognizing and retaining complex visual patterns. That's one way they're able to tell different kinds of flowers apart. But a joint project between researchers at the Université de Toulouse and Melbourne's Monash University has found that bees can be trained to distinguish flowers from human faces, and to recognize the basic configuration of human facial features in different contexts.

A group of bees were shown pictures of human faces and pictures of random geometric designs, and rewarded with sugar when they visited the pictures of faces. After doing this for a while, the bees were shown a different set of images that *resembled* faces; they flew toward these face-like pictures though they'd never seen them before.

What's happening here isn't exactly "learning" — there's no reason to think that bees know any of the salient differences between people and flowers, like that flowers are rooted in the ground and people can walk, talk, and order pizza. Insofar as a distinction exists in the bee's mind, they probably think of human faces as very oddly-shaped flowers. Still, they can definitely tell one from the other, and have demonstrated the ability to choose.

While there's no evidence that bees can recognize and revisit *individual* human faces, it's probably too soon to say for sure; bees have a way of surprising us. It was only a few months ago that researchers learned that bees have some kind of internal mechanism that allows them to keep track of energy expenditure, even when flying through optical illusions created in a lab. How they're able to do this, with brains smaller than a peppercorn, remains a mystery — one that's only compounded by the new evidence of complex pattern integration. Here's hoping the ongoing global bee die-off comes to an end soon — it seems we're losing some of the smartest insects on the planet. —/\—