

# WASHINGTON STATE BEEKEEPERS ASSOCIATION

*Keep the Bee in Business*

A PUBLICATION OF THE WASHINGTON STATE BEEKEEPERS ASSOCIATION

[WWW.WASBA.ORG](http://WWW.WASBA.ORG)

## PRESIDENT'S MESSAGE

This might become a very nice honey year for all of us. If we can stave off the heat and not have all the plants dry out it will be great. The reports from the east side is the bees look very good. The honey flow has started and in many cases we have a super about full of honey. I haven't seen a lot of mites this year but know they are lurking in there ready to lay waste to my hives.

The good news is WSU has the emergency funding from the Governor for testing of 800 samples for colony and bee health. Watch the web site for the sampling protocol so you can send in samples to be tested.

Convention Update-you may now get your room reservations on line or by calling. See the instructions on our web site or in this news letter. We have finalized our speakers for the convention. Our speaker lineup will be great with many topics of interest to everyone.

Dr. Jeff Pettis, USDA-ARS, Beltsville, MD

An update on the status of USDA Area Wide Project – migratory operations in the eastern U.S.

Dr. Dave Tarpy - North Carolina State University, Raleigh, NC  
(tentative title) Mating numbers in commercial queen populations: possible consequences

Ms. Beth Kahkonen, WSU-Pullman  
WSU disease diagnostic services

Dr. Marina Meixner, Kirchain Bee Institute, Kirchain, Germany  
Honey bee pathogen and pest diagnosis in Germany

Dr. Mike Burgett – (emeritus) Oregon State University, Corvallis, OR  
2007 PNW Pollination Economics Survey

Eric Olson – Beekeeper action leads to widespread support for honey bee colony health study

Judy Wu – WSU MS candidate  
Possible sublethal effects of contaminated beeswax on honey bee workers

Dr. Devrim Oskay , WSU-Pullman  
Bee breeding and honey production

Matthew Smart – WSU MS candidate  
*Nosema ceranae* – another challenge for US beekeepers

Registration forms will be posted to the web site within the next couple of weeks. Let's plan on attending if at all possible.



## REGIONAL EVENTS TO INTEREST YOU

### Bee Events

August  
2008



#### Western Apicultural Society Conference

Aug 17 –Aug 21, 2008 at the Holiday Inn, Victoria, British Columbia, Canada.

October 2008

#### Joint Oregon/Washington State Beekeepers Convention

Oct. 16-18 at the Red Lion in Vancouver, Washington



#### WSBA Executive Board Meeting

Oct. 16 @ 1600 at the Red Lion in Vancouver, WA

#### WSBA General Membership Meeting

Oct 17@1700 at the Red Lion in Vancouver, WA

January 2009

#### ABF National Convention

Jan 13-17, 2009 in Reno, NV

**PRESIDENT'S MESSAGE,  
CONTINUED**

A major concern by the state association and myself in particular is that our state association membership has continued to drop. This trend needs to stop if we expect to be heard at the state and local levels. We all need to make a concerted effort to pay our dues and become members of the state association. We have not in the recent past been as active as we are now at all levels of beekeeping yet support for the state and local associations seems to be slowing.

We need to encourage more beekeepers to sign up. We also need to grow our registered colonies within the state. We will not be taken seriously if we can't support our own associations. So lets get signed up and encourage others to sign up also.

Check out the following conference and see if you can fit it into your busy schedule. Western Apicultural Society [http://groups.ucanr.org/WAS/Conference\\_Information/](http://groups.ucanr.org/WAS/Conference_Information/)

**Beekeeper of the Year Award  
for WSBA**

In June of 1989 the 'Beekeeper of the year' for the State of Washington was created. The merits of their selection to be described in writing not to exceed one page. The criteria to be the beekeeper that has done the most to promote and demonstrate good beekeeping, improve the public image of the industry, serve the industry as a Volunteer and the number of years spent as a beekeeper.

It's now time to consider who you want to nominate! Email your nomination to [president@wasba.org](mailto:president@wasba.org) or mail your nomination to Bob Smith (Master Beekeeper Committee Treasurer) at 15525 Castle SE, Yelm, WA 98597.

**Nominations are due by  
September 15**

**Executive Board Meeting Agenda  
10/16/08**

**Reports:**

- The Secretary's Report-minutes from newsletter
- The Treasurer's Report
- Membership Report
- Master Beekeepers Certification Committee Report
- Area Reps

**Old Business:**

- WSU Report-Steve Sheppard
- Report on Apiary Advisory Committee-Eric Olson
- Status of Joint Convention-Jerry
- WSU funding for research-Eric Olson

**New Business:**

- By law changes
- Student Grant Requests



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**WSU REPORT**

We have the diagnostic lab up and running with three trained undergraduates and the other usual suspects assisting. At present we are finding that at this time of year the commercial operations seem to have control of their pest problems. Interestingly, some WSU colonies (started this year from packages - I seem to recall that we got them in Spokane) had very high nosema numbers when last tested. We are watching them to see what happens and treating a portion after the honey flow.

The queens inseminated with Italian semen a couple of weeks back appear fine. 6 viruses were detected in the semen sample sent to Beltsville (the same 6 viruses found in queens from CA queen producers and Australian bees) and now APHIS has decided the Italians must remain in place with WSU until further notice (at a satellite isolation yard) rather than being allowed to go to CA producers. The new semen import currently residing at the APHIS inspection facility at SeaTac is from a *m. carnica* (from a German breeding lab) and the same protocol of virus testing will be followed.

While we have a bit of a slow start - we will be making the WSU queens - so we will resupply the cooperative WSBA apiaries again this summer.

There it is.

Steve Shepard

**EXECUTIVE BOARD MEETING MINUTES**

Washington State Beekeepers Assn. Executive Board Meeting Minutes

For Jodi Pilarski, Secretary

By James Bach

The Executive Board meeting was called to order by President Jerry Tate at 11:22 am at the Bar 14 Restaurant in Ellensburg, WA.

Persons in attendance were: Jerry Tate – Spokane, Lisa Knox – Kingston, Bob Arnold – Deer Park, Lee & Arlene Massey – Grandview, John Timmons – Graham, Louis Matej – Tacoma, Jo Miller –

**EXECUTIVE BOARD MEETING MINUTES, CONTINUED**

Bellingham, Robert Smith – Olympia, Paul Lundy – Kingston, Sue & Eric Olson – Yakima, Van & Barbara Sherod – Seattle, David White – Kennewick, Ted Swenson – Chattaroy, Jim Bach – Selah and Paul Hosticka – Dayton.

Lee Massey moved to accept the minutes of the previous meeting as published, second by Bob Arnold, passed.

Treasurer's report by Paul Hosticka: Discussion about the Balance Sheet and Profit & Loss Statement, the purpose and use of the Roy Thurber, Alvina Timmons and Carl Van Wechel funds and CD maturation dates. Total income to date was \$13,925.44 and expenses were \$12,627.47 leaving an operating profit of \$1,297.97. Net profit/(loss) was \$2,240.46.

The checking account contains: \$1,762.71 & savings \$7,257.57 = \$9,020.28.

The Thurber fund (used to support students studying entomology) contains \$32,495.95 in cash and a CD.

The Alvina Timmons fund contains 29,312.43 in cash and a CD – used for research and scholarships. The Carl Van Wechel fund contains \$8,314.42 and is used to fund honey bee research projects.

WSBA equity amounts to \$2,240.46 in current earnings (bank interest) and the historical balancing account contains \$76,902.62 for a total equity of \$79,143.08.

Lee Massey moved to accept the treasurer's report, second by Bob Arnold, passed.

To date in 2008 we have 45 paid and 5 honorary members for a total of 50. There are 11 new members and 34 renewals. We have three associations with a total of 67 associate members. Association members are Stanwood-Camano, Northwest District and the North Olympic Peninsula Assn.

Paid membership had ranged from 92 in 2003, 79 in 2007 and 45 to date. Total dues went from \$2,290 in 2003 to \$1,014 to date in 2008.

We discussed the need to send letter to the other local beekeeper associations to encourage them to become associate members so that the WSBA can represent beekeepers' interests statewide in their legislative and other activities.

## EXECUTIVE BOARD MEETING MINUTES, CONTINUED

It was mentioned that membership in organizations decreases as their web presence becomes more useful to interested persons.

Paul Lundy gave a report on the activity of the Bee Master Committee: Our effort presently is to revise and update the Apprentice handbook. The new version will be published this fall. The committee treasury contains \$3,918.30.

Tim Bueler and Van Sherod are resigning their committee membership. Tim is building a new house and the Sherods are making preparations to move to Montana.

Discussion of the Spokane city beekeeping ordinance: Beekeepers must register with the WA State Department of Agriculture and comply with state statute, city ordinances and be certified at the apprentice level of the WSBA Master Beekeeper Program.

Jerry Tate presented a report from Steve Sheppard:

He and Sue Cobey– Davis, CA, are cooperating on the importation of drone semen from Italy and some Carniolan semen. Tests showed the presence of six viruses including the Israeli virus in the Italian semen. Content of the Carniolan semen is unknown at present.

The honey bee disease diagnosis laboratory is now operating with three technicians. WSU is in the process of hiring a person to manage the lab.

A honey bee sampling protocol is being drafted and will be published in the next WSBA newsletter. Beekeepers wishing to send samples to WSU for analysis will be required to follow the sampling protocol to ensure uniform sampling procedures and interpreting of lab results.

WSU has a new post doctoral person that will manage the WSU queen breeding program.

Eric Olson is currently providing 200 samples per month for analysis of Nosema, Varroa and Honey Bee Tracheal Mites and the lab will be able to process 400 samples per month. Beekeepers around the state are encouraged to send samples to WSU for analysis.

Debby Delaney has now received her Doctorate degree and is currently working in North Carolina.

Reports surfaced that WSU queens purchased last year didn't over-winter. One beekeeper stated that only 2 of 8 queens received survived and only poorly.

The WA State Dept. of Agriculture is working various industries to assess the "Future of Farming" in Washington State. Jennifer Hart manages the program.

Old Business:

Motion by Lee Massey and second by Bob Arnold to purchase 200 rolls of a new design of honey labels. Carried.

Motion by Jim Bach and second by Eric Olson to purchase 70 WSBA t-shirts per the recommendations of Lisa Knox.

New Business:

Discussion of WSBA funds available for research projects. Motion by Jim Bach, second by Eric Olson to use \$5,000 from each of the Van Wechel and Timmons funds for a total of \$10,000 toward WSU honey bee laboratory and field research activities. Carried.

Beekeepers will be provided with the address of where to send contributions for WSU research. The address is Dept. Entomology, FSHN, RM 166, Pullman, WA 99164-6382, attn. Barb, make checks payable to WSU Bee Research.

Jerry Tate encourages local beekeeper associations to utilize the "Events" section of the WSBA web site to post their local activities. The need to submit their information to Lisa Knox (360 297 6743, [editor@wasba.org](mailto:editor@wasba.org)) who will pass it to the web master for posting.

Discussion of the fall conference preparations, speaker list and arrangements.

Draft letter to associations and beekeepers in other states requesting donations to WSU research.

Jerry Tate requested Bob Smith to solicit nominations for a beekeeper of the year to be awarded at the annual conference.

Conference details and registration fees will be in the next newsletter

Adjournment at 2:20 pm.

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**WASHINGTON STATE DEPT. OF  
AGRICULTURE APIARY ADVISORY  
COMMITTEE MEETING MINUTES**

WSDA Apiary Advisory Committee Minutes  
April 3, 2008

By James C Bach

Meeting called to order by Eric Olson at 11:00 am at the Bar 14 Restaurant in Ellensburg, WA.

AAC members present were: Eric Olson – Chair, Jerry Tate, Paul Hosticka, Tim Hiatt, Steve Sheppard – WSU, Jim Smith, Stan Pallo, Hermann Thoennissen. Carolyn Elliott was unable to attend but sent an email to members that she “would vote in favor of establishing such a program” as the Baseline Honey Bee Colony Health Project.

Also attending were: Jim Bach, John Timmons, Harry Smits. Brenda Player, Brad White and Jennifer Falacy of WSDA; Beth Kahkonen and Devrim Oskay of WSU.

Eric Olson asked Brad White about the minutes of the previous meeting. After discussion Jim Bach moved and John Timmons seconded a motion to approve the final copy of the minutes as received from Mary Toohey – WSDA. Motion passed. Motion and second later acknowledged by Jim Bach to have been made in error since only AAC members can make motions and seconds. The AAC let the motion stand.

Eric Olson led a discussion of the WA State Beekeepers Association’s Baseline Honey Bee Colony Health Project (WSBA BHBCHP) as adopted by the Executive Board on February 16, 2008. He reviewed his efforts of collecting samples for Nosema, Varroa and Honey Bee Tracheal Mites (HBTM) which were as follows:

On 2-10-2008, 24 samples were analyzed with a low of 550,000 Nosema spores per bee with a maximum of 3,500,000 spores per bee and an average of 1,460,400 spores per bee.

On 3-13-2008, 42 samples were analyzed with 5 samples showing no Nosema, 12 samples showing 50,000 spores per bee, one sample with a maximum of 8,150,000 spores per bee with the 42 sample average of 626,190 spores per bee.

Of the 24 colonies sampled:  
two (8%) died and were rebuilt,  
three (12.5%) were marginal and received several combs of brood with bees,  
four (16.6%) went queenless and were requeened and received brood and bees, and  
15 (62.5%) were OK for use in pollination in Washington.

Of the 24 colonies sampled:  
11 did not have Varroa mites,  
the rest had one mite to 3.92 mites per 100 bees (average = 8%).

Of the 24 colonies sampled:  
4 did not have HBTM,  
the rest had between 5 and 23% of bees infested (average = 9.79%).

Of the 42 colonies sampled on 03-12-2008:  
8 did not have Varroa and  
the rest had between 0.44 and 3.6 mites per 100 bees (average = 1.2%), and  
all had HBTM of between 5% and 43% (average = 19.9%).

The Final Bill Report on the 2<sup>nd</sup> Substitute Senate Bill 6468 as passed by the Legislature and signed by the governor is summarized as:

“Beekeepers are exempt from the following taxes:  
the B&O tax on the wholesale sale of honey and honey bee products,  
the B&O tax on bee pollination services; and  
the sales and use tax on the sale of pollinating bees.

To qualify for these tax exemptions, beekeepers must be registered with the Department of Agriculture.”

Eric Olson and Tom Hamilton of Idaho are planning a media event with WSU for April 18 in Pullman. The event is to highlight the enhancement of the apiary program at WSU and for WSU to receive \$10,000 checks from Eric and Tom for the WSBA Baseline Honey Bee Colony Health Project. Eric has been talking with the WA Tree Fruit Research Commission, the Growers – Shippers and cranberry grower associations for additional funds.

Eric is requesting the AAC approve a request of the director of agriculture for \$20,000 from the beekeeper registration fund for the WSU research project. Funds will also be solicited from beekeepers and other groups in Washington, Oregon, Idaho and other northwest states.

Steve Sheppard gave the following report:

**WASHINGTON STATE DEPT. OF  
AGRICULTURE APIARY ADVISORY  
COMMITTEE MEETING MINUTES,  
CONTINUED**

His efforts are intended to get sample analysis reports back to the beekeeper on a timely basis, Beth Kahkonen has been hired as the apiary lab manager, Samples are being analyzed for HBTM, Varroa and Nosema, They are going to perfect their lab techniques to distinguish between *N. apis* and *N. ceranae*, Beekeepers will be able to take their own samples using a published WSU sampling protocol and have them analyzed by the apiary lab,

Eric discussed the possibility to get additional funding for the WSU bee project from the governor's emergency budget. The request will be forwarded through the director of the department of agriculture.

Eric will talk with Dan Cummings of Project Apis about the possibility of acquiring additional funds for the project.

John Timmons suggested that \$5,000 be taken from the WSBA Timmons and Thurber scholarship and research accounts to support the project. There is about \$70,000 in these two accounts.

Devrim Iskay suggested that WSU's queen stock evaluation process include Nosema analysis.

It was mentioned that other grower commissions be approached for funding the research project – Raspberry, Cranberry and Blueberry, etc.

Discussion involved the matching fund protocol of the Tree Fruit Research Commission. Eric will contact Keith Mathews of the Growers & Shippers.

The Oregon State Beekeepers Association and their leading beekeepers may also be contacted for contributions. Received funds would be deposited in a WSBA research account and forwarded to WSU.

Hermann suggested that viable applications for funding include the following elements:  
A well developed project plan,  
Short and long term deadlines and dates,  
Identified receivables,  
Persons accountable for the receivables,

Budgets for the next two years with 50% of funds shown as already committed.

Eric said that he and Tom Hamilton are planning on sending 100 samples to the WSU apiary lab each month for the next two years.

Steve Sheppard and Beth will develop sample analysis costs – a single person can run ten samples for Nosema, HBTM and Varroa in one day. Ten samples per day times 22 days is 220 samples per month. Steve suggested that between 150 and 200 samples could be run per month considering the tiring aspect of continually looking through a microscope. It was suggested that the analysis cost may be developed by using past sample cost, adding an inflation factor and doubling this amount to arrive a projected cost.

Jerry Tate moved and Hermann Thoennissen seconded a motion to have the AAC adopt the WSBA Baseline Honey Bee Colony Health Project as their vision and blueprint for the research needed by the industry in the northwest. The motion passed unanimously.

Jerry Tate moved and Paul Hosticka seconded a motion to have Eric work with WSU to have a written research proposal for the BHBCHP by the April 18, 2008 meeting with WSU. Motion passed.

Jerry Tate moved and Paul Hosticka seconded a motion to request WSDA to approve the transfer of \$20,000 from the beekeeper registration fund to support the WSU research project. Motion passed.

Eric Olson reinforced his insistence on the immediate need for the requested research project by stating that he is uncertain whether his bees, with the above mite and Nosema loads, will continue as they are today into June and July. He mentioned a beekeeper who had 5,000 colonies come out of almonds with only five combs of bees per hive.

2:17 pm, AAC meeting adjourned.

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## MASTER BEEKEEPERS COMMITTEE MEETING MINUTES

Minutes by Ted Swenson, 10AM June 14, 2008

Present: Paul Lundy, Bob Smith, Van Sherod, Barbara Sherod, James Bach, Jo Miller, Louis Matej, David White, Ted Swenson. Discussion on updating the certified Apprentice booklet. All proposed changes will be emailed to each committee member prior to finalizing the new booklet. Changes to be sent to Paul Lundy by July 1.

The title of the revised booklet will be "Master Beekeeper Certification Program - Apprentice Booklet".

Certified Beekeeper patches were discussed. Louis Matej will find a source for production and if the old pattern cannot be found, will make a new pattern.

Current account balance as reported by Treasurer Bob Smith, \$3,918.30.

There was a general discussion of the Journeyman program.

A motion to add Mr. John DeGroot of Puget Sound Beekeepers Association to the Committee was made by Van Sherod. Van will talk to John and Paul will follow up.

Meeting adjourned 11AM

## NOTES FROM YOUR EDITOR

You may have noticed a new format for your state newsletter.

Well, I was committed to getting a new computer and that meant changing many things, the largest challenge being a switch from producing the newsletter on a PC to Mac. Well, that wasn't much of a challenge, that change just simplified my life.

What it forced me to do was reassess how I published the newsletter. I changed from using Microsoft's Publisher to Mac's Pages. You are seeing that difference in July's newsletter. This should cure some of the incompatibility some folks have been having when they read the online version of the newsletter.

Let me know what you think as I'm always trying to make it easier for you to get information you need.

Paul Lundy



[editor@wasba.org](mailto:editor@wasba.org)

## WSBA Officers & Exec. Committee

### President:

Jerry Tate, E. 8900 Maringo Dr, Spokane, WA 98212  
509-924-6669, [President@wasba.org](mailto:President@wasba.org)

### Vice President:

Eric Olson, 93 Camfield Rd., Yakima, WA 98908  
509-966-2867 [VP@wasba.org](mailto:VP@wasba.org)

### Secretary:

Jody Pilarski, 9125 Edgewater Drive SW, Lakewood, WA  
98499-1925, 253-988-3090, [Secretary@wasba.org](mailto:Secretary@wasba.org)

### Treasurer:

Paul Hosticka, 517 S. Touchet Rd., Dayton WA 99328  
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### Area #1 Representative:

Jerry Robnett (2010), 360-387-3693, [Area1@wasba.org](mailto:Area1@wasba.org)

### Area #1b Representative:

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### Area #2 Representative:

Robert Smith (2008), 15525 Castle SE, Yelm, WA 98597  
360-894-2159, [Area2@wasba.org](mailto:Area2@wasba.org)

### Area #3 Upper Valley Representative:

James Bach (2009), P.O. Box 397, Selah, WA 98942-0397  
509-573-4245, [Area3a@wasba.org](mailto:Area3a@wasba.org)

### Area #3 Lower Valley Representative:

Arlene Massey (2009), 2781 Hornby Rd, Grandview, WA 98930,  
509-882-4601

### Area #4 Representative:

Dave Sabold (2010), 17 Bean Road Winthrop WA 98862,  
509-996-2522, [Area4@wasba.org](mailto:Area4@wasba.org)

### Area #5 Representative:

Paul Hosticka (2010), 517 S. Touchet Rd., Dayton WA 99328  
509-382-8939, [Area5@wasba.org](mailto:Area5@wasba.org)

### Area #6 Representative:

Robert Arnold (2010), 42615 N. Division Rd., Deer Park, WA  
98006, 509-276-2399, [Area6@wasba.org](mailto:Area6@wasba.org)

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## THE STATUS AND FUTURE OF WASHINGTON APICULTURE AND AGRICULTURE

The apiculture industry in Washington is experiencing many and diverse difficulties in the management of honey bee colonies. Honey bees are required to pollinate tree fruit, tree nuts, berries and seed crops. If bees become unavailable for pollination the quality and abundance of these will be reduced. Beekeepers are facing the challenges of Varroa and Tracheal mites, two species of Nosema disease, genetic deficiencies, and some unknown causes of the recently reported Colony Collapse Disorder (CCD). These issues are causing 15 to 75 percent losses for beekeepers, some in the fall and some year round. These losses are putting beekeepers out of business and decreasing the number of colonies available to pollinate agriculture in Washington. In addition the high cost of fuel makes the intra and interstate transport of hives used for pollinating almonds in California, fruits and berries in the northwest and transport to the Dakotas for a honey crop almost prohibitively costly. The availability of capable English speaking employees is of increasing concern.

However, there are bright spots in the future. The Washington State Beekeepers Association is establishing a Colony Health Research Project at Washington State University to determine the baseline colony health of our bee colonies. The project is looking at the nutrition, diseases and maladies of bees to determine why colony losses are so prevalent and how we might remedy these issues.

### Honey bee pollinated agriculture:

All tree fruit in Washington consisted of 217,750 acres in 2007 located in four western and eight eastern counties of the state. The utilized value of tree fruit is \$2,128,811,000 according to USDA's National Agricultural Statistics Service (NASS). Apples, cherries and pears account for 213,550 acres mostly in eastern Washington and their utilized value is \$2,102,698,000. In addition there are many individual trees and small acreages located throughout western Washington in urban and rural residential areas.

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## THE STATUS AND FUTURE OF WASHINGTON APICULTURE AND AGRICULTURE, CONTINUED

Blueberries, cranberries and raspberries consist of 14,900 acres mostly in Whatcom, Skagit Snohomish, Pacific and Grays Harbor counties but are also scattered through other counties in urban and rural areas. The utilized value of these berries is \$84,786,000.

NASS also provided the total value of fruit, tree nuts and berries requiring pollination consisting of 232,650 acres at a value of \$2,213,597,000.

Other crops foraged and pollinated by bees include canola, alfalfa seed, vegetable seeds, red clover, corn and mint. Honey bees enhance the quality of the seeds and fruits of these crops as well as that of wild plants, trees and legumes.

Washington State University has recommended the use of at least one colony per acre for ideal pollination of tree fruit, depending somewhat on the size of tree and amount of bloom per acre. That means we should be using about 200,000 colonies of bees for pollination in Washington because some are used twice, once for tree fruit and once for seed or berry pollination.

Twenty-four Washington resident and five non-resident commercial beekeepers registered 77,471 colonies with the Washington State Department of Agriculture (WSDA) in 2007. Other WA and non-resident beekeepers failed to register as required by statute so we don't know exactly how many resident and non-resident colonies are being used for pollination in the state, and make it appear that colony numbers fall far short of requirements.

### Honey Bee Hives:

In 2007, 283 beekeepers registered a total of 74,820 hives with WSDA. It is generally thought that less than half of the hives in WA are registered with WSDA. If that is so then we have approximately 150,000 resident

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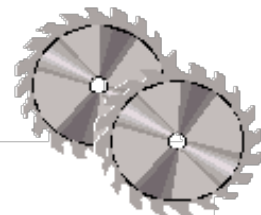
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## THE STATUS AND FUTURE OF WASHINGTON APICULTURE AND AGRICULTURE, CONTINUED

hives. We may have 25,000 non-resident hives here during pollination. Several thousands of hives are brokered into the state for pollination by beekeepers and others.

Relatively new hives and those kept in good repair may be saleable at \$150.00 each. That would make the 74,820 (2-story) hives worth approximately \$11,223,000, and 200,000 hives valued at \$30,000,000.

A recent national survey revealed that beekeepers lost about 32 percent of their bees during the fall and winter of 2007-2008. That is 64,000 hives of 200,000. Loss reports ranged from 10% to 100%. (These numbers are approximately equal to the loss of 32,000 head of marketable cattle!)

So 200,000 colonies of bees pollinate \$2,213,597,000 worth of tree fruit, nuts and berries, or one colony insures the production of \$11,068 worth of these fruits. In addition honey bees are required for pollination of seed crops that are utilized by man and animals, for which NASS does not collect data.

Honey bees also produce about 2.5 million pounds of honey in Washington worth approximately \$2,500,000. Honey bees therefore have a total value to the state of Washington of \$2,216,097,000.00

### Current challenges facing beekeepers:

Colony management costs approximately \$150.00 to \$170.00 per colony per year in inputs, travel, mileage and labor.

If colony losses are 32% of 1,000 colonies or 320 colonies that would be a \$54,400 loss that must be offset by income from surviving colonies that remain on the production line. Or, the surviving 680 colonies must now pay an operation cost of \$250.00 each. In addition it would cost about \$200.00 cash to purchase bulk bees and a queen to put each of the 320 lost colonies back on the production line. That would be a cost of \$46,000.00 divided among the 680 survivor production colonies (\$67.65 ea.) or a total operation cost of \$317.65! Income per colony is approximately \$125.00 for almond pollination in CA, \$45.00 for WA tree fruit and a few extra dollars for seed pollination, plus approximately \$60.00 for honey production. That is \$230.00 in income. Subtract the income of \$230 from the \$317.65 cost per hive and you have a net loss of \$87.65 per colony and no net profit, return on your investment or salary for the owner/manager.

The average age of commercial beekeeper is about 55 years. That means in ten years they will want to retire if they can arrange a reliable sale of their operation (not available currently) as their retirement account. Due to the pests and diseases in honey bees most beekeepers can't depend on retirement income from the sale of their business.

With the continuing annual colony losses from known and unknown causes and the current economic reality, a beekeeper can't plan on having a viable apiculture business in the next five years.

Beekeeper offspring generally don't want to "take over" the bee business because they are well aware of the hazards, poor family income and long hours of hard work without any guarantee that they will be successful.

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## THE STATUS AND FUTURE OF WASHINGTON APICULTURE AND AGRICULTURE, CONTINUED

Bankers are not inclined to lend operating capital to beekeepers because of the known hazards in bee management. There is no guarantee that they can recoup their investment.

Younger beekeepers do not have the capital to invest in a commercial beekeeping business, nor the skills necessary to the management of large numbers of colonies and the necessary business administration.

Income per colony is not sufficient to pay the mortgage on the hives, to raise a family and to put aside funds for their children's college education.

Beekeepers have great difficulty finding qualified persons for employment. Bee colony management includes a lot of lifting of boxes weighing 60 to 80 lbs. on a repetitive basis. Employees must adapt to observing how the colony is performing, recognize variable bee behavior depending on queen quality and be able to identify problems in early stages and accurately relate their observations to the owner / manager for necessary decision making. Employees generally are paid \$8.00 to \$12.00 per hour while working and sometimes less when they are riding along over long distances between work sites. Additionally, it is difficult to hire employees that speak the English language adequately. Foreign workers are being imported and hired but there is dissatisfaction with their knowledge, skills, abilities and the language barrier.

Fuel costs: The owner of one large commercial operation tells the author that he drives approximately 14,772 miles per 1,000 colonies to accomplish his colony management activities and transporting them within Washington for pollination and honey production. He averages 7.83 miles per gallon with his semi(s) and one-ton trucks. He purchases 1,887 gallons of fuel to manage 1,000 colonies. At the current average price of \$4.60 per gallon that is an annual cost of \$8,680 per 1,000 colonies.

His interstate transport of hives to and from California with 528 hives per load and 26 loads total 39,000 miles at 4.2 miles per gallon equals 9,286 gallons combined with 10 loads to North Dakota and 20,000 miles using 14,018 gallons; at \$4.85 per gallon totals \$7,655 per 1,000 colonies. Interstate and intrastate fuel costs per thousand hives is \$16,335 (on 13,000 hives).

Colony health: In spite of the many years of study by federal and state honey bee scientists, the definition and parameters of colony health have never been developed. We do know that some level of proteins and lipids are necessary to produce a surviving bee. We do not know if bees are able to acquire these necessities in their normal diets as they are transported interstate or even if they remain in Washington year round. We know they collect pollens from many species and cultivars of plants and trees but we do not know the relative nutritional value of these pollens.

In addition, beekeepers are experiencing high numbers of queen bee losses after their introduction to a colony, three to six weeks later and sometimes over the winter. When the queen dies, worker bees often do not replace her, resulting in the colony being off the production line until the beekeeper returns to solve the queenless problem.




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## THE STATUS AND FUTURE OF WASHINGTON APICULTURE AND AGRICULTURE, CONTINUED

Beekeepers also observe colony behaviors that they interpret to be caused by poor queens. This author's observations over many years suggest that these aberrant behaviors result in a lack of an adequate queen retinue of 12 to 15 attendant bees. These bees feed and groom the queen and spread her pheromones throughout the colony to support colony behaviors and cohesion. Often beekeepers tell the author that they do not see a queen retinue at all. The queen goes about her egg laying activity without any attention by workers. Since the queen pheromone is primarily responsible for all colony behavior she may not be getting proper nutrition (in the form of royal jelly) from the workers, hence her eggs may not be as viable as desired, the resulting larvae may not be getting proper nutrition and therefore not achieving adequate survival rates. These combined issues result in poor performing colonies and fall and winter losses. In the 1990s annual losses were about 5%, now it is common to experience 15 to 50% loss.

Agricultural pesticide damage to honey bees still occurs. Commercial beekeepers have been transporting their bees to other states for a honey crop instead of operating them in eastern WA and receiving continuing pesticide kills. Newer pesticides are less toxic to bees but there are serious questions whether part of the reported "CCD" problem is caused by a new family of chemicals that are systemic in the crop plants and being collected by bees when foraging for pollen and nectar.

### Current research solutions:

The Washington State Beekeepers Association (WSBA) and the WSDA Apiary Advisory Committee (AAC) have adopted a Colony Health Research Project document that describes the research needs of Washington beekeepers, as well as those of other northwest states. This Project document has been given to WSU with the insistence that it defines our research needs and that we want the WSU - P.F. "Roy" Thurber Endowed Chair to accomplish this research over a five year period.

The current Project activity consists of 144 hives receiving six different nutritional and management treatments and an additional 200 colonies being tested by WSU for Honey Bee Tracheal and Varroa mites and *Nosema apis* and *ceranae* diseases. All colonies are being monitored monthly to document variations in colony performance, nutrition and diseases in an effort to be able to quickly react to any significant changes in colony health and survival. Brood survival and pollen species and their nutritional characteristics are also being monitored.

Eric Olson, Vice President of WSBA, Jerry Tate, President and others are working to ensure that WSU research efforts accomplish industry defined goals. Mr. Olson has taken the lead in generating contributions from beekeepers in the northwest, beekeeper registration fees located in a WSDA account, funds from WSBA research accounts, fruit growers and others to support the research Project activity.

Eric and Sue Olson have met with Governor Gregoire's staff and requested \$40,000 from her emergency fund to help jump-start the research Project at WSU. To date his efforts have been able to acquire \$4,540 from 36 pollination customers and \$86,500 from 11 commercial beekeepers and several pollination user groups for a total of \$131,040.00.



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## THE STATUS AND FUTURE OF WASHINGTON APICULTURE AND AGRICULTURE, CONTINUED

### Short and long term vision for apiculture:

If the number of honey bee colonies in Washington continue to decline at current rates, agriculture and native fauna will suffer from lack of pollination. Fruit and seed quality and quantity will decline. The economy of apiculture will not allow beekeepers to rebuild failing or dead colonies and make increases in numbers if these losses continue even in the short term. Beekeepers can't sustain their operations if these losses occur more than two years in a row. More beekeepers will leave the business because of the colony losses and their inability to overcome the economic impact.

Commercial beekeepers manage several thousand (1,000 to 13,000 in WA) colonies and if they go out of business their customers and the crops they grow will lack pollination. There are no colonies available for import from other states to pollinate the specialty crops. Beekeepers in other states are experiencing the same losses. Crops in western Washington will not be pollinated because there aren't any commercial beekeepers able to meet the needs of agriculture. The logistics of pollination activities and high fuel prices make it difficult for beekeepers to move colonies long distances without substantial increases in pollination service fees.

Beekeepers in the 60 to 65 age bracket will sell their operations and retire in the next five years because they can't maintain their colony numbers due to economics, stock quality, and bee pests and diseases.

WSU must acquire funds from the legislature to build a credible, responsive and efficient honey bee research effort within the parameters of the WSBA / AAC Colony Health Research Project. The effort must be solution based and responsive to the economics and function of apiculture in the northwest. The effort should not duplicate the research psychology of the past that had a shotgun approach to resolving problems instead of

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## THE STATUS AND FUTURE OF WASHINGTON APICULTURE AND AGRICULTURE, CONTINUED

first investigating baseline colony health and then doing research to resolve those issues that affect colony health and survival. Research as conducted in the past produced knowledge but the science did not resolve the problems facing beekeepers. In some cases the results can't be trusted because the scientist didn't consider queen and bee behavior and other factors that could explain their results. Beekeepers used the research and experienced only varied or no benefit. Research must be performed within the parameters of the Colony Health Research Project to achieve useful results.

Research must continue over the next ten to 20 years to determine if agricultural crops are capable of providing for the nutritional needs of honey bees. We do not know if the cultivars being propagated in modern tree fruit nurseries, in row crops and seed varieties are capable of satisfying the nutritional needs of honey bees or if these cultivars are a part of the so-called CCD problem.

Washington apiculture must calculate its costs and needs in a manner that will justify higher pollination service fees across pollinated crops to better reflect the contribution of honey bees to each of these crops in the northwest. Interaction with grower groups and the research community will be necessary to acquire a valid understanding of their interests, economies, needs and potential outcomes.

With higher pollination service fees beekeepers will be better able to adapt to the changing needs of their colonies, promote better nutrition management and colony health, and react to research results that will enhance colony survival.

When the business of apiculture is on a more sound economic footing, younger beekeepers will be encouraged to grow their operations to commercial numbers and the pollination of Washington agriculture will be ensured. Older beekeepers will be able to retire and leave their operations in capable hands to meet the changing needs of agriculture in the state.

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### PESTICIDES: GERMANY BANS CHEMICALS LINKED TO HONEYBEE DEVASTATION

Pesticides: Germany bans chemicals linked to honeybee devastation by Alison Benjamin, [guardian.co.uk](http://guardian.co.uk), Friday May 23 2008

Germany has banned a family of pesticides that are blamed for the deaths of millions of honeybees. The German Federal Office of Consumer Protection and Food Safety (BVL) has suspended the registration for eight pesticide seed treatment products used in rapeseed oil and sweetcorn.

The move follows reports from German beekeepers in the Baden-Württemberg region that two thirds of their bees died earlier this month following the application of a pesticide called clothianidin. "It's a real bee emergency," said Manfred Hederer, president of the German Professional Beekeepers' Association. "50-60% of the bees have died on average and some beekeepers have lost all their hives."

Tests on dead bees showed that 99% of those examined had a build-up of clothianidin. The chemical, produced by Bayer CropScience, a subsidiary of the German chemical giant Bayer, is sold in Europe under the trade name Poncho. It was applied to the seeds of sweetcorn planted along the Rhine this spring. The seeds are treated in advance of being planted or are sprayed while in the field.

The company says an application error by the seed company which failed to use the glue-like substance that sticks the pesticide to the seed, led to the chemical getting into the air. Bayer spokesman Dr Julian Little told the BBC's Farming Today that misapplication is highly unusual. "It is an extremely rare event and has not been seen anywhere else in Europe," he said.

**UPDATE ON WSU BEE RESEARCH PROGRAM, ERIC OLSON****Update by Eric Olson***July 2008*

After my catastrophic loss of bees (4,000) hives in January of 2008 and growing statewide and regional reports of colony losses, it became obvious that a colony health research project was necessary to determine what was happening to the bees. With the help of the Deans Bernardo and Cavalieri at WSU we began trying to enhance the program around Dr. Walter Sheppard, holder of the Thurber Endowed Chair. This update reports our progress to date.

January 2008: The first 24 colonies from Olson's Honey were sampled as they entered almond pollination in California. A colony health analysis protocol was developed to examine samples for parasitic mites and *Nosema* pathogens. These and a subsequent >164 colonies entered into the colony health survey (see below) will be sampled monthly throughout the year 2008.

February 2008: Beth Kahkonen was hired as lab/apiary manager for the honey bee program under the direction of Dr. Sheppard. The university provided a 2 year-commitment to fund this position. During the almond pollination period, colonies were resampled and an additional 18 colonies were added to the research project.

March 2008: Because of the growing scope of the proposed colony health survey, it became obvious that funding had to be secured to establish a diagnostic center to run the bee samples. An all out effort was launched to secure that funding. Tom Hamilton (Idaho Beekeeper) and I each gave \$10,000 to get this project started. This effort has been well received. A list of donors is attached. The results of the Jan. & Feb. samples showed an alarmingly high infestation of *nosema* spores. I implemented an emergency treatment of colonies with the antibiotic fumagillin.

April 2008: An additional 48 colonies from my operation were entered into the project to provide adequate samples across the geographic distribution and Tom Hamilton entered 100 colonies. Advertisements went out for people to work in the diagnostic center. Sample results were slow until employees could be hired. Dr. Sheppard successfully implemented a working protocol to distinguish between *Nosema apis* and *Nosema ceranae*. Approximately 200 samples were received by the diagnostic center.

May 2008: Fund raising continued with pledges from the Washington State Tree Fruit Research Commission, the cranberry growers, the Washington State Commission on Pesticide Registration and others. Early results indicated that emergency fumagillin treatment worked with greatly reduced spore counts. Approximately 200 samples were run. Samples of WSU colonies confirmed the presence of *Nosema ceranae* in Pullman and Puyallup.

June 2008: We received \$40,000 from the Governor's Emergency Fund and her support to fund the WSU program through the legislature next year. WSU President Elson Floyd expressed support to enhance the WSU program over the long term.

June samples painted a confusing picture that parallels reports from European researchers. Some colonies that had high *Nosema* spore counts in Feb. and March had dropped to zero. Other colonies with zero counts in March, had modest counts of 150,000 – 250,000 spores per bee in June. All had been treated identically. The basis for the observed oscillation in *Nosema* spore counts is unknown at the present time. However, European researchers have reported that if high *Nosema ceranae* spore loads occur in the fall, colony losses can be expected to be high. Mite counts remained low. In Tom Hamilton's colonies *Nosema* counts were found to be low. However, tracheal mite counts jumped significantly from 5-10% in April to 30-70% infestation in some areas prompting emergency treatment. Additional samples from other WA beekeepers indicated the widespread presence of *N. ceranae*. Again approximately 200 samples were run.

In collaboration with Sue Cobey at UC-Davis and with some financial support from western queen producers, Dr. Sheppard collected, imported and inseminated honey bee queens with semen from *Apis mellifera ligustica* and *Apis mellifera carnica* under the auspices of a USDA-APHIS permit. Queens are currently being held at the WSU Smoot Hill mating station and the WSU Bald Butte quarantine facility for evaluation and eventual distribution of germplasm to queen producers.

## UPDATE ON WSU BEE RESEARCH PROGRAM, ERIC OLSON, CONTINUED

July 2008: Kirsten Northfield began training to work as the full time director of the diagnostic center. Coupled with the currently available part-time student help, sample results will become much more timely.

As part of the colony health research project and her MS research, Judy Wu is analyzing comb for chemical residues and possible effects on developing bees. She has started her first bioassay in contaminated comb to determine effects of larval survivability. AWESOME – Go Judy.

Mathew Smart is working on analyzing the occurrence and distribution of Nosema across the PNW, in both commercial and small beekeeping operations. He has recently demonstrated the ability of the WSU protocol to distinguish nosema apis and nosema ceranae infections from samples that were collected in alcohol. Previously, bees had to be frozen for this determination. This advance will greatly simplify sampling in the field.

The ARS bee lab in Tucson began collaborating with the WSU colony health research project. The focus of this part of the research project is nutrition. 144 colonies were identified that were going to cranberry pollination. Many different supplements were applied and measurements are being taken. Bee samples are also being analyzed to determine nutritional status within the bees. The Tucson lab will be analyzing the samples for protein content within the bees. Dr. Carol Anelli from WSU will do the analysis to determine the fat content in the bees.

This update is a quick overview of the progress of the Colony Health Research Project. We plan on publishing updates every 30-60 days to provide results that beekeepers may be able to apply to their own operation.

Eric Olson

## A WHO'S WHO OF COLONY COLLAPSE DISORDER SCIENTISTS

### How \$4 Million For Bee Research Is Spent

#### A Who's Who of Colony Collapse Disorder Scientists

July 18, 2008 by Kim Flottum

<http://www.thedailygreen.com/environmental-news/blogs/bees/colony-collapse-disorder-55071701>

On July 17, Ag Secretary Shafer announced that the University of Georgia had been awarded a \$4.1 million grant to study CCD.

This is a four year CAP (Coordinated Agriculture Project) grant, funded through USDA's Cooperative State Research, Education, and Extension Service (CSREES), which aims to improve the health of managed bee populations in agricultural systems. The research, according to Shafer, will address genomics, breeding, pathology, immunology and applied ecology to explain the causes behind dwindling bee populations. Researchers will work closely with the extension community and other stakeholders to develop and implement mitigation strategies for CCD and other significant problems.

The research team that put together the proposal is spread out over much of the country, coming from 16 Universities and two USDA Honey Bee Research Labs. That they just got this money isn't a surprise since we outlined their goals some time ago, but I'll bet you haven't heard of most of these scientists, and I'd like to give a short introduction for some of them, so you know who is in charge of finding out the answers to Colony Collapse Disorder.

The Project Director is **Dr. Keith Delaplane**, Univ of GA. He's written a couple technical books on pollination and honey bee mites, and a couple of beginning beekeeping books. He does research and Extension at GA, mostly on varroa mite IPM, but other projects as well. On this grant he'll be working on IPM and queen resistant queen production.

**Dr. Kate Aronstein**, from the USDA Honey Bee Lab in Weslaco, TX will be working on the new disease suspected of contributing to CCD, Nosema ceranae. She'll be working with **Dr. Tom Webster**, KY State, and **Dr. Leellen Solter**, who is leading the Nosema studies, from the Natural History Survey in IL. **Dr. Christina Grozinger**, Univ NC will also be helping, doing micorarray analyses of Nosema-infected bees collected by Dr. Aronstein, and also looking at the genetic differences between bees resistant and susceptible to Nosema, produced by Dr. Greg Hunt, from Purdue. She will have one of the stationary apiaries.



## A WHO'S WHO OF COLONY COLLAPSE DISORDER SCIENTISTS, CONTINUED

**Dr. Anne Averill**, Univ MA is the non-Apis scientist in the group, who will be studying the effects of insecticides on bees that aren't honey bees.

**Dr. Nick Calderone**, from Cornell Univ is studying genetic variability of northern bee populations, and when he finds desirable samples will send them to **Dr. Greg Hunt** at Purdue who will incorporate them in his resistant program, and to Dr. Steve Sheppard, WA State, who is doing the same thing for western and southern U.S. bees. Dr. Calderone will also develop stock selection protocols for honey bee breeding programs.

**Dr. Diana Cox-Foster**, PA State will be working on the diagnostics and pathogen collection part of the program. She has one of the stationary apiaries.

**Robert Danka**, USDA Honey Bee Research Lab in Baton Rouge will be working on finding honey bee strains resistant to varroa mites, in collaboration with Dr. Hunt and **Dr. Marla Spivak**, Univ MN.

**Dr. Frank Drummond**, Univ ME, will be studying the pollinating efficacy of *Bombus impatiens* (a bumblebee) and looking at bumblebee habitat. He also will manage one of the stationary apiaries there.

**Brian Eitzer**, from CT Ag Experiment Station will be conducting toxicology studies and analyses.

**Dr. Marion Ellis**, Univ NE will be looking, along with a Post-Doc student and a colleague, **Dr. Blair Siegfried**, at the sub-lethal effects of pesticides on honey bees.

**Dr. Zach Huang**, MI State will be working with Dr. Webster and others on *Nosema*-induced morbidity.

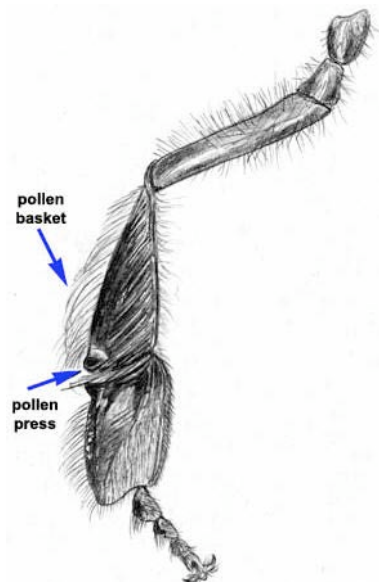
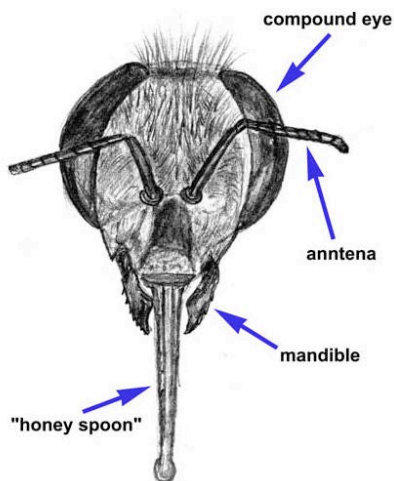
**Dr. Greg Hunt** will, in addition to the tasks already mentioned, be doing a significant amount of work on the genetics of resistance in honey bees to a variety of problems, using a wide collection of sophisticated techniques working with the newly fleshed out honey bee genome.

**Chris Mullin**, PA State will be working on sublethal pesticide bioassays, along with **Maryann Frazier** and **Dr. Jim Frazier**. **Dr. Nancy Ostiguy**, PA State will be working on the descriptive epidemiology of the Israeli Acute Paralysis Virus and Deformed Wing Virus and is part of the stationary apiary program in PA, **Steve Sheppard**, WA State Univ will manage one of the stationary apiaries and be looking at genetic diversity in the honey bee population. **Dr. John Skinner**, Univ TN will be responsible for getting all of this information from the scientists to the extension web site for distribution to the rest of the world. These scientists have joined with the USDA Ag Research Service's Areawide Project to form a Managed Pollinator Community of Practice, a combined website that will be the chief conduit through which new knowledge will flow to beekeepers and crop growers. **Dr. Marla Spivak**, Univ MN will have one of the stationary apiaries, and will be working on developing honey bees resistant to the various pathogens they are finding, and then teaching commercial queen breeders how to incorporate these traits into available queens. **Dr. Kirk Visscher**, Univ CA, Riverside will manage the stationary apiary in California. And **Dr. Tom Webster**, KY State will study the two *Nosema* diseases we have, the old one and the new one, and what happens when they combine with each other, and other stress disorders.

So there you have it. A vast entomological army of expertise. The best there is, according to the USDA, which gave them the money, to study Colony Collapse Disorder. When you divide the \$4.1 million between all these people, plus buy all that equipment for apiaries, each one doesn't end up with much ... let's hope it's enough.

There are, however, other teams studying CCD, and we'll look at those next time.

Kim Flottum



## PESTICIDES: GERMANY BANS CHEMICALS LINKED TO HONEYBEE DEVASTATION

Clothianidin, like the other neonicotinoid pesticides that have been temporarily suspended in Germany, is a systemic chemical that works its way through a plant and attacks the nervous system of any insect it comes into contact with. According to the US Environmental Protection Agency it is "highly toxic" to honeybees.

This is not the first time that Bayer, one of the world's leading pesticide manufacturers with sales of €5.8bn (£4.6bn) in 2007, has been blamed for killing honeybees. In the United States, a group of beekeepers from North Dakota is taking the company to court after losing thousands of honeybee colonies in 1995, during a period when oilseed rape in the area was treated with imidacloprid. A third of honeybees were killed by what has since been dubbed colony collapse disorder.

Bayer's best selling pesticide, imidacloprid, sold under the name Gaucho in France, has been banned as a seed dressing for sunflowers in that country since 1999, after a third of French honeybees died following its widespread use. Five years later it was also banned as a sweetcorn treatment in France. A few months ago, the company's application for clothianidin was rejected by French authorities. Bayer has always maintained that imidacloprid is safe for bees if correctly applied.

"Extensive internal and international scientific studies have confirmed that Gaucho does not present a hazard to bees,"

said Utz Klages, a spokesman for Bayer CropScience.

Last year, Germany's Green MEP, Hiltrud Breyer, tabled an emergency motion calling for this family of pesticides to be banned across Europe while their role in killing honeybees were thoroughly investigated. Her action follows calls for a ban from beekeeping associations and environmental organisations across Europe.

Philipp Mimkes, spokesman for the German-based Coalition Against Bayer Dangers, said: "We have been pointing out the risks of neonicotinoids for almost 10 years now. This proves without a doubt that the chemicals can come into contact with bees and kill them. These pesticides shouldn't be on the market."

<http://www.epa.gov/opprd001/factsheets/clothianidin.pdf>

[http://www.bayercropscience.com/BAYER/CropScience/cscms.nsf/id/clothianidin\\_se.htm?Open](http://www.bayercropscience.com/BAYER/CropScience/cscms.nsf/id/clothianidin_se.htm?Open)

## FLOWERS LOSE FRAGRANCE BECAUSE OF POLLUTION

Air pollution is hampering the ability of pollinating insects, including bees and butterflies, to follow scent trails to their source.

A [study at Univ. of Va.](#) has shown that air pollution from power plants and automobiles is destroying flower fragrance. This could partially explain why pollinator populations, particularly bees, are declining in several areas of the world, including California and the Netherlands.

Jose Fuentes, Univ. of Va. professor of environmental sciences, said the loss of fragrance has created a vicious cycle where pollinators struggle to find enough food to sustain their populations, and populations of flowering plants, in turn, do not get pollinated sufficiently to proliferate and diversify.

### What's in That Package? An Evaluation of Quality of Package Honey Bee (Hymenoptera: Apidae) Shipments in the United States

**Authors:** Strange, James P.; Cicciarelli, Richard P.; Calderone, Nicholas W.

**Source:** [Journal of Economic Entomology](#), Volume 101, Number 3, June 2008, pp. 668-673(6)

#### Abstract:

To replace deceased colonies or to increase the colony numbers, beekeepers often purchase honey bees, *Apis mellifera* L., in a package, which is composed of 909-1,364 g (2-3 lb) of worker bees and a mated queen. Packages are typically produced in warm regions of the United States in spring and shipped throughout the United States to replace colonies that perished during winter. Although the package bee industry is effective in replacing colonies lost in winter, packages also can be an effective means of dispersing diseases, parasites, and undesirable stock to beekeepers throughout the United States. To evaluate the quality of packages, we examined 48 packages representing six lines of bees purchased in the spring 2006. We estimated levels of the parasitic mite *Varroa destructor* Anderson & Trueman and the percentage of drone (male) honey bees received in packages. We surveyed for presence of the tracheal honey bee mite, *Acarapis woodi* (Rennie), and a microsporidian parasite, *Nosema* spp., in the shipped bees. We found significant differences in both the mean *Varroa* mite per bee ratios (0.004-0.054) and the average percentage of drones (0.04-5.1%) in packages from different producers. We found significant differences in the number of *Nosema*-infected packages (0.0-75.0%) among the six lines. No packages contained detectable levels of *A. woodi*. Considering the observed variability among honey bee packages, beekeepers should be aware of the potential for pest and disease infestations and high drone levels in packages.

# Special Notice

WASHINGTON STATE DEPARTMENT OF REVENUE

JUNE 3, 2008

## Tax Exemptions for Honey Beekeepers

Beginning July 1, 2008, Second Substitute Senate Bill (SSSB) 6468 provides a business and occupation (B&O) tax and sales/use tax exemption for “eligible apiarists.” The exemptions will expire on July 1, 2013.

### Who qualifies?

Only “eligible apiarists” qualify for the new exemptions. An eligible apiarist is a person who:

- Owns or keeps one or more bee colonies;
- Grows, raises or produces honey bee products for sale at wholesale; and
- Registers their hives/colonies with the Washington State Department of Agriculture as required by RCW 15.60.021.

(For more information about the Department of Agriculture’s hive registration program, please visit <http://agr.wa.gov/PlantsInsects/default.htm> or call (360) 902-2070.) The registration form can be found here: <http://agr.wa.gov/PlantsInsects/Apiary/docs/ApiaryRegistrationForm.pdf>

A “bee colony” is defined as a natural group of honey bees containing 7,000 or more workers and one or more queens, housed in a man-made hive with moveable frames, and operated as a beekeeping unit.

### B&O tax exemptions

#### **Sales of honey bee products:**

An exemption from the business and occupation (B&O) tax is provided for wholesale sales of “honey bee products” by an eligible apiarist.

Honey bee products are defined as:

- Queen honey bees
- Packaged honey bees
- Honey
- Pollen
- Bees wax
- Propolis
- Other substances obtained from honey bees

This B&O tax exemption does not extend to retail sales of honey bee products. Retail sales tax also applies to retail sales of honey bee products that are nonfood products.

#### **Bee pollination services:**

An exemption from B&O tax is also provided for income received by an eligible apiarist for providing bee pollination services to a farmer (as defined in Chapter 82.04.213 RCW,). The eligible apiarist must provide pollination services using bee colonies that the eligible apiarist owns or keeps.

It is important to note that income received from brokering bees remains subject to the B&O tax under the Service and Other Activities classification. A broker is generally a third party who simply arranges for an apiarist to place bee colonies in a farmer’s fields or orchards. The apiarist, rather than the broker, owns or keeps the colonies.

#### **Sales/use tax exemptions:**

A sales/use tax exemption is provided for purchases of honey bees by an eligible apiarist. To document the exempt purchase, the eligible apiarist (buyer) must give the seller a properly completed “Buyer’s Retail Sales Tax Exemption Certificate” at the time of purchase. The exemption certificate is available at <http://dor.wa.gov> under “Get a form or publication.”

The sales/use tax exemption does not cover other items such as bee hives, hive components, extractors, protective clothing, and beekeeping equipment.

If you are not required to file an excise tax return and you need to report use tax, you can use a Consumer Use Tax Return available on the Department’s Internet web site under “Get a form or publication.”

If you need assistance or have questions, please visit the Department’s web site at <http://dor.wa.gov> or contact the Telephone Information Center at 1-800-647-7706.

P.O. BOX 47478 | OLYMPIA, WASHINGTON 98504-7478 | 1-800-647-7706 | [HTTP://DOR.WA.GOV](http://DOR.WA.GOV)

## **How to make Convention Room Reservations on [www.RedLion.com](http://www.RedLion.com)**

Go to [www.RedLion.com](http://www.RedLion.com) on the Internet.

Click on the word "Reservations" at the very top of the screen.

Scroll down to the bottom of the screen, for the section titled "Room block and group reservation."

Enter your check-in date & check out date. Enter the group code for the Washington State Beekeepers Association, which is 081016WA.

Under Hotel, select Red Lion at the Quay (2<sup>nd</sup> from top).

This will enable group attendees to get all of their group rates, and for the group to get credit for all of the rooms reserved. These instructions are for anyone using Windows. Mac users will see a slightly different interface.

### **How to make Group Reservations on the phone**

Call 800-RedLion (800- 733-5466)

Be sure to mention you are getting special rates for the Washington State Beekeepers Association.

(Your rates are lower than government, AAA, AARP or other discounts.)

If you have any difficulty, or have special requests, please call Qynne McKibben, at 360-750-4916.

Your special rates will be honored three days before, and three days after the convention, in case you'd like to stay longer.

Paul Lundy  
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Washington State Beekeepers Association  
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Kingston, WA 98346