

Washington State Beekeepers Association



Keep the "Bee" in Business

Publication of Washington State Beekeepers Association

www.wasba.org

October 2004

President's Message

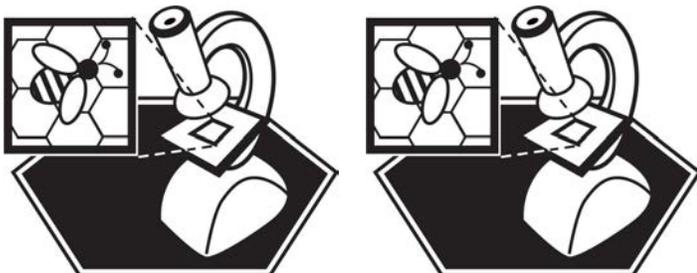
Well the convention is done and I want to thank Jim Miller for leading a great team of folks to make it a great time for everyone. A big thanks to the IEBA for sponsoring this event. I would also like to thank everyone who took time from his or her busy schedule to attend. We are waiting to hear from Oregon on a joint meeting for next year and will let everyone know what is going on as soon as we have something.

After the convention I attended the Washington Ag Presidents meeting in Moses Lake where we heard from the President of WSU. It was a very enlightening discussion for me as President Rawlings and his staff shared with us where they are trying to take the University. **Remember Agriculture is still the biggest Business in Washington.** The University is being under funded in the core areas so badly that it is affecting their ability to do research. If the core areas aren't there, the professors and students aren't there for our research projects. It seems to me we need to build up the base that supports our research. I think they are on the right track and I hope you can support them.

January 8, plan on a productive executive board meeting. My goal is to start at 10 AM and have the different committees meet until 11 AM to work on their issues and be ready to report at the Board meeting. I expect we will be having a Master Beekeepers Meeting, and several other committees. From 11 till 2 PM we will have our board meeting and spend the whole time reviewing the survey and developing plans to take the information forward to improve our association. This meeting and our March meeting will develop our responses to our survey. I think we are up to the task.

Again I want to thank the folks that worked hard on the convention. Our out of state guests and speakers, plus Dick Molenda and Roger Carney for a great auction raising over \$4,000, and to Leonard Pankratz and Pat Heitkam for attending the convention and donating to our auction. And a special thanks for the ladies and Roger for the quilt, and Joan Nolan for winning it in the auction. It is a beautiful quilt.

Jerry Tate



Washington State Updates

2005 Program Calendar for the Association.

- JANUARY 8, 2005:** WSBA Executive Board Meeting
Bar 14 Ranch House Restaurant
1800 South Canyon Road, Ellensburg, WA
10 AM to 2PM
- MARCH 2005:** WSBA Executive Board &
General Membership Meeting
LOCATION TBA, Ellensburg
- JUNE 2005:** WSBA & WSU June Field day TBA
- NOVEMBER 2005:** WSBA & OSBA joint meeting TBA
Executive Board Meeting TBA
WSBA General Membership Meeting

Beekeeper of the Year

Wesley B. Tate was awarded the copper bee smoker at the Spokane Conference. Congratulations Wes! Your dedication to beekeeping and your perseverance in helping others is appreciated by all.

Wes has been a mainstay for the Inland Empire Beekeepers Associations since the early 1970's. He started Mountain View Honey Farm in 1971 with his brother-in-law Bob McMillan. They quickly built the business up to include 300 colonies, extracting house and a wood shop to build equipment. In the mid 70's, they decided to open up a retail outlet for beekeeping supplies for the Spokane area, which has continued to serve the area to this day. When they realized the local area needed package bees and queens, they started driving to California and

(Continued on page 2)



**HONEYBEE
INVESTIGATIONS**

P.O. Box 163
45289 Rd. Q NE
Hartline, WA 99135
rjbkdorm@televar.com

Diagnostic Laboratory for Apiaries

Jan Dormaier
Microbiologist

(509) 639-2577

Tracheal test \$ 25/100 bees and Nosema \$ 10/test

Washington State Updates, continued

Beekeeper of the Year

(Continued from page 1)

hauling hundreds of packages into the area. This allowed our local beekeepers to receive their packages without having them mailed.

He served several terms as President of the Inland Empire Beekeepers Association and served Eastern Washington as State Bee Inspector. During the late 1980's he managed the IEBA fair booth at the Spokane Interstate Fair. It was his effort to improve the booth and educate the public that got the IEBA the top booth award and made it the center of attention in the Ag Building during the fair. He served for many years as area 6 representative to the Washington State Beekeepers Association. In 1985 Mountain View Honey Farm was sold and the bee shop was closed while Wes dealt with family health issues and the passing of his wife. In 1988 Wes went into partnership with his son Jerry and founded Tate's Honey Farm and reopened the bee shop. All of the old customers and many new ones came back to the shop and it was as though it had never closed. In 1990 he was chairman of the Washington State Beekeeping Association State Convention, which was held in Spokane. His tireless work and effort led to an extremely successful convention.

The most lasting impact by Wes was all the advice you could get at the bee shop counter or at the IEBA bee meetings he always attended. It was never said that IEBA meetings were dull with Wes, Ancel Goolsbey and Walt Peterson in attendance. His honey ice cream was always the hit of the IEBA yearly picnic. The grandkids always hoped there was some left over so they could have it when they visited grandma. His support, good advice and always having the time to help new beekeepers lead to many successful hobby beekeepers in the Spokane area. Many of our areas commercial beekeepers got there start working with Wes. He was especially partial to retired military. Maybe it was that they talked two languages; bees and military. He always had time to mentor, give good advice and lend a helping hand to any beekeeper. His desire to help the industry that he has loved since he worked bees in Montana in the Sun River Valley as a boy till his active retirement from Tate's Honey Farm in 2001 has been an overriding objective of his life. He has touched many honey and bee customers, friends, and fellow association members.

Ted Swenson
President, IEBA

Annual Conference in Spokane

Sixty eight of us had a great annual conference this year.

Jack Thomas from Mann Lake gave us an update on the incident with beekeepers in North Dakota and sodium cyanide. There is more on that in this newsletter.

Frank Merickel was enthralling with his "Pandora's box" of live insects and the informative talk on how diverse insect life is. I never knew there were so many noseem's in the world.

Steve Sheppards talk about sound research and the scientific method was nice as it really brought home what some of us talk about at the local association on articles we read in the popular journals. His message was this; do not take research on its face value without critically looking at the entire article. Such things as, "what is the hypothesis, are there controlled experiments to test the hypothesis, was there statistical evaluation and what are the significant results?"

Nick Calderone from Cornell University talked about Integrated Pest Management (IPM) techniques and gave good advice. Nick talked about having a basic plan to take you through the seasons; such as using drone comb as a technique to control Varroa, deciding on the general schedule of treatments and testing for mite levels throughout each year. When deciding on your schedule, compare it against the nectar flows for your area to pick your treatment windows. If you haven't done it already, make a treatment card for each colony.

Jeff Pettis from the ARS Honey Bee Research Lab discussed miticide effects on queen health. His research compared various levels of miticides in queen cups and the effects of increasing amounts of chemicals on the developing queens. If it wasn't obvious before, it sure is now, levels of miticides in wax have a bad effect on queens. The queens are smaller, take longer to develop, and do not mate as well as queens raised in clean wax. Jeff also discussed American Foul Brood (AFB) treatments. He is continuing research on alternatives to Terramycin; specifically the antibiotics Lincomycin and Tylosin for the treatment of Terramycin resistant AFB. Based on their findings, manufacturers of Tylosin may be able to apply to the EPA for registration next year. Jeff showed evidence that Tylosin is less toxic to brood at recommended doses than Terramycin.

Here is one tidbit came out of Jeff's talk that did not surprise many. In one of his slides the data showed that mated queen mortality of the control groups, during the first year, was approximately 50%. Perhaps more attention needs to be focused on the issue of first year queen mortality. Maybe this is an area of research that could help us all.

Steve Sheppard gave an update on research at WSU and Marina Meixner showed us her continuing research into queens that are being selected for gentleness, hygienic behavior, and Varroa mite suppression. The data Marina presented is encouraging as it showed the first round of breeding selection is moving toward the traits we have said are important.



E-mail: ruhbeesupply@yahoo.com

RUHL BEE SUPPLY
Beekeeping Supplies - Honey - Bees

17845 SE 82nd Drive
Gladstone, OR 97027

The Johnson Family
(503) 657-5399

Executive Board Meeting Minutes

Washington State Executive Board Meeting on October 14, 2004

The meeting was called to order with promptness by president Tate. He gave a quick presentation of the meeting outline. The big issue will be mites and treatments. He has been getting lots of calls regarding this problem. We will go through the reports for tomorrow's meeting and the master beekeepers will be discussed. There were 21 people present at the meeting.

Reports

The Secretary's Report - The minutes of the June meeting by the Secretary Linda Carney were accepted as written in the June newsletter and are also available in the syllabus.

The Treasurer's Report - The treasurer Lisa Knox submitted a presentation of the expenses and income for the year. She also gave a brief verbal explanation. There is a combined balance of \$4565.29 between checking, savings and petty cash. The savings CD will be \$7068.11 as of 11/16/2004 and the WSBA PR fund has a current closing balance of \$1619.70. The scholarship funds have a total balance of \$48932.11 as of 9/30/2004. The Treasurer's report was accepted as written in a syllabus, which will be presented to each member attending the convention.

WSBA Newsletter and Survey - Paul Lundy, the newsletter editor, presented the responses received from the surveys in a handout. Most of the responses were from hobbyists who wanted help and wanted to keep education and training such as the Master Beekeepers program. A more complete breakdown was provided in the syllabus distributed at the convention.

Area 1 - Tim Bueler from Snohomish - Honey production is down and there are lots of queen problems. 20-30% queen losses. There have also been lots of mite problems reported.

Area 2 - Robert Smith from Yelm - After discussions with 4 other beekeepers, Robert discovered there have been queen problems. Bob Bower has not medicated for 5 years now. Had 35 hives going into last winter and 22-23 hives coming out. Dan Harvey used almost no medication. J. Robinson uses standard medication regimens and he's doing well. Smith had not medicated his hives and they all died. He bought 8 packages this year and has 14 colonies now. He is unsure of his mite problems. Bob Bower harvested 600 lbs of honey with 30 colonies. Robert said his area has a short bloom time for fireweed. Ragsdale said was happy just to have enough honey for his customers!

Area 3 Upper Valley - Eric Olsen from responded, "It's not good in area 3. Area 3 had a barnburner of a crop. Unfortunately it was dark and no one wanted it!"

Area 3 Lower Valley - Arlene Massey from Grandview - Lots of bees in mint. The bees in North and South Dakota did not do that good but they did better than others in that area. Others joined in with tales from across the US. Eric Olsen stated that several areas had a variety of production results, but overall it was not good. Even North Dakota was lousy he said. Eric believes because he double queens on everything that his production was higher than others.

Area 4 - Miriam Bishop from Twisp - She traveled to other

areas also and it was "zip to mediocre" honey production.

Area 5 - John Pettigrew from Pasco - He had a good year for honey production but 1 of three hives were infected with mites and he had foulbrood also. His observation hive is very active. Paul Hosticka has moved to area 5 and he has been doing real well. There are mixed results with Varroa. Some yards have almost none and some were very heavy. Paul raises his own queens and he has no problems at this time.

Area 6 - Bob Arnold from Deer Park - He thinks the honey production for Spokane area is okay. He is still seeing mites in brood.

WSU Report - Jamie Strange said the reports from WSU are in the syllabus. Honey is horrible in the Pullman area. There is good encouragement from the hygienic queens that wintered over. The only foul brood was from the 4 colonies that had packaged queens; none of their local queens had foul brood. He said they also have a queen with low Varroa mite counts. WSU has good prospects. One theory about queens is a possibility the genetic diversity has decreased. The university will be checking into this.

WSDA Report-

Eric Johansen will be going forward requesting Section 18 in currently used products. Formic acid is on everyone's mind. Eric will not be requesting anything regarding formic acid at this time. But, a decision is expected to be made regarding the availability of it in products this December.

Old Business

Paul Lundy brought up the costs of the newsletter with details on page 12 of the syllabus. Paul wants to keep the advertising rates the same as last year. A motion was made and passed to keep the advertising rates the same for the coming year. Mites - Eric Olson reports other beekeepers (commercial) in North Dakota have lost 50% of their hives. Still others have only 5 frames of bees in a hive. He constantly tests for varroa and used both Apistan and Coumaphos and rotates their usage. Texas and some others have a crisis. The key is to use products properly so there is no problem. The drone brood did not have mites this year but there are mites in the worker bees! Everyone at the meeting agreed that something must be done about this mite problem. New solutions, new treatments, new queens, and new techniques need to be researched! All agreed that these are the major areas of concern with the honey producers and pollinators. Arlene Massey and Connie Bueler will audit the books for the WSBA and the books of the Master Beekeepers committee. The results will be announced at the general meeting on Friday October 15, 2004.

New Business

Area reps are requested to make contact with the local associations and associates. Because the size of the areas can be foreboding and too large for one rep to travel effectively, it was discussed that area 2 be divided into two sub-areas. The area reps decided to get together and discuss the possible splitting of area 1 and area 2. It was moved to table the discussion until the next meeting because it is necessary according to the by laws to have a motion to add a new area representative-at-large. The first

(Continued on page 4)

Executive Board Meeting, continued

(Continued from page 3)

meeting in 2005 will be January 8th and there is a general meeting tomorrow.

For general information! All three drums of cyanide in N. Dakota have been found.

Jerry Tate presented an outline to be proposed for a formalized change to the by laws regarding the Master Beekeepers.

Then, John Timmons rose and presented a \$5,000.00 check for the Timmons Scholarship. This sparked a large round of applause.

On that happy note our meeting was adjourned.

Submitted by Linda Carney, Secretary, WSBA

Annual General Membership Meeting Minutes

General Membership meeting on October 15, 2004.

President Jerry Tate called the general meeting of the WSBA to order. President Tate apologized in advance for fast pace of this meeting. The restraints of time making it necessary to keep our meeting very short.

Reports

The Treasurer's Report - The treasurer's report was accepted as written in the syllabus. No one had any questions regarding the treasurer's report. A motion was passed to accept the treasurer's report as read and written by Lisa Knox.

The Auditor's Report - The auditors, Arlene Massey and Connie Bueler, stated that the books for the WSBA and the Master Beekeepers were in good order. There is approximately \$1950 in the Master Beekeepers account.

Old Business

None presented

New Business

There are several major items that need to be addressed at this meeting. 1. The by laws need to be changed so the Master Beekeepers can have a checking account. 2. The number of members and how to get on the committee need to be defined for Master Beekeepers. 3. Set a maximum dollar amount that the Master beekeepers can spend and over that amount it must be approved by the Executive Board. 4. It has been recommended that area 1 be subdivided into two regions because of the physical size of the area. It has been suggested Watson, Skagit, Snohomish, San Juan and Island counties be one subdivision area 1a and King, Kitsap, Jefferson and Clallam counties constitute a second subdivision area 1b.

A motion was passed to change the bylaws to include the subdivision of area 1.

Because there are now several scholarship funds It was proposed to change Article IX, Section 1 (J) of the bylaws from the Roy Thurber Memorial Scholarship fund to read Scholarship fund. A motion was made and passed to change the name to Scholarship.

Elections - Bob Zahler for the nominating committee asked for nominations from the floor for the offices of President, Vice President, Secretary, Treasurer & the area representatives. There were no nominations, so all officers were re-elected for the Washington State Beekeepers Association. President Tate asked that all area Reps stand and be recognized. Each in turn stood and was introduced. At this time the new area rep for Area 1b was announced as Van Sherod of Seattle. Tim Bueler is still the rep for Area 1a.

President Tate took us quickly into the bylaws and the other proposed bylaw changes. The changes were discussed at length and then voted upon. Motions were made and accepted to change the bylaws as written below and presented by President Jerry Tate.

By Law Changes

Master Beekeepers and the WSBA

President Tate began his presentation by stating, "In reading through many of the minutes and consulting with several of the members of the Master Beekeepers I feel we need to provide some additional guidance and clarity to what the relationship is and the committee's role within WSBA."

Article IX

Change Section 1 (I) to read Master Beekeepers

Add Section 3. The Master Beekeepers Committee will have 12 members. Eight members will be nominated from within the Master Beekeepers Committee membership and 4 appointed by the President of WSBA. All nominations to be approved by the Executive Board. The committee members will select a chairman, vice chairman, treasurer, and secretary. The business account of the committee will be audited annually by the WSBA Audit committee and the WSBA treasurer and reported to the membership with the WSBA annual report.

The purpose of the committee is to educate beekeepers through three structured courses on beekeeping, Certified, Journeyman and Master. The committee manages a separate banking account to purchase materials, books and certificates required for the course. The 4 officers of the committee must approve all expenditures for these items. The WSBA Executive Board must approve all expenditures over the amount of \$250.

Use a resolution to define goals and objectives as they can change and we are more flexible using resolutions.

Resolution proposed:

The purpose of master beekeepers committee is to maintain our course material, support and promote classes for each level and to assist local associations with training as it pertains to these courses. The executive board directs the master beekeepers committee to develop a correspondence program to support the three courses with the beginning course on line by Oct. 2005. Resolution Passed.

Current Members of the Committee:

Paul Lundy-Chairman
Jo Miller-Vice Chairman
Bob Smith-Treasurer
Bob Zahler-Secretary
Jim Miller-Member

(Continued on page 5)

**Buckfast & All – American
Queens • Package Bees**
www.rweaver.com

The R Weaver Apiaries, Inc.

16495 C.R. 319 Navasota, TX 77868

Phone: 936-825-2333 Fax: 936-825-3642

E-MAIL: rweaver@tca.net

WSBA Beekeeper Classified Ad Form

Classified ads are \$5 per insertion, for a maximum of 30 words.
(**FREE for WSBA Members**).

To place an ad, please fill out and mail this form, with
payment made out to:

Washington State Beekeepers Association

c/o Newsletter Editor

P.O. Box 1331

Kingston, WA 98346-9301

Fax: (425) 527-4251

Please **CLEARLY PRINT** your ad below. Don't forget to include
your contact information (phone, fax, e-mail).

Your ad will run in the next printing of the Newsletter
when received by the 15th of the month prior
to publication. **The ad will run for two (2) newsletters.**
(You may email your submission to plundy@seagen.com
and mail your payment to the P.O. Box.)

**Annual General Membership Meeting
Minutes, continued**

(Continued from page 4)

Tim Bueler-Member

Van Sherod-Member

Miriam Bishop-Member

Technical Advisor-Steve Sheppard

Appointed by the President:

Jim Pefley

Bob Stump

(one open position to be selected at the January meeting)

Article IX, Section 1 (J)

Change Roy Thurber Memorial Scholarship Fund to read
Scholarship Fund

Redefine Area 1 definition:

Area 1a-Whatcom, Skagit, Snohomish, San Juan, Island.

Area 1b-King, Kitsap, Jefferson, Clallam.

Area 2 is unchanged.

Motions were made, seconded & passed to change the
bylaws to accept the changes and additions for each item.

The last matter of business was to announce the Beekeeper
of the Year. This year our honored member is Wes Tate of
Spokane Washington. Congratulations Wes!!

The meeting was adjourned.

Note: the by-laws, as amended, are published in this newsletter.

Submitted by Linda Carney, Secretary, WSBA

Election Results

Election results:

- President - Jerry Tate of Spokane
- Vice President - Lee Massey of Grandview
- Secretary - Linda Carney of Spokane
- Treasurer - Lisa Knox of Kingston
- Area 1 - Tim Bueler of Snohomish
- **Area 1b - Van Sherod of Seattle**
- Area 2 - Robert Smith of Yelm
- Area 3 Upper Valley - Eric Olson of Yakima
- Area 3 Lower Valley - Arlene Massey of Grandview
- Area 4 - Miriam Bishop of Twisp
- Area 5 - John Pettigrew of Pasco
- Area 6 - Bob Arnold of Deer Park

Regional Updates

Oregon State Beekeeping Association Fall Confer-
ence was at the Agate Beach Inn Best Western in Newport Ore-
gon from October 28, 29 & 30, 2004.

California State Beekeepers Association 2004 Con-
vention will be held November 9-11 at the Red Lion Hanalei
Hotel in San Diego, CA.

**HEITKAMS'
HONEY
BEES**

PAT, RUSSELL & CRAIG HEITKAM
4700 FIRST AVENUE • ORLAND, CA 95963
Bus. 530-865-9562 • FAX 530-865-7839
Email: heitkamsbees@sisna.com



Queens, Bees, Honey & Pollination

WSBA CONSTITUTION & BY-LAWS

Proposed Changes were presented and voted upon at the annual meeting October 15th, 2004.
Here is the current version.

CONSTITUTION AND BY – LAWS of the WASHINGTON STATE BEEKEEPERS ASSOCIATION

Adopted November 13, 1981, Everett, Washington

ARTICLE I – NAME

The name of this organization, a non-profit organization, shall be the Washington State Beekeepers Association. The organization will hereinafter be referred to as WSBA.

ARTICLE II – PURPOSE

The WSBA is formed to engage in any activity which will promote the common interest and general welfare of the Beekeeping Industry, and a balanced agricultural economy, in part by maintaining memberships in appropriate local, regional, national and international organizations as designated by the Executive Board.

ARTICLE III – MEMBERSHIP

Section 1. Eligibility

Any individual, or firm, or any organization of individuals or firms having an interest in any part of the Beekeeping Industry may become a member or an associate member of WSBA.

Section 2. Application for Membership

A completed application form for membership shall be accompanied by the prescribed annual membership fee for such calendar year. Thereafter, the annual membership fee shall be payable in advance.

Section 3. Categories of Membership

Paragraph a. Regular Membership – A Regular Member of WSBA shall have voting rights, shall be eligible to hold office as prescribed under Article 4, and is entitled to distribution of all newsletters, other publications, and mailings provided by WSBA. Membership fees for Regular Members shall be as follows:

The initial Regular Membership fee to WSBA covers one person. The fee for each additional person from the same operation is \$7.50.

_0 to 50 Colonies.....\$ 15.00	_1,501 to 2,000 Colonies...\$ 90.00
_51 to 150 Colonies.....22.00	_2,001 to 3,000 Colonies...120.00
_151 to 300 Colonies.....30.00	_3,001 to 4,000 Colonies...150.00
_301 to 500 Colonies.....40.00	_4,001 to 5,000 Colonies...180.00
_501 to 1,000 Colonies.....55.00	_5,001 to 6,000 Colonies...225.00
_1,001 to 1,500 Colonies. 70.00	_6,001 or more Colonies....250.00
	_Industrial Member.....50.00

Paragraph b. Industrial Membership – Industrial Memberships shall include dealers, manufacturers, suppliers packers, and other enterprises. Industrial Members shall be entitled to distribution of all newsletters, other publications and mailings provided by WSBA. Industrial Members shall not be eligible to hold office. Dues for Industrial Members shall be a minimum of \$50.00 per calendar year.

Paragraph c. Associate Membership – Associate Memberships shall be restricted to those persons who are members of a locally recognized beekeeping organization. Persons possessing Associate Membership shall not be entitled to distribution of newsletters or other publications or mailings. Associate Members shall be entitled to subscribe to the newsletter, which will be mailed directly to the Associate Member, upon making application to the WSBA Secretary with the prescribed subscription rate, which is to be decided upon each year by the Executive Board. Written application for Associate Membership shall be made by the local association to the WSBA Secretary and shall include: The name of the local association, the names and addresses of each associate membership applicant, and the prescribed annual membership fee of \$1.00 per person.

Paragraph d. Ex-Officio Membership – The Director of the State Department of Agriculture; the Supervisor of the State Apiary Division; the Chief Apiary Inspector; the County Agricultural Extension Chairpersons or their agent of the several counties of the state; and the Apiculturist at the Washington State University; and such other members of the faculty as approved by the Executive Board; and the Presidents or their representative of the various local beekeeping associations shall be ex-officio members of WSBA without payment of dues.

(Continued on page 7)

WSBA Constitution and By-Laws Update

(Continued from page 6)

ARTICLE IV – OFFICERS

Section 1. The officers and governing bodies of the WSBA shall be: (A) President; (B) Vice-President; (C) Secretary; (D) Treasurer; (E) Executive Committee. All elected officers must have been a member in good standing for the preceding year.

Section 2. The Executive Board shall consist of the President, Vice-President, Secretary, Treasurer and one Committeeperson from each of the geographic areas coincident with the boundaries of those or the Apiary Board of the State of Washington, with the exception of Area 1 and 3 which shall have 2 Committeepersons. A Thirteenth member of the board shall be the immediate past president of the WSBA. The President may appoint up to three additional Committeepersons who shall have full voting privileges upon ratification of their appointment by a majority of the board at any regular board meeting, a quorum being present. The newly elected members of the Executive Committee shall take office at the close of the annual meeting and shall hold office for three years, at least two to be elected each year.

Section 3. The Executive Board shall have full power and authority over the affairs of the WSBA, provided however, that the Board shall take no action which conflicts with policies established by the members of the WSBA. The Board shall conduct all important business of the WSBA and shall control all expenditures of more than \$250, which expenditures must be approved by a majority vote of the board present, or by telephone or mail ballot in an emergency. Actions taken by the Executive Board will be reviewed and approved by the members of the WSBA at its annual meeting.

Section 4. The President of the WSBA shall be elected and hold office for one year, or until his/her successor is elected and takes office. The President shall preside at all business and Executive Board meetings. He/she shall submit an annual report to the WSBA at its annual meetings.

Section 5. The Vice-President shall be elected by ballot at the annual meeting, and shall hold office for one year, or until his/her successor is elected and takes office. In the absence of the President, the Vice-President shall perform the duties of the President. In the case of resignation, death, or removal from office of the President, the Vice-President shall perform the duties of the President.

Section 6. The Secretary shall be elected by ballot at the annual meeting, and shall hold office for one year, or until his/her successor is elected and takes office. He/she shall maintain a complete record of all meetings and perform such other duties as may be indicated by this constitution, and as may be directed by the Executive Board. At each annual meeting, he/she shall submit a full report of his/her activities for the period since the last annual meeting.

Section 7. The Treasurer shall be elected by ballot at the annual meeting, and shall hold office for one year, or until his/her successor is elected and takes office. He/she shall have charge of the funds of the WSBA and be responsible for their proper disbursement. He/she shall at each annual meeting submit a full report of his/her activities, including an accounting for all funds received and disbursed by him/her.

Section 8. Any vacancy occurring in the Executive Board shall be filled by appointment of the President, with the approval of the majority of the Executive Board. The absence of any officer from two successive Executive Board meetings shall be deemed a resignation from office, unless such absence is decided to be unavoidable by the majority of the Executive Board.

ARTICLE V – VOTING

Section 1. Each member in good standing with the WSBA shall be entitled to vote at the annual meeting.

Section 2. In the election of officers, all voting shall be by secret ballot, unless suspended by the membership. There shall be at least two nominations for each elective office.

Section 3. Any motion or controversial issue to be voted on at the annual meeting of the WSBA must, by demand of any member, be voted on by secret ballot, otherwise by voice vote.

Section 4. Nominations shall be made from the floor for all officers to be elected at the annual meeting of WSBA.

Section 5. Election of officers shall take place at the annual meeting. The new officers shall take office immediately following the annual meeting.

Section 6. All members in good standing of the WSBA present at the annual meeting shall constitute a quorum.

Section 7. A majority shall constitute a quorum for a meeting of the Executive Board.

ARTICLE VI – MEETINGS

Section 1. The WSBA shall hold two meetings per year, the annual meeting being that at which elections are held. The locations for these meetings shall be proposed by the members present at the preceding annual meeting.

Section 2. The dates of these meetings shall be set by the Executive Board and the hosting association.

Section 3. Special meetings of the WSBA may be called by the Executive Board upon a written notice ten days in advance of the meeting date, stat-

(Continued on page 8)

WSBA Constitution and By-Laws Update

(Continued from page 7)

ing the purpose of the meeting. The meeting date and place is to be set by the Executive Board.

ARTICLE VII

Section 1. Such constitution and by-laws as may be considered necessary shall be presented at the annual meeting for ratification by the members of the WSBA.

Section 2. The constitution and by-laws may be amended at any annual meeting by a two-thirds vote of the members present.

ARTICLE VIII

The latest edition of Robert's Rules of Order Newly Revised shall be used as the authority of transacting the business of this association on all items not specifically covered in this constitution and by-laws.

ARTICLE IX

Section 1. All standing committees may be appointed by the President with the approval of the Executive Board and are as follows:

- (A) Membership and Organizations
- (B) Publicity and Education
- (C) Nominating
- (D) Pollination and Insecticide
- (E) Marketing
- (F) Way and Means
- (G) Legislative
- (H) Resolutions
- (I) Master Beekeeping
- (J) Scholarship Fund

Section 2. Special committees may be appointed from time to time as the action demands, and shall be appointed by the President with the approval of the Executive Board.

Section 3. The Master Beekeepers Committee will have 12 members. 8 members will be nominated from within Master Beekeepers Committee members and 4 appointed by the President of WSBA. All nominations approved by the Executive Board. The committee members will select a chairman, vice chairman, treasurer, and Secretary. The business account of the committee will be audited annually by the WSBA Audit committee and the WSBA treasurer and reported to the membership with the WSBA annual report.

The purpose of the committee is to educate beekeepers through three structured courses on beekeeping, Certified, Journeyman and Master. The committee manages a separate banking account to purchase materials, books and certificates required for the course. The 4 officers of the committee must approve all expenditures for these items. The four officers can also approve other miscellaneous items but the WSBA Executive Board must approve anything over \$250.

ARTICLE X - COMPENSATION

Section 1. Any elected official of the WSBA, acting under the direction of the WSBA President, as approved by the Executive Board, conducting business related to the WSBA shall be entitled to reimbursement for those expenses incurred. Proper documentation for these expenses shall be presented to the Treasurer for reimbursement.

Section 2. The Secretary and Treasurer of the WSBA shall be compensated for that time expended in conducting the business of the WSBA at a rate set by the Executive Board.

Section 3. The WSBA shall establish a minimum contingency fund of \$200 which will be made available to that local association selected to host the annual meeting. The hosting organization shall work with representatives from the WSBA Executive Board in planning the annual meeting and

(Continued on page 9)

Your Editor

In my opinion the Master Beekeepers Committee is one of the most important resources for Washington State beekeepers available today. I thank those at the annual meeting who voted to clarify its mission, and to strengthen its purpose. Those who volunteer to help on the committee are grateful for your sup-

port. Look to future newsletters as I publish the work of aspiring Master Beekeepers. I am proud of their work and simply amazed that these folks have learned so much about the art and science of keeping honey bees. Due to space constraints in this edition, I will publish Louis A. Matej's Master Beekeeper category #8 dissertation on Pollen & Pollination in the December issue.

Paul Lundy

WSBA Constitution and By-Laws Update

(Continued from page 8)

any profits derived from that meeting shall be used to repay this contingency fund and WSBA expenses incurred. Any funds remaining shall be split 50 – 50 between the local association and WSBA.

Section 4. The Director of the State Department of Agriculture and the Supervisor of the Apiary Division shall be entitled to attend the WSBA annual meeting without payment of registration fees.

The Constitution and By-Laws adopted November 13, 1981 at the annual meeting held at Everett, Washington, and amended on November 3, 1990, October 7, 1995 and Oct 15, 2004 at the annual meeting held at Spokane, Washington.

APIARY ADVISORY BOARD

AREA BOUNDARIES

WAC 16-602-010: Repealed by 01-11-146, filed 5/23/01, effective 6/30/01. Statutory Authority: Chapter 15.60 RCW.

AREA 1: Area 1 shall include the counties of Whatcom, San Juan, Island, Skagit, Snohomish, Jefferson, Clallam, Kitsap and King.

AREA 2: Area 2 shall include the counties of Pierce, Grays Harbor, Mason, Thurston, Pacific, Lewis, Wahkiakum, Cowlitz, Clark and Skamania.

AREA 3: Area 3 shall include the counties of Kittitas, Yakima, Klickitat and Benton.

AREA 4: Area 4 shall include the counties of Okanogan, Chelan and Douglas.

AREA 5: Area 5 shall include the counties of Grant, Adams, Franklin, Walla Walla, Columbia, Garfield, Asotin and Whitman.

AREA 6: Area 6 shall include the counties of Spokane, Lincoln, Ferry, Stevens and Pend Oreille.

NEED TO BUILD UP YOUR BEES?

BEE-PRO® Pollen Substitute Patties are a complete feed source offering the proper balance of proteins, amino acids, lipids, carbohydrates and vitamins needed to produce healthy, young bees.

BEE-PRO® Pollen Substitute Patties provide the nutrient rich ingredients that will help you maintain young bee populations.

1-800-880-7694

beekeeper@mannlakeltd.com
www.mannlakeltd.com

BEE-PRO® Patties are also available for pickup in California; please call for location and pricing!

Call for a **FREE**
2004
color catalog!



Mann Lake Ltd.

501 S. 1st St.
Hackensack, MN 56452-2001
Fax: 218-675-6156

- ✓ **PRE-FORMED PATTIES READY TO FEED**
- ✓ **STIMULATES BROOD PRODUCTION**
- ✓ **JUST SLIT PAPER AND PLACE ON HIVE**
- ✓ **HEAT SEALED EDGES FOR EASY HANDLING**
- ✓ **BALANCED NUTRITION**
- ✓ **NOT WEATHER DEPENDENT**
- ✓ **HEALTHIER BEES**
- ✓ **EARLY BROOD PRODUCTION**
- ✓ **INCREASED BEE POPULATION**



IMPROVED!

*Now made with
50% less
packaging!*

1 Pound Pre-formed **BEE-PRO®** Patties

FD-320	BEE-PRO® Patties 10 pack.....	\$19.95 per pack
FD-300	BEE-PRO® Patties 40 pack 1-10 cases.....	\$46.25 per case
	BEE-PRO® Patties 40 pack 11-19 cases.....	\$43.85 per case
	BEE-PRO® Patties 40 pack 20-29 cases.....	\$41.65 per case
	BEE-PRO® Patties 40 pack 30-39 cases.....	\$39.55 per case
	BEE-PRO® Patties 40 pack 40+ cases.....	\$37.60 per case

Large quantity breaks call for pricing.

WSBA Research Scholarship Update

At the Annual meeting in Spokane, two members of the department of Entomology at the WSU Apis Molecular lab applied for research scholarships to continue their on-going research. The following are the abstracts and the amounts WSBA contributed toward the applicants individual goals.

Name of Applicant: James P. Strange Date: 15 October 2004

Abstract of Proposed Research:

I am requesting Thurber scholarship funds to purchase microsatellite primers for the molecular analysis of honey bees in my study of drone congregations. I am currently conducting a study of the genetic admixture in Drone Congregation Areas (DCAs) in areas where multiple populations of honey bees are commercially maintained. Although there has been significant numbers of non-native subspecies maintained in the proposed study region in France, there is low genetic mixture (about 2%). I want to test the idea that these two populations, although inhabiting the same region, visit DCAs at different times. In the summers of 2002 and 2003 I trapped drones from 4 drone congregation areas located between two apiaries of honey bees of different racial origin. I have been analyzing samples for this experiment and now must purchase additional primers to complete the analysis of samples collected in 2003.

These primers are sold as primer pairs which cost about \$150.00 per pair. I need to purchase 6 pairs this year for a total cost of \$900.00. They will be purchased from Applied Biosciences.

Budget: 5 microsatellite primer pairs: \$900.00
Total requested: \$900.00

Total approved for James Strange's request to be used from the Alvina Timmons Scholarship fund: \$900.00.

Name of Applicant: Debbie Delaney Date: 15 October 2004

Abstract of Proposed Research:

Genetic diversity of honey bee populations in the United States: Comparative analysis of commercial breeding populations through time

Over fourteen years ago the honey bee population of the United States was composed of both feral and commercial subpopulations. Commercial honey bee subpopulations are maintained by beekeepers for honey, bee products, pollination of crops and replacement queens. Pollination by honey bees is crucial to US agriculture and the livelihood of its people. One third of our total diet is dependent upon plants that are pollinated primarily by honey bees (S.E. McGregor, 1976) Commercial honey bee queens are produced in two geographically distinct areas, the southeastern US and California. These two separate queen producing regions differ in their queen breeding techniques and strategies, and these methods used by commercial queen production operations may have contributed to significant reductions in genetic variability in the commercial populations

Previous studies (Schiff et al. 1994, Schiff & Sheppard, 1995) analyzed samples of honey bee populations from these two different queen breeding regions, and characterized the genetic makeup of populations of honeybees that occur in these geo-

graphically distinct areas. The heterogeneity and genetic differentiation within and between these two geographically distinct honey bee populations was evaluated and provides a genetic characterization of the honey bee populations maintained in the commercial arena during 1993-1995.

Schiff and Sheppard (1994) also looked at feral honey bee populations from the southeastern U.S. This allowed them to assess the amount of gene flow occurring between the feral and commercial populations.

Overall, these previous studies showed that the feral population was significantly different from both commercial populations. The two geographically isolated commercial populations were also significantly different from each other. Implications of these findings were that feral populations could serve as a reservoir for genetic variation useful to the commercial breeding populations.

The spread of *Varroa destructor* in the US has devastated feral honey bee populations, and significantly reduced commercial honey bee populations. The estimated winter losses in the eastern US in 1997 were over 50% (Finley et al, 1996).

The purpose of this study is to evaluate the possible effects *Varroa* and breeding methods has had on commercial honey bee populations. I will do this by analyzing the current genetic composition of US honey bee populations and comparing them to the composition of a parallel sample set collected in 1993-94.

To date, I have recollected the western queen producing areas and begun analyzing the samples from 1994 and 2004. This spring I intend on recollected the southeastern queen producing apiaries. From this data I will be able to genetically characterize present day honey bee populations from the main, geographically isolated queen breeding regions. In addition the analysis I am performing on previously collected populations from the same areas will allow us to assess the extent of change that has occurred during the past decade. Quantifying the genetic variability of the US queen producing populations will allow us to understand the genetic heritage of the commercial strains of honey bees and to address the controversial issue of further germplasm importation.

Budget: travel: \$600.00
food & lodging \$575.00
Total requested: \$1,000.00

Total approved for Debbie Delaney's request to be used from the Thurber Scholarship fund: \$1,000.00.



Try our beeswax skin cream for dry itchy skin. Contains almond and coconut oils, beeswax, and propolis. Call 509-996-2522 or e-mail sabold@methow.com

WSU Research Update

The Washington State University Queen Breeding Project 2004 Progress Report

Marina D. Meixner and Walter S. Sheppard

Goals of the breeding program

The goals of the breeding program are to select and breed a population of honey bees exhibiting a significant level of mite resistance combined with a number of economically desirable traits. Initially including genetically diverse material from queen producers across the U.S. and maintaining a diverse breeding population through maternal subline selection will ensure sufficient genetic variability.

The breeding population will serve as a desirable source of genetic material accessible to producers of commercial stock. After the end of the project, a self-sustaining breeding operation with the support of the beekeeping industry is envisioned.

Initial population and selection of lines

Our initial genetically diverse population consisted of a collection of commercial stocks across the country. Three previously selected WSU lines were included.

Out of this initial population, eight breeder queens were selected in 2003, two more were selected in 2004.

The acquisition of queens was completed in 2003, followed by the first cycle of selection. Eight breeder queens were selected in 2003 and daughter queens were produced for each of them. Starting 2004, the highest performing daughter of each line is being selected as mother of the next generation, thus maintaining the individual lines. Two more lines were added in 2004, selected from queens purchased in 2003 so that we are now maintaining ten individual lines at WSU.

Traits we are selecting for

Each queen is evaluated during one full season for the performance of desirable traits. For each trait, a score is assigned to each queen.

Mating of new queens

Mating of the new queens takes place in an isolated mating apiary about 10 miles north of Pullman, which has been monitored for the presence of unwanted drones. Mother colonies receive ample drone comb and are encouraged to rear drones by continuous feeding.

- Over-wintering ability / spring buildup
- Honey production – evaluated as short term weight gain during a nectar flow
- Temperament – behavior of colony during handling (continuous evaluation during entire season)
- Hygienic behavior – percentage of cells that are uncapped and cleaned out after 48 hrs in a freeze-kill assay. The expression of this behavior is to a great extent influenced by environmental conditions. We are currently increasing the stringency of the test by testing colonies without a nectar flow and by scoring after 24 hrs.
- Resistance to mites – proportion of non reproducing *Varroa* mites in 200 randomly selected brood cells

Development of Temperament Scores

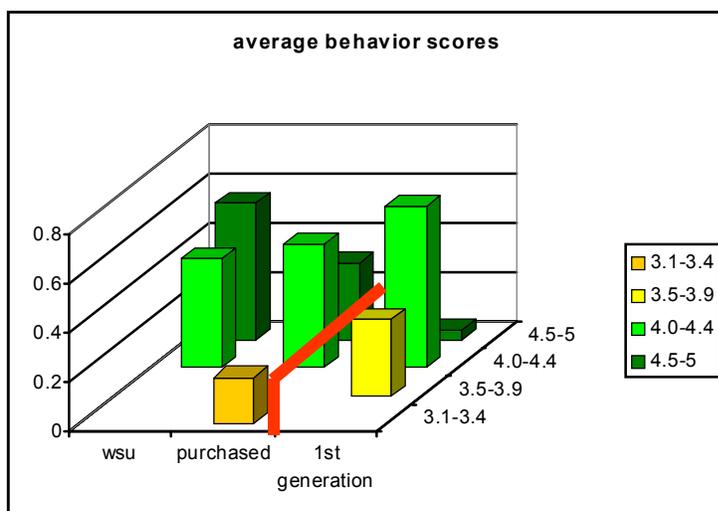


Figure 1

BUILDING HIVES FOR OVER 25 YEARS

GloryBee has been supplying beekeepers from all over the country for over 25 years with quality products and family owned customer service. At GloryBee you will find a huge selection of quality beekeeping products from beginner kits to pest control products. Our easy shop online site and full color mail order catalog make it easy to get the products you need quickly at a great price.

Beekeeping supplies we offer:

- Live Bees
- Beekeeping Kits
- Complete Hives
- Observation Hives
- Pine Supers & Hardware
- Pierco Plastic Frames & Foundation
- Beekeeping Suits
- Beehandling Tools
- Bee Feed, Feeders & Nutrition
- Medication & Antibiotics
- Honey Containers & Labels



GBF
GloryBee® Foods, Inc.

[www. GloryBeeFoods.com](http://www.GloryBeeFoods.com) | 800-456-7923 | PO Box 2744, Eugene OR 97402

WSU Research Update

(Continued from page 11)

Figure 1 describes the development of the average temperament scores from our starting population to the first generation of selected queens. The behavior of a colony is assessed each time the colony is handled and the final score of a colony is built by the average of its individual scores. Scores range from 5 (best - bees very calm and steady on comb) to 1 (worst – bees unacceptably nervous and aggressive).

In figure 1, the columns to the left of the red line describe the behavior of our initial population, broken down into purchased queens and lines already maintained at WSU. The color of each column describes the average score achieved, ranging from orange to green, with greener colors assigned to more desirable scores. The height of each column tells the proportion of queens showing this particular behavior. Thus, very desirable behavior scores characterize queens from the initial WSU population, while a considerable proportion of colonies headed by purchased queens showed some nervousness (orange column in the middle row).

The columns to the right of the red line describe the average behavior of the first generation of daughter queens produced from the selected mothers. In comparison to the previous generation, scores expressing “extreme” values have disappeared (orange) or decreased (dark green), while the majority of colonies still shows desirable behavior (bright green column). No colony was on average rated less than 3.5 (yellow column).

The behavior assessment of the 2nd generation daughters produced in 2004 is still incomplete.

Development of hygienic behavior scores

Figures 2 and 3 describe the progress we made in selecting for hygienic behavior. All tests were carried out without a nectar flow and were scored after 24 hrs and after 48 hrs.

Figure 2 describes the scores achieved in the freeze kill test after 24 hrs between the 1st and the 2nd generation. Scores range from more than 95% of the cells cleaned (dark green) to less than 50% cleaned (red). The height of the column describes the proportion of the colonies exhibiting this particular behavior. The figure shows that the proportion of queens who clean out a high percentage of cells in short time has increased from the 1st to the 2nd generation (green columns), while the proportion of queens who cleaned few cells has decreased (orange and red columns).

Figure 3 explains the change in cleaning behavior after 48 hrs using the same technique as figure 2. Almost two thirds of our 2nd generation queens clean more than 95% of cells in a freeze kill assay (dark green) with additional 17% of colonies cleaning between 90% and 94% of cells (bight green). Only about 3% of our colonies show a dissatisfactory cleaning behavior (less than 50% of cells – red column).

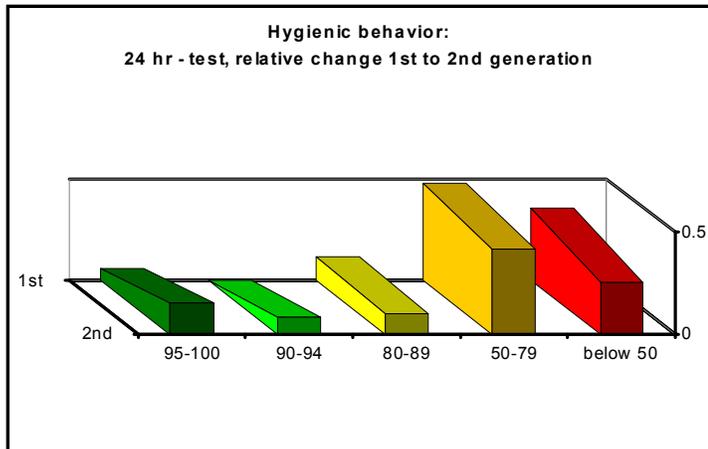


Figure 2

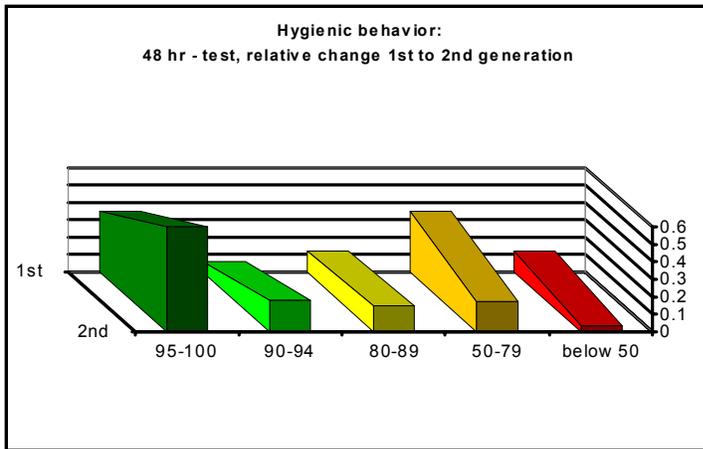


Figure 3

Suppression of mite reproduction (SMR)

This trait describes the failure of female *Varroa destructor* mites to produce viable offspring in brood cells of selected honey bee lines. It has been shown to be a heritable character of the honey bees by John Harbo and co-workers.

We assessed colonies headed by 2nd generation queens for the suppression of mite reproduction in September 2004, on average 57 ± 7 days after the introduction of the new queen. The SMR trait is known to have a delayed effect, therefore it is necessary to wait at least two full brood cycles of the new queen, before assessing it. Future tests will be done only after a complete turnover of the worker population following re-queening of the colony, since the SMR trait has recently been shown to be expressed by the adult workers.

A total of 12,856 purple eyed or tan colored pupae were examined. 2,999 cells with single mites were scored for number and age of offspring. 1,505 cells were infested with two or more mother mites.

(Continued on page 14)

WSU Research Update

(Continued from page 13)

For each infested cell, it was determined if the female offspring of the mother mite would have reached maturity by the time the bee would have emerged.

The non-reproduction rate was calculated from the offspring of single mother mites in cells only.

Figure 4 explains the relative proportions of our colonies expressing high SMR scores (dark green – few mites have viable offspring) to low SMR scores (red – many mites have viable offspring). Since this is the first time we assessed this behavior, no selection progress can be demonstrated here. However, a promising percentage of our queens show intermediate to high SMR scores so that we expect to improve the expression of this trait in future generations by favoring these queens in our selection process.

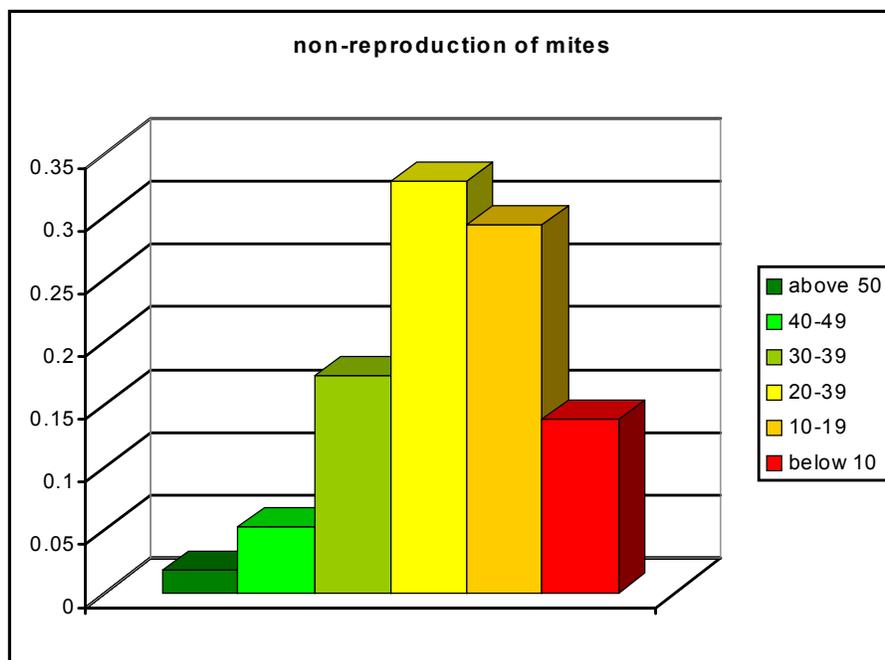


Figure 4

Master Bee Certification Meeting Minutes

Master Bee Certification Committee Meeting October 16, 2004, Spokane

Meeting called to order @ 5:15 PM, by Chair. P. Lundy. Members present: P. Lundy, V. Sherod, M. Bishop, T. Bueler, B. Smith, J. Miller and B. Zahler.

Clarification of Journeyman test questions, discussion on same. Set up a succession of an officer's chain; chair, vice chair, secretary and treasurer. Jo Miller elected vice chair.

Co-chair position eliminated, as Dr. S. Sheppard was changed to Committee Advisor.

Discussion of future members-how to select, etc... Discussion

on names of classes, i.e. Master, Journeyman and Certified. A motion to change Certified to Apprentice was carried, Zahler dissent.

Discussion on inviting WSU instructors, group to be members of certification committee as positions vacated.

Discussion on pending and applications to be members will be covered and voted on at the January 2005 meeting.

Proposed that certificates for graduates of various classes be signed by WSBA President and the graduate's instructor.

J. Pefley and B. Stump were accidentally left off the committee list, to be re-appointed by President prior to the January 2005 meeting.

Chair P. Lundy will set forth proposed goals and committees to be acted upon at the January 2005 meeting.

Adjourned 5:45 PM. B.Zahler, secretary

PACIFIC NW BRED "SMART" QUEENS

**WILD CAUCASIAN / SMR / RUSSIAN
SURVIVOR STOCK**

**Hardy; Work at Cooler Temperatures
PROVEN HYGIENIC, MITE RESISTANT
Abundant Drones,
Isolated Mating Yards
Available Summer & Fall only**



Olympic Wilderness Apiary

Toll Free: 866-204-3426

e-mail: harbees@olypen.com

Web Page: www.owa.cc

Classified Ads

Mann Lake - motorized 18 frame honey extractor. Bought new, never used, paid \$1,100 including shipping. Asking \$700. Beekeepers starter kit (needs to be assembled) hive and frames for \$40. And I have beekeeping books if interested. Please call Linda Kiehl 253-851-2040. (8/04)

WESCO - 1500 lbs. Fork mounted DRUM GRAB
NEW CONDITION \$175.00
Dave Stokesberry 253-845-4961 Puyallup (6/04)

WSBA "Proudly Produced in Washington" gold labels for sale. Rolls of 500 are \$ 7⁰⁰ each. To order, Call 360-297-6743 or email myrasprings@centurytel.net .



Here is a free resource for beekeepers sponsored by Glenn Engel:
<http://www.mybeehives.com> (6/04)

Tronson, and Duane Mills, Memphis, TN, a representative of DuPont, manufacturer of the chemical, also took part in the search. It was Mills who actually found the keg about 6:30 p.m.

Searchers covered more than 20 miles on foot and on all-terrain vehicles Wednesday, looking for the container.

Agencies involved included the Devils Lakes Fire Department and Rural Fire Department, Ramsey County Emergency Management, the Nelson County Sheriff's Office, Lakota Fire Department, North Dakota State Health Department, the State Department of Emergency Management, the North Dakota Department of Transportation, the Highway Patrol, the State Crime Laboratory and the Bureau of Criminal Investigation, as well as Ramsay County authorities. The case initially drew the attention of the U.S. Department of Homeland Security and the FBI, but after it was learned that the chemical was intended for beekeeping, it became an agricultural regulatory matter and NDDA took the lead role.

Johnson said that some North Dakota beekeepers have apparently been using sodium cyanide to fumigate their hives before transporting them to other states.

"Such use has long been illegal and must stop," Johnson said. "We intend to find out how and where the chemical was obtained and who has been using it. We will then take the proper administrative action at the conclusion of our investigation, which will likely take months to complete."

(Continued on page 16)

Other News

**COOPERATION RESULTED IN RECOVERY
OF CYANIDE**

BISMARCK, ND— Following the recovery of a container of deadly sodium cyanide, authorities are continuing their investigation into the shipment and probable illegal use of chemical in North Dakota.

"Finding that barrel was obviously the number one priority," said Agriculture Commissioner Roger Johnson. "Now that it is in safe hands, it is time to find out how and why it got here in the first place."

The 110-pound container of Cyanobrik® was found late Wednesday, deep in some cattails in a ditch along N.D. Highway 1, three miles south of Brocket. It had been reported missing Sept. 30, when it fell off a truck. Two other drums that had fallen off the truck had been found earlier.

"Ramsey County Sheriff Steve Nelson and his department did an outstanding job in leading the search for that container," Johnson said. "Thanks to them and to the cooperation of many agencies, a potential tragedy was avoided."

North Dakota Department of Agriculture (NDDA) pesticide personnel Jim Gray, Doug Johnston, Ken MacDonald and Julie

Tate's Honey Farm

E. 8900 Maringo Drive
Spokane, WA 99212

Wes Tate Rita Tate Jerry Tate

Beekeeping Supplies	Honey, Comb Honey
Pollination Service	Pollen
Package Bees, Queens	Candle Making
Bulk Bees Wax	Extracting Equipment

509-924-6669

taccon105@icehouse.net

www.tateshoneyfarm.com

attained with Apistan or formic acid.

The addition of essential oils did not affect treatment efficacy of either formic acid or thymol. The ratio of the coefficients of variation for percentage mortality for the formic acid (CV_{FA}) and Apistan (CV_A) groups was $CV_{FA}/CV_A = 0.66$. This indicates that the formic acid treatment was as consistent as the Apistan treatment.

Thymol treatments did not provide as consistent results as Apistan or formic acid. Coefficient variation ratios for percentage mortality for the thymol group (CV_T) with the Apistan and formic acid groups were $CV_T/CV_A = 4.47$ and $CV_T/CV_{FA} = 6.76$, respectively.

In a second experiment, colonies received a 4-wk fall treatment of either 300 ml of 65% formic acid ($n = 24$) or four, 10% strips of Apistan ($n = 6$). The next spring, mite levels in the formic acid group (554.3 ± 150.20 mites) were similar to those in the Apistan treatment group (571.3 ± 145.05 mites) ($P = 0.93$). Additionally, the quantities of bees, brood, pollen, and nectar/honey in the two treatment groups were not significantly different ($P \geq 0.50$ each variable).

These results suggest that formic acid is an effective alternative to Apistan as a fall treatment for Varroa mites in temperate climates.

Other News, continued

(Continued from page 15)

Since the incident was first reported, NDDA investigators have located 18 containers of sodium cyanide at five locations in North Dakota. All have been tagged with stop-sale orders. All have been traced to the same dealer and represent the dealer's entire sales of the chemical this year.

Sodium cyanide is used in extracting precious metals, case-hardening steel and electroplating. It has no registered agricultural use.

Johnson said that there is no evidence that honey is not safe to eat. It is believed that the cyanide gas is used to disinfect the hives after the honey is removed. Such use poses no risk to honey consumers, but could possibly endanger the persons handling the cyanide or the environment.

For more information, please call Roger Johnson at (701) 328-4754.

Journal of Economic Entomology

2000, vol. 93, no. 4, pp. 1065 - 1075

Effective Fall Treatment of *Varroa jacobsoni* (Acari: Varroidae) with a New Formulation of Formic Acid in Colonies of *Apis mellifera* (Hymenoptera: Apidae) in the Northeastern United States

NICHOLAS W. CALDERONE

Abstract

New formulations of formic acid and thymol, both individually and in combination with various essential oils, were compared with Apistan to determine their efficacy as fall treatments for control of *Varroa jacobsoni* (Oudemans), a parasitic mite of the honey bee, *Apis mellifera* L.

Percent mite mortality in colonies treated with 300 ml of 65% formic acid averaged $94.2 \pm 1.41\%$ (least square means \pm SE, $n = 24$), equivalent to those receiving four, 10% strips of Apistan ($92.6 \pm 1.79\%$, $n = 6$).

Treatment with thymol ($n = 24$) resulted in an average mite mortality of $75.4 \pm 5.79\%$, significantly less than that



Other News, continued

Saving Bees: Fungus Found To Attack *Varroa* Mites

Parasites known as *Varroa* mites infest honey bee colonies, sucking blood from the bees and causing weight loss, deformities, diseases, and reduced lifespan. These mites, which can nearly destroy an entire colony within a few months, now infest honey bee colonies across most of North America.

The honey bee is critical to maintaining natural vegetation, transferring pollen between flowers as it collects the pollen and nectar for its hive. And more than 130 agricultural plants in the United States are pollinated by honey bees. Every year, beekeepers send their best bees throughout the country to help pollinate crops, one farm at a time. In 2003, the value they added to U.S. crops was estimated at \$10 billion, not including the honey, beeswax, and royal jelly also produced. USDA's National Agricultural Statistics Service reported more than 2.5 million honey bee colonies—up 1 percent from 2002—and U.S. honey production increased 5 percent, to 181 million pounds.

Since 2000, scientists in the ARS Beneficial Insects Research Unit (BIRU) at Weslaco, Texas, have been looking for a disease-causing agent, or pathogen, that can stop *Varroa* mites. The mite has developed resistance to the only approved chemicals—fluvalinate and coumaphos—now used for control, and coumaphos is on the U.S. Environmental Protection Agency's "hit list" for possible removal from the market. So the researchers have looked at various disease agents, tried different dosages and application methods, and conducted toxicity tests. Finally, they selected a strain of the fungus *Metarhizium anisopliae* that was highly pathogenic to *Varroa* mites.

This potent fungus, which also kills termites, doesn't harm bees or affect their queen's production. To test it, the scientists coated plastic strips with dry fungal spores and placed them inside the hives. Since bees naturally attack

anything entering their hives, they tried to chew up the strips, spreading the spores throughout the colony.

In field trials, once the strips were inside the hives, several bees quickly made contact with the spores. Within 5 to 10 minutes, all the bees in the hive were exposed to the fungus, and most of the mites on them died within 3 to 5 days. The fungus provided excellent control of *Varroa* without impeding colony development or population size.

"We tried to find a pathogen of *Varroa*, and we did it!" says ARS entomologist Walker A. Jones, research leader of the BIRU. Tests showed that *Metarhizium* was as effective as fluvalinate, even 42 days after application. "Commercial beekeepers are very edgy about using fluvalinate and coumaphos and are eager to see this natural control get to market," Jones says.

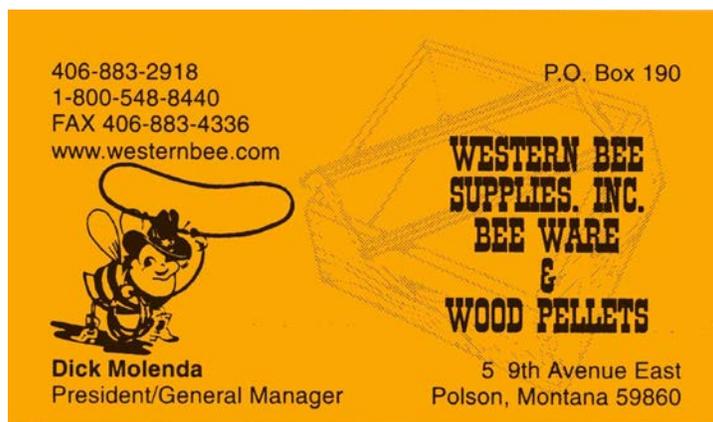
This research was begun by Rosalind James, formerly with the Weslaco unit. Lambert H.B. Kanga, former BIRU research associate and now chair of the Entomology Department at Florida A&M University at Tallahassee, continues to collaborate on the project. "While *Metarhizium* doesn't kill as fast as fluvalinate and coumaphos, the result is the same," Kanga says. "*Metarhizium* gets the job done, and we won't have to worry about *Varroa* becoming resistant to the fungus."

The scientific team is now fine-tuning the strategy for transfer to producers.—By **Alfredo Flores**, Agricultural Research Service Information Staff.

This research is part of Crop Production, an ARS National Program (#305) described on the World Wide Web at www.nps.ars.usda.gov.

Walker A. Jones is in the USDA-ARS Beneficial Insects Research Unit, 2413 E. Highway 83, Weslaco, TX 78596; phone (956) 969-4852, fax (956) 969-4888.

"Saving Bees: Fungus Found To Attack *Varroa* Mites" was published in the **October 2004** issue of *Agricultural Research* magazine.



406-883-2918
1-800-548-8440
FAX 406-883-4336
www.westernbee.com

P.O. Box 190

**WESTERN BEE
SUPPLIES, INC.
BEE WARE
&
WOOD PELLETS**

Dick Molenda
President/General Manager

5 9th Avenue East
Polson, Montana 59860

WSBA Associate Membership Summary

Associate Memberships	Year Paid	Associate Members
Mount Baker Beekeepers Association	2004	44
North Olympic Peninsula Beekeepers Association	2004	12
Northwest District Beekeepers Association	2004	15
Olympia Beekeepers Association	2004	41
Pierce County Beekeepers Association	2004	80
Puget Sound Beekeepers Association	2004	100
Skagit Valley Beekeepers Association	2004	27
Stanwood/Camano Island Beekeepers Association	2004	18
West Sound Beekeepers Association	2004	62
Inland Empire Beekeepers Association	2004	140
TOTAL:		539
Methow Valley Beekeepers Association	2000	3

P. Lundy
Washington State Beekeepers Association
Newsletter Editor
P.O. Box 1331
Kingston, WA 98346-1331

