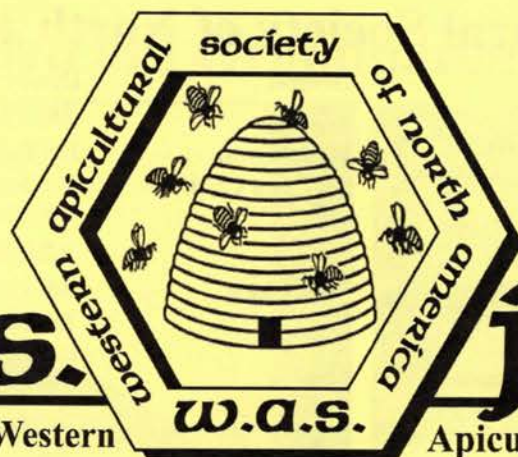




February 2009

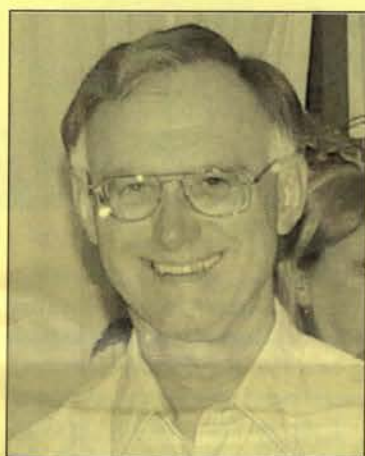
groups.ucanr.org/WAS/

w.a.s.

The Journal of the Western

Journal

Apiculture Society of North America



Message from the President

Hello, from Sunny California. In fact, it is too sunny! We are headed into the third year of drought with only 55% of normal rainfall at this time.

Helen and I still have reason to be happy. Our first grandchild, Amber Rose Mussen, was born on January 22nd at a hospital close enough for us to visit on the first day. Dad Tim and Mom Noelle appear to be up to the challenges of being new parents, and Amber appears to really appreciate the attention (we think).

As the 2009 Conference approaches, plans continue being made and contracts signed. I will block 30 "Vintage" rooms and 10 "Tuscan" rooms at \$95 and \$180 per room per night, respectively, plus 12.4% tax. The nights covered are Monday, August 17th, through Thursday, August 20th. A first night's deposit is charged in advance for each room, but it will be refunded for a cancellation at least 48 hours prior to the arrival date. The group rates for WAS are available only by calling 1-800-222-5784. You may call any time, now.

I am beginning to firm up the speaker agenda. I will try to include enough variation in the program to interest everyone, even non-beekeepers. Interest in the health benefits of eating honey is reviving. I'll try to cover that topic, too.

Now is a good time to remind you to be looking for inexpensive, but interesting, items to bring to the Conference for door prizes. As many of you remember, the number on your name badge is your door prize ticket number. It should always be with you. The winning numbers are drawn at random, and no number is repeated until all have been called once. In the interest of time, the numbers are called quickly so be on your toes! Additionally, we need many, more valuable, items for the Silent Auction. We will realize most of our auction returns from the Silent Auction, since a live auction consumes significant time and most participants become "priced out" fairly early in the bidding. We have six months to find and acquire items. Let's do a good job.

On rather short notice, I would like to inform you that Gunther Hauk, a nationally known practitioner of natural beekeeping in the Steiner tradition from the Pfeiffer Center in New York State, will be the key speaker at the annual Bee Symposium held at the Summerfield Waldorf School and Farm, 655 Willowside Road in Santa Rosa, California, on Saturday, March 7th, 2009, from 9:00 am to 6:00 pm. Following an organic, vegetarian lunch, Gunther will lead a panel discussion on the topic. Panel members include Kathy Kellison (Partners for Sustainable Pollination), Serge Labesque (Santa Rosa Junior College Beekeeping Instructor), Michael Thiele (Natural Beekeeping Teacher), and Doug Vincent (Owner/Instructor Beekind Beekeeping Supply).

The event is sponsored by the Summerfield Waldorf School and Farm, Beekind Honey Shop and Beekeeping Supply, The Melissa Garden, and the Michel-Schlumberger Wine Estate. Tickets (\$45 in advance, \$50 at the door) may be ordered from Beekind Honey Shop: (707) 824-2905 or www.beekind.com. A Saturday Ticket, or \$10 at the door, also will allow attendance at a Friday evening talk by Gunther (7:30-9:00 pm) at the Summerfield Waldorf School and Farm: "The Honey Bee Crisis – A Critical Point in Evolution." A further presentation by Gunther, "Honey Bee Sanctuaries: A Conversation with Gunther Hauk" will be held in conjunction with a Sunday brunch at The Melissa Garden. For information and tickets to that event (\$35 per person) contact The Melissa Garden at (707) 433-2114 or www.themelissagarden.com.

Looking forward to seeing you in Healdsburg in August.

Eric Mussen

Western Apicultural Society of North America

EXECUTIVE President

Dr. Eric Mussen
Department of Entomology
U of California, Davis, CA 95616
530-752-0472
ecmussen@ucdavis.edu

Past President

Mark Pitcher
Babe's Honey Farm
334 Walton Place
Saanich BC V9E 2A4 Canada
250-656-2960, Fax 250-658-2970
mpitcher@uvic.ca

1st Vice President

Helen Mussen
530-752-0472
ecmussen@ucdavis.edu

2nd Vice President

Dewey Caron
dmcaron@udel.edu

Secretary

Betty Farber
3249 Schubert Rd.
Kamloops BC V2B 6Y4 Canada
250-579-8518
ian_farber@telus.net

Treasurer

Mark Pitcher
USA: #324 - 1121 Harrison Avenue
Centralia, WA 98531-1852
Canada: (See Past President above)
Kari Hallopeter
9724 14th NW, Seattle WA 98117
206-789-1949
karihallopeter@yahoo.com

Registrar Nominations Chair

DIRECTORS

British Columbia Auditor

Ian Farber
3249 Schubert Rd.
Kamloops BC V2B 6Y4 Canada
250-579-8518
ian_farber@telus.net

California

Archie Mitchell
1520 N B Court, Lompoc CA 93436
805-736-4300

Nevada

Maycelle Muncey
1927 G St, Sparks NV 89431
775-358-0467

NEWSLETTER

Journal Editor/Historian: Fran Bach

PO Box 397, Selah WA 98942-0397 USA
Phone 509-573-4245, Fax 509-573-3319
febach@fairpoint.net

Oregon

Dewey Caron
dmcaron@udel.edu

Washington By-Laws Chair

Jim Bach
PO Box 397, Selah WA 98942
509-573-4245
jcbach@fairpoint.net

Sites Chair

Bill Cervenka
751 Temescal Way
Emerald Hills CA 94062
650-365-5548

Awards Chair

Nancy Stewart
2110 X St, Sacramento CA 95818
916-451-2337
sacbeek@cwnet.com

Resolutions Chair

Randy Oliver
14744 Meadow Dr
Grass Valley CA 95945
530-272-4450

Parliamentarian

Tom Muncey
1927 G St, Sparks NV 89431
775-358-0467

Other states/provinces TBA

Each state/province in Western North America is entitled to elect one Director to the governing board of the Society. Directors meet before and after each general meeting and set policy and guidelines for the operation of the business of the Society. Throughout the year, they serve as the liaison between the Society officers and the members in their respective states/provinces. They are responsible for recruiting new members, keeping track of state/provincial concerns and advising the membership of their activities through this Journal.

WAS NEWSLETTER ADVERTISING RATES (Payable in US funds only)

- black & white only available

Full page (7.25" x 9.75") \$150 per issue

Half page (7.25" x 4.5" or 4.5" x 7") 85

Quarter page (3.5" x 4.5" or 4.5" x 3.5") 50

Business card (3.5" x 2" or 2" x 3.5") 25

Up to 25 words 10 US (incl header & contact info)

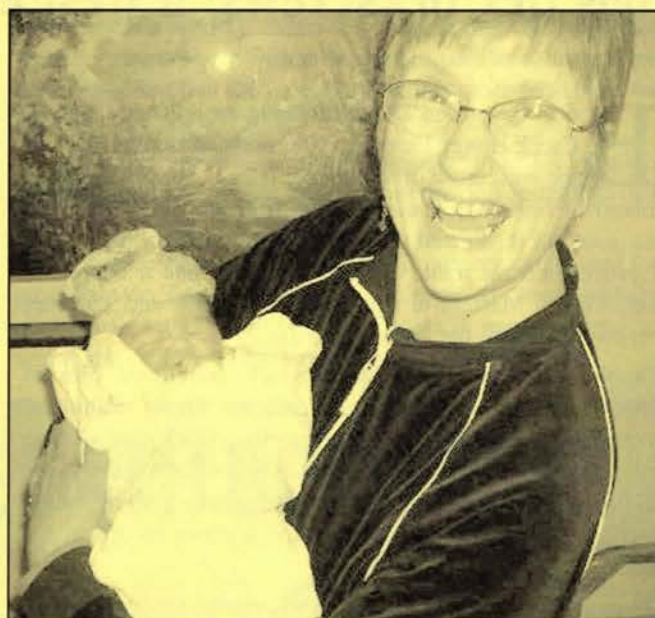
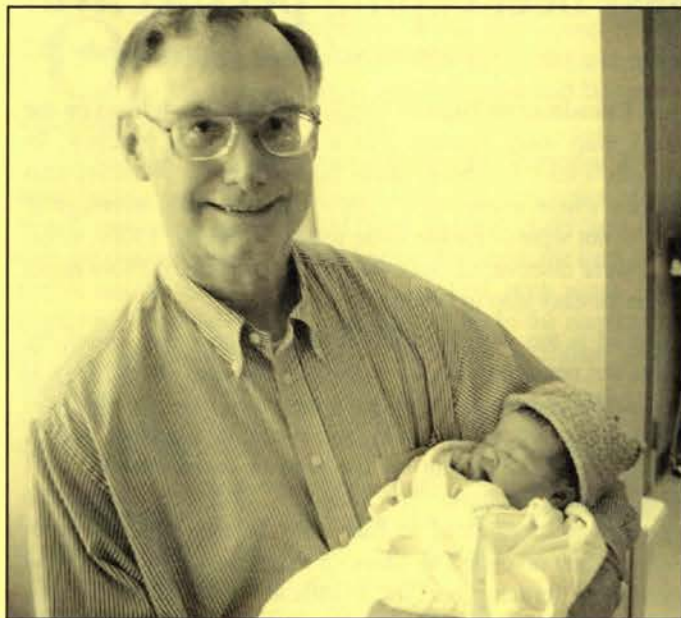
26 - 50 words 20 US

Make check payable to Western Apicultural Society and mail to Newsletter Editor/Publisher

MEMBERSHIP RATES

Individual	\$ 10.00 US	Commercial	\$ 50.00 US
Junior	\$ 7.50 US	Life	\$ 100.00 US
Senior	\$ 7.50 US	Couple Life	\$ 150.00 US
Couple	\$ 15.00 US	Benefactor	\$ 500.00 US
Associate	\$ 10.00 US	Patron	\$1000.00 US

Eric and Helen are Grandparents!



WAS President and Vice-President Eric and Helen Mussen welcomed their first grandchild on Thursday morning at 7:26 am, January 22nd, in Sacramento CA. Amber Mussen, daughter of Eric and Helen's son Tim and his wife Noelle, weighed in at a healthy 9 pounds 8 ounces. Everyone is doing well and getting used to this brand new element in their lives. Congratulations to all the Mussens.

Locally Made & Award Winning Honey, Candles, Lotions & Gifts

Consumable goods
Thoughtful gifts

Manuka & Rare Honey
Fresh & Dried Pollen
Organic Royal Jelly
Bee Venom Cream
Propolis Tincture
Healing Salves



beekind.com

OPEN
Mon-Sat
10-6
SUN 10-4

707.824.2905

Beekeeping Supplies

Bees, Classes & Workshops
Candle making supplies, and more

921 Gravenstein Hwy 116 South, Sebastopol

For those of you who will be attending the 2009 WAS Conference in California, beekind is located only 25 mins. south of conference headquarters in Healdsburg. We extend a warm welcome to visit us while you are in the area. Our honey tasting bar features over 50 flavors and live bee hives are on site.

*Katia Vincent
beekind owner*

Conference 2008....

Fogs to Corkscrews: a west coast beekeeping perspective

Presentation by Bob Liptrot, Sooke BC

Bob Liptrot and Dana LeComte established Tugwell Creek Honey Farm in 1998, north of Sooke, BC, on the west coast of Vancouver Island. Liptrot has been involved in beekeeping most of his life, and now runs 100 hives, much of it directed to a commercial meadery the couple has established on their 12 acre farm. He has a degree in entomology, a Masters in Apicultural Sciences, and 25 years experimenting with mead for home use.

Problems getting good queen stock convinced him to produce his own. He uses a Carniolan cross strain and produces 100 to 150 at a time, selecting stock that will be gentle, has a tolerance for cold wet weather, is hygienic and will forage in foggy weather. Some adjustment to where wintering yards were placed helped to cut down on off-season losses.

Though Vancouver Island beekeepers are somewhat protected from beekeeping pests and diseases, since the area is a quarantine zone -- no bees or used equipment can be transported to the island -- temperamental island weather takes its own toll. A cold wet summer in 2007, winter and spring of 07/08 left him with weak colonies in the spring of 2008. By late summer, his 150 colonies were down to 100.

The farm is part of a bee genetics study with the aim of producing hardier stock. Although he's limited by the quarantine to importing only queen eggs, he is getting some interesting results. Hardier stock, with less need for chemical interventions is, in his estimation, a necessary adjustment "to get us off this treadmill" of more and more chemicals in beekeeping. Sadly, he hasn't high hopes that beekeepers are willing to go that route.

But honey production was labour-intensive, with less profit that one would hope. So, searching for a more lucrative value-added product, the couple returned to Liptrot's long-time fascination with mead. In 2003, Tugwell Creek Farm became Tugwell Creek Farm & Meadery when they acquired the license that made it British Columbia's first commercial meadery. Since then, business has doubled every year, up to 12,000 bottles a year of their unique vintage meads, metheglins, and melomels. The honey-based alcoholic drink, which dates back at least 8,000 years, is becoming trendy with people looking for a new buzz, many of them young.

"The big attraction of mead is that you're drinking a piece of living history," says Liptrot. "And people are looking for something unique" adds his wife.

In Canada, until Tugwell Creek put British Columbia on the mead map, only Quebec had a mead-making industry. In Europe, mead has been made historically in countries and regions where grapes won't grow, and the local beverage is beer -- not wine -- for the same reason. Until the 1300s, when hops were discovered, beer was made with honey. From there, it was an easy step to producing mead.

Mead is the world's oldest fermented beverage, drunk by kings and peasants alike down through the ages. Most likely, it was first imbibed by a pleasantly surprised cave-dweller who accidentally left some honey and water in a leather pouch, Liptrot says. Depending on the type of mead desired, fruit juice, spices or herbs are added. At Tugwell Creek, the mixtures are fermented in four oak barrels imported from France, each holding 230 litres, or in stainless steel tanks. The mead then "ferments out" for as little as two months or as long as two years. The shorter the duration, the sweeter the mead because the sugar in the honey causes the fermentation.

There are about 200 commercial mead operations around the world, including 15 in Canada and 60 in the United States, most of which began operating in the past five to seven years. B.C. is home to two (Tugwell Creek and Middle Mountain Mead, on Hornby Island) and a third is preparing to open in Langley. Three mead producers are expected to open in Alberta in the next couple of years.

Tugwell Creek Meadery is open for tastings and self guided tours May 1st through September 30th, Wednesday - Sunday from 12pm - 5pm. October 1st through April 30th, Saturday and Sunday 12pm-5pm. (Closed January). Contact them at 250-642-1956, email at info@tugwellcreekfarm.com or view the website at www.tugwellcreekfarm.com.



Food companies pledge to avoid GM beet sugar

By Caroline Scott-Thomas, Food Production Daily, submitted by Bee Culture magazine

Over 70 companies have vowed not to use or sell genetically modified beet sugar by signing a registry set up by food safety, environmental and corporate watchdog organizations on Saturday.

The first GM sugar beet crops – Monsanto's Roundup Ready sugar beets – were harvested in the fall, but signatories of the Non-Genetically Modified (GM) Beet Sugar Registry have said they are worried about a lack of knowledge about the long-term health and environmental impacts of GM beet sugar. The Center for Food Safety (CFS) added that one of the reasons for creating the registry is to give consumers a choice about whether they eat foods containing GM sugar in the absence of mandatory labeling for GM foods.

Jeffrey Smith, director of the Institute for Responsible Technology – one of a dozen sponsors of the registry – said, "We need to avoid the all-too-common situation of finding out a product is harmful after it has been approved and widely distributed. Requiring that GM foods be labeled is the only protection consumers have if they want to avoid eating GM foods."

CFS asserted that the US Environmental Protection Agency increased allowable levels of herbicide residue on GM sugar beet roots "at the request of Monsanto."

Monsanto's Roundup Ready sugar beets are modified so that the crop is resistant to the company's Roundup-brand herbicide, allowing farmers to kill weeds without killing the crop.

No one from Monsanto was available to comment prior to publication.

Contamination concerns

CFS has also said that the recent mercury contamination of high fructose corn syrup has made companies particularly nervous about the introduction of unlabeled GM beet sugar to the US food supply.

It said, "The registry shows the food industry's increasing apprehension about the government's ability to adequately regulate food production technologies."

Tom Stearns, president of High Mowing Organic Seeds, which has also

sponsored the registry, expressed concern that GM sugar beets would cross-pollinate with related crops such as chard and table beets, meaning that the issue could affect other foods and food ingredients.

"Overseas markets have already rejected other GM products, so the economic future of many of our nation's farmers is being needlessly risked," he said.

The registry has been signed by 73 grocery chains and food producers so far, documenting a pledge to "seek wherever possible to avoid using GM beet sugar in our products" and urging the sugar beet industry to avoid using GM beets.

SAVE WITH BETTERBEE

Betterbee offers the most complete SOLUTIONS for the beginning beekeeper – for less!

PRICES START AT JUST

\$259.95

(unassembled)

SAVINGS CODE:

WAS2009

This kit does NOT contain bees, which must be purchased separately. Prices are subject to change due to market forces that are beyond our control.

Order toll-free 1-800-632-3379

Monday – Friday: 9 a.m. to 5 p.m. Saturday: 9 a.m. to 1 p.m.

Check out more great deals online at www.betterbee.com

Betterbee™
Beekeepers Serving Beekeepers™

Selecting Varroa resistant bees for BC beekeepers

By Liz Huxter, Kettle Valley Queens, Grand Forks, B.C.

Across Canada several breeders are working to produce bees resistant to varroa. In 2006, John Gibeau and I started three years of testing to check how these stocks perform under BC conditions. We had two goals. One was to find the queens showing both low varroa infestations and still having good spring build up and honey production Secondly, we wanted to produce one generation of daughters from the selected colonies to distribute to BC beekeepers. In order to test the value of the economic qualities of the selected stocks we incorporated control stocks. The control lines, popular commercially available queens, helped to gauge the economic viability of the varroa resistant stocks to queens normally purchased by BC beekeepers.

Year one, 2006, we brought in stocks from breeding programs that had started with Russian queens (Ontario and Saskatchewan), a mix of Russian and local queens (Saskatchewan), local Canadian queens (Ontario), and two BC survivor stocks. We assessed these stocks against three controls not selected for varroa resistance but commonly used in BC. Two were from BC and one from offshore.

We started off in 2006 with 105 miticide treated packages in three yards. When the selected queens were introduced (early July) each colony was deliberately infested with 20 mites.

We monitored mites by monthly natural drops, a series of treatment drops, washes of adult bees from the brood nest, and two samples of 200 dark eyed pupal brood cells. To assess size we monitored the squares of brood, pollen and honey (32 squares to one side of the frame) in the hives three times, once in the first year in late September 2006 and twice in the second year, in mid-May and late September 2007. In the second year the brood samples were taken at the mid-May assessment. In the second year, we also tested for hygienic behavior with the liquid nitrogen test and measured honey weight gain. Scores for each assessment were calculated based on yard averages.

Results

By the end of year one we were able to see some winners and losers. In the first year, the results of the 24 hour natural drops revealed statistically significant differences between stocks by late September. (Figure 1: 2006 Varroa Growth) This correlated with the amount of brood in the hives that fall for all but the E stock, a BC survivor stock. (Figure 2: 2006 Relationship Between Fall Brood and Varroa Populations).

The second year results

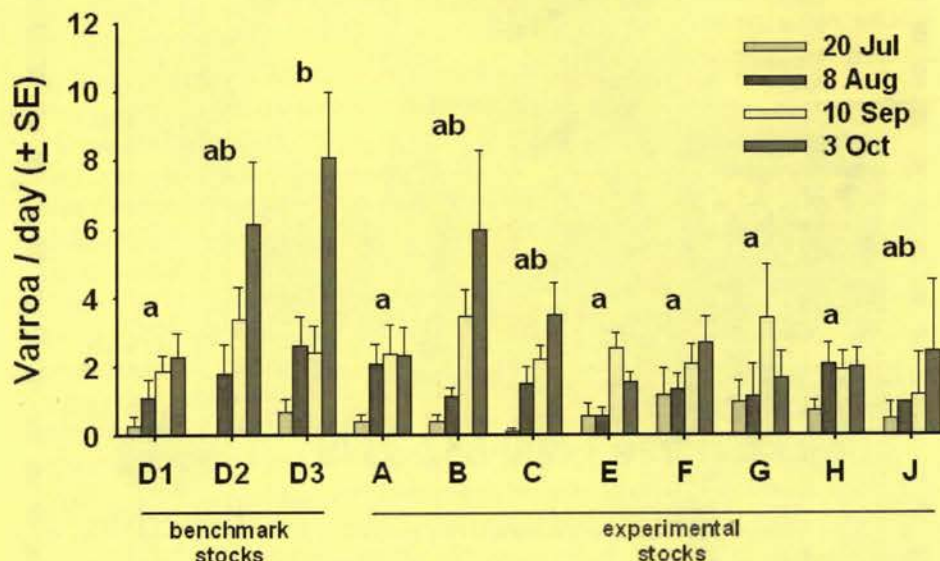
Mite Levels:

We had three measures of varroa infestations, 24 hour ND, treatment drops and brood infestations. For all three measures we found high variability within stocks except for one stock, the Russian A. This stock consistently kept varroa levels low relative to other hives in the study. All other stocks, though more variable, did have individual hives that kept the varroa levels down. This season we will determine if this trait is passed on to daughter queens.

Hygienic Behavior:

The hygienic testing revealed 10% of the tested hives would be considered "Minnesota Hygienic", removing 95% or greater freeze killed brood in 24 hours. This was very encouraging. After 48 hours another 21% removed 90% of the previously frozen brood. The Russian F line achieved the best results, and the Vancouver Island stock performed the lowest.

2006 Varroa Growth Among Experimental and Benchmark Families



Economic Performance:

For honey production there were no statistical differences between stocks but the southern BC Control followed by the Russian F showed the highest averages.

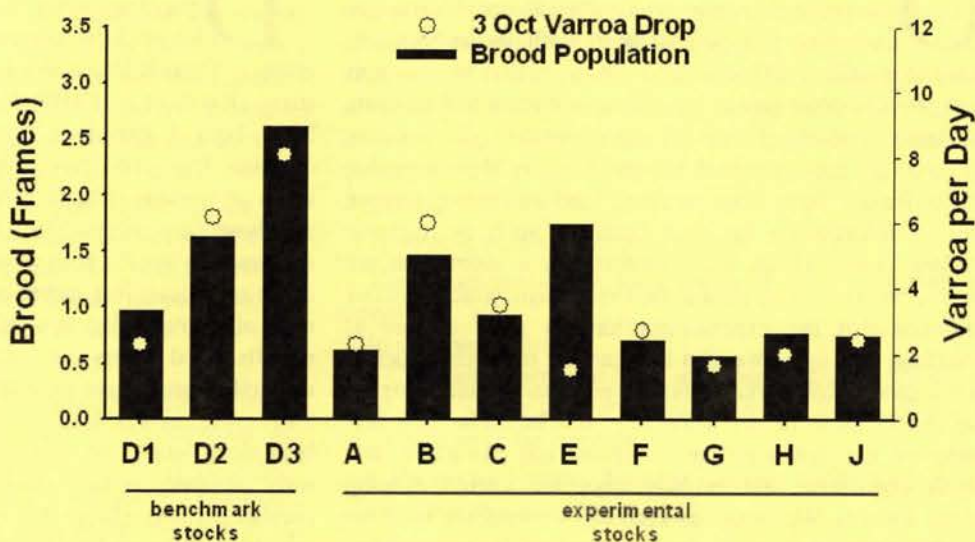
The second measure for economic success is the amount of brood in spring. BC beekeepers rely on early pollination of blueberries and sales of nucs/divides in the spring for a large part of their income making early brood production an important economic trait. Brood production was highest for two of the controls, the Offshore and Vancouver Island stocks. The two BC survivor stocks and southern BC control were next. The Russian A line that showed the most consistently low levels of varroa had the lowest brood score average.

Thus, as breeders, we have a challenge. On the one hand we have the Russian A line maintaining low varroa levels but the colonies will not be big enough for nuc production or pollination in the spring. On the other hand, we have stocks that produce large quantities of early brood but only a few of these hives also kept lower varroa levels. Were these lower mite levels due to genetically based traits that we can breed from? In the third year we have begun to tackle this problem. In 2008 we produced closed mated queens from a pool of queens chosen for low varroa with good honey production or from queens chosen for low varroa and early spring brood production. Surviving hives will be monitored in 2009.

Third Year

Our third year (2008) was spent producing daughter queens from the most prospective hives for BC beekeepers and a set of closed mated daughters for further testing in 2009. Also we inadvertently tested the Nosema resistance of our stocks. We did not use a Nosema treatment in the fall of 2007. The Pacific Northwest was hit particularly hard with high levels of Nosema winter 2007 to 2008. Yard samples taken in the fall of 2007 had 8 to 10 million spores per bee. In the spring yard samples had from 15 to 40 million spores per bee. Individual

2006 Relationship between Fall Brood and Varroa Populations Among Experimental and Benchmark Families

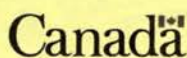


hive samples taken in the spring of 2008 had 10 to 53 million spores per bee. Despite these high levels of Nosema infection, a few of the three year old queens built up well in the spring.

This baseline study is a small snapshot in time and in numbers. Further years of testing are required to reach our goal of providing beekeepers with a hardy and varroa resistant stock that broods up early in the spring and is a good honey producer. We had hoped to include VSH stock in the past project but had trouble acquiring the stock. In the future we will be testing the VSH as well. Our main aim in 2009 is to test closed mated daughters we reared last year and rear a new set to be tested in the following year. We will be running one or two yards with no varroa treatments to test for tolerance and survivorship. We are presently embarking on a project with Beaverlodge Research Station, Dr. Steve Pernal and Adony Melanthopoulos, and with the University of British Columbia team headed by Dr. Leonard Foster to define varroa resistance in terms of proteomics.

I wish to acknowledge support from John Gibeau, of the Honeybee Centre, the BC Beekeepers Association, BC Bee Breeders Association, Beekeeping Industry Development Initiative, Investment Agriculture Foundation BC, Agriculture and Agri-Foods Canada and the British Columbia Ministry and Lands for making this project possible.

Funding provided by:



UBC Research Update

By Dr. Leonard Foster, Vancouver BC, reprinted with permission from BeesCene

Our big project aimed at identifying markers for resistance to American Foulbrood and Varroa got underway this past summer with us traveling to Beaverlodge, AB, and Grand Forks, BC to collect hemolymph (blood) from worker larvae, as well as antennae and midguts from adult workers. There are approximately 60 colonies involved in the project at each site and Andony Melathopoulos and Liz Huxter have been working hard to collect various pieces of information for each colonies, such as hygienic behaviour, honey yields, etc. Comfortingly it seems that we have a very diverse gene pool in the experiment, which gives us confidence that the experiments have a good chance at succeeding. In August we also had another research associate join our group, Rob Parker, who has now started analyzing all these tissues back in our laboratory at UBC. The first few months of the fall were spent optimizing extraction and analysis conditions and in November we started running samples for real. We expect to keep our instruments busy for several months now with the analysis of these samples, finishing just in time to start analyzing the anticipated samples from next summer's field experiments!

Do bees sleep? I don't know about you but I get this question pretty frequently and I've never really known how to answer it well. Tom Seeley's research group at Cornell University in New York has come out with a study (Klein et al (2008) Caste-dependent sleep of worker honey bees. J. Exp. Biol. 211(18):3028-40) that asks just this question. Using observation hives they looked at the different kinds of workers (i.e., foragers, nurse bees, etc.) to see when and how they sleep. They defined sleep as periods of no movement when the bees were either inside a cell or outside on comb or frames. Not surprisingly, they found that foragers did most of their sleeping at night, predominantly sleeping outside of cells. Food storers also slept most at night, while nurse bees and cell-cleaning bees were observed to sleep at any time of the 24 h cycle, mostly inside cells. They also noted that younger bees sleep longer, on average, than older bees. What I found most intriguing is how closely bee sleep behaviour seems to parallel humans – those that work during the day sleep at night and those that care for children sleep when they can! No word on whether drones need sleep during their busy schedule...

Bee Learning Behavior Affected by Eating Toxin from GE Corn

By Ken Roseboro, ed., *The Organic and Non-GMO Report*, Dec 2008

A recent study found that honey bees fed on the active form of purified Cry1Ab protein, the genetically modified protein found in GM Bt corn, can be affected in the learning responses necessary to associate nectar sources with odorants.

The scientists wanted to determine if GM Bt is one of the causes for colony collapse disorder, a mysterious affliction that is killing honeybees worldwide.

In this study bees consuming artificial nectar containing 5000ppb of Cry1Ab continued to respond positively to a learned odor even in the absence of a food reward, while normal bee behavior is to become discouraged and seek more abundant food sources.

This learning response is important in bee foraging behavior and it has attracted the attention of CCD researchers since it is known to be inhibited by the insecticide imidacloprid.

The new finding is particularly interesting since it lends weight to a previous suggestion that Bt toxins may have other, non-lethal effects which become apparent only when the normal (i.e. lethal) effect is absent. If there were to be multiple

modes of Bt action then many more non-target organisms would likely be at risk from GM Bt corn. Bt Researcher Angelika Hilbeck says that more research is needed that looks at the impacts of both the Bt toxin and imidacloprid on bee behavior.

From *Bee Culture*, The Magazine Of American Beekeeping -- www.BeeCulture.com



Finally, A Complete Description Of Colony Collapse Disorder Across Time and Location

Jerry Bromenshenk has been involved with Colony Collapse Disorder from the very beginning. He and his colleagues at the University of Montana, the U.S Army's Edgewood Chemical and Biological Center, his own company called Bee Alert Technology, and BVS, Inc. have ferreted out an amazing amount of information on this Disorder and are close to understanding the answers to this problem. Because of their work the beekeeping community is more aware of the best management practices over time to combat the worst of the regular pests and diseases bees have, and this year the almond orchards should have an ample supply of bees for pollination, in part due to their efforts, and of course the work of many other researchers and scientists.

Over the two years that Colony Collapse Disorder has been a recognized problem, this group has probably visited more bee-yards suffering from CCD, in more locations, and over a longer time than most of the people involved in this search. As a result, in a full report prepared by this team to be released in the February issue of Bee Culture magazine, Bee Alert's Scott Debnam and Jerry Bromenshenk from Missoula Montana, David Westerveld from Florida's Apiary Inspections Bureau,

and Randy Oliver, a commercial beekeeper with significant honey bee research experience from Grass Valley, California detail the symptoms of CCD with respect to where it hits, and when it hits. This information is critical in making a diagnosis as symptoms do change as seasons progress and knowing what to look for and when to look for it is absolutely necessary in making correct decisions. So far, no better guidelines exist for diagnosing this disorder.

To review what's commonly known:

The symptoms of the final stages of CCD have been oft repeated:

In collapsed colonies

- Complete absence of older adult bees in colonies, with few or no dead bees in the colony, on the bottom board, in front of the colony, or in the beeyard.
- Presence of capped brood in colonies during time of year when queen should be laying.
- Presence of food stores, both honey and pollen, unless a drought or time of year restricts availability of food resources.
- Absence of pest insects such as wax moth and hive beetle.

MANN LAKE APIARY KITS!

Assembled Growing Apiary Kits

Are you looking to add a new colony this season? With our Growing Apiary Kit, it **couldn't be easier!** You will have all the woodenware needed. The kit includes: commercial hive bodies, commercial supers, telescoping cover, inner cover, bottom board with reducer, hive stand and either plastic waxed frames or wood frames with Rite-Cell® foundation. The kit comes unpainted or painted. All you need to do is add your colony of bees.

Order Your Apiary Kit Today And Be Ready For Spring!

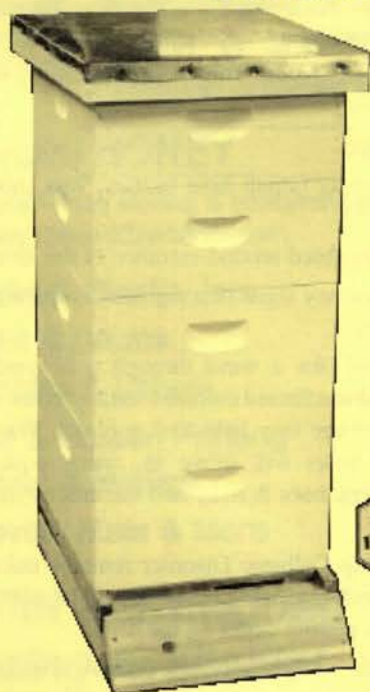
WW-740 Unpainted Kit- Wood Frames.....\$209.95

WW-741 Unpainted Kit- Plastic Frames.....\$189.95

WW-742 Painted Kit- Wood Frames.....\$221.95

WW-743 Painted Kit- Plastic Frames.....\$199.95

*Prices are subject to change without notice and do not include shipping charges.



www.mannlakeltd.com

Mann Lake Ltd.

800-880-7694

- Lack of robbing by other bees
- Robbing and return of hive pests is delayed by days or weeks.

In collapsing colonies

- Too few worker bees to maintain brood that is present.
- Remaining bee population predominately young bees.
- Queen is present.
- Queen may lay more eggs than can be maintained by workers, or is appropriate for the time of year.
- Cluster is reluctant to consume supplemental food such as sugar syrup and pollen supplement.

However, these are the terminal symptoms. By the time colonies reach this point it is far too late to do anything but bury the dead. Being able to spot colonies that are just becoming affected is a real plus because beekeepers can turn them around most times and keep them productive. Even though they still don't know the cause, proper and appropriate management techniques go a long way in helping. Here's what the team has found:

One year out

Colonies are "just not doing well" with few other visible symptoms. They seem healthy, but have lackluster honey production.

Six months out

Symptoms are vague and easily missed. Monthly inspections and careful comparisons are needed. Brood nests are slow to expand, with most in a single hive body. Mid-day inspections show bees dispersed in the colony, but this varies. Population growth slows to stops during growing season when compared to other colonies in the same yard. Honey stores remain untouched, bees are feeding on nectar recently collected. These symptoms are difficult to spot due to the careful comparisons needed.

Three months out

CCD colonies appear slow to grow and are outpaced by non-CCD colonies in the apiary. There is a noticeable population decrease going from 3 to 2 boxes, or 2 to 1, and often the bees are on only a few frames in the bottom box...and they appear

restless. Brood is shot gunned because of dead brood removal, and honey stores begin to diminish if it's late in the season, but if early, the honey remains untouched. Routine maintenance goes undone and no propolis seals are noticeable.

One month out

Usually 8 frames of bees or fewer remain and they decline rapidly. Brood is produced, but can't be supported, queen replacement is often tried and abandoned brood is common. Stored honey depends on the season...in summer it may all be depleted, in winter untouched.

Finally

Remaining bees fail to eat supplied food or medications, and it's mostly young bees that remain now, as the older bees are gone. Queens continue to lay excessively, and the colony usually lacks any aggressiveness at all.

Visual Symptoms of a CCD Colony

1. Just days before its collapse the colony seemed to be strong and fully functional
2. Mostly young bees remaining in the hive
3. Bees are not aggressive
4. Queen is present
5. Eggs are present
6. Full frames of brood may be present
7. Brood may show signs of "shotgun" pattern
8. Capped honey and fresh nectar are often present, although not in summer collapses, which are uncommon
9. Fresh pollen has been stored in the hive recently, if external resources are available
10. Supplemental feed (syrup and extender patties) if supplied, are ignored
11. No robbing occurs
12. No secondary pests (small hive beetles, wax moths or ants) are found
13. No dead bees are noted around entrance of the hive
14. Bees do not show any signs of winglessness, paralysis or other adult bee diseases.

CCD tends to travel like a wave through a beeyard, and combining affected and unaffected colonies usually gives 2 dead colonies. Adding a package may help, and may not. There is a time until secondary pests will move in...using equipment before that time for more bees is risky and the colony may die again.

The Cause of Colony Collapse Disorder remains unknown, but the diagnosis, and thus the opportunity to administer remedial treatments is getting better all the time.

For the full article with additional information see the February issue of Bee Culture on our web site www.BeeCulture.com. Thanks to Scott, David, Jerry and Randy.

This message brought to you by Bee Culture, The Magazine Of American Beekeeping -- www.BeeCulture.com.

Bee Culture
THE MAGAZINE OF AMERICAN BEEKEEPING

Don't Miss Even One Exciting Issue of *Bee Culture*
 Magazine filled with everything you want to know about:

- Bees • Beekeeping • Beekeepers •
- How-To's • Honey Report • Profiles • Recipes •
- Funny Stories • Research • Something For Everybody •

Send check to: Bee Culture Magazine
623 W. Liberty, Medina, OH 44256 or call
800-289-7668, Ext. 3220 with credit card

SAVE
20%
 When Advancing to This Association Discount

Chinese Honey laundered in US, Seattle paper exposes the continued fraud

By Alan Harman

Big shipments of contaminated honey from China are being laundered in other countries to avoid U.S. import fees, protective tariffs or taxes imposed on foreign products that intentionally undercut domestic prices.

A five-month investigation by the Seattle Post-Intelligencer found that in a series of shipments in the past year, tons of honey produced in China passed through the ports of Tacoma and Long Beach, California, after being fraudulently marked as a tariff-free product from Russia.

It found other shipments routed through India, Malaysia, Australia, Indonesia, and Thailand.

The report, which mirrors a story in Bee Culture back in 2002, says tens of thousands of pounds of honey entering the U.S. each year come from countries that raise few bees and have no record of producing honey for export.

"In the U.S., where bee colonies are dying off and demand for imported honey is soaring, traders of the thick amber liquid are resorting to elaborate schemes to dodge tariffs and health safeguards in order to dump cheap honey on the market," the newspaper reports.

"The business is plagued by foreign hucksters and shady importers who rip off conscientious U.S. packers with honey diluted with sugar water or corn syrup - or worse, tainted with pesticides or antibiotics."

The newspaper cites 350 drums containing 223,300 pounds of Chinese honey that were shipped in August from Hubei Yangzjiang Apiculture Co. in Wuhan, China, and loaded on a ship in Shanghai. Within a month, the shipment arrived at Tuglakabad, an import warehouse near New Delhi.

"There, according to Indian Customs reports, the honey marked 'for re-export purposes' was accepted by Apis India Natural Products," it says. "The drums still contained instructions from the Chinese company, saying the load was to be shipped to America's biggest and oldest honey cooperative - Iowa-based Sue Bee Honey. Two containers of the honey reportedly were shipped to Norfolk, Va., and three more went to Jacksonville, Fla.; all were later routed to Iowa."

The Post Intelligencer says honey laundering is so rampant crackdowns are being pushed in a number of countries, including Russia, India and Australia.



Freund
CONTAINER & SUPPLY

A Division of Berlin Packaging



on your next order
of \$100 or more.
offer expires 06/30/09

use Media Code WAS91 when ordering

Search:

for more honey storing & containing products
on www.FreundContainer.com

Glass & Plastic Jars
Pails & Drums
Printers & Labels
Pad & Screen Printing
Boxes & Mailers
Gloves, Mats & More

**Pallet & Truckload
Pricing Available!**



Glass Queenline



Glass Honey Pot



Plastic Honey Bear - PET



Plastic Beverage - PET



Plastic Cylinder
HDPE & LDPE



Plastic Snap Lock
HDPE & PP

Phone: 800.363.9822 www.FreundContainer.com Fax: 800.423.7545

February 2009 11

"While very little Russian-made honey is exported, according to the Federal Customs Service of Russia, records obtained by the P-I show more than 11 million pounds of honey purportedly originating in Russia entered the U.S. last year alone," it says.

In February, it says, the Australian Supreme Court imposed almost a half-million dollars in fines against two companies that shipped 1.8 million quarts of Chinese honey to the U.S. after falsely relabeling the product as Australian.

The Indian Directorate of Revenue Intelligence found that through mid-November last year, 471 out of 665 honey shipments that listed India as the country of origin actually came from China.

The U.S. imported 237 million pounds of raw honey last year. But the newspaper says honey brokers, bee experts and foreign customs officials are suspicious that seven of the top 12 countries appear to be exporting far more honey than their domestic bees produce or their export agencies acknowledge.

These countries include Vietnam, India, Thailand, Russia, Taiwan, Indonesia and Malaysia.

"Countries that have few if any commercial beekeepers, such as Singapore, are now exporting significant quantities of honey, records show," the newspaper says. "That includes the Grand Bahamas, which has been listed as the country of origin for honey shipped into Houston, authorities say.

"And other countries that locally produce mostly dark, strong-tasting honey, such as India, Vietnam and South Korea, are shipping tons of the more marketable white honey.

Vietnam now is the No. 2 honey exporter to the U.S., second to Canada.

"But Vietnamese honey officials say much Chinese honey is being transshipped through their country, citing 24 containers that arrived in Los Angeles earlier this month (December)," the report says.

This message brought to you by Bee Culture, The Magazine Of American Beekeeping -- www.BeeCulture.com.

Beekeepers' Calendar

Mar 7: BEE SYMPOSIUM, at the Summerfield Waldorf School and Farm, 655 Willowside Road, Santa Rosa, California. Key speaker is Gunther Hauk, a nationally known practitioner of natural beekeeping in the Steiner tradition from the Pfeiffer Center in New York State. Tickets (\$45 in advance, \$50 at the door) may be ordered from Beekind Honey Shop, 707-824-2905 or www.beekind.com. More information in President's Message, Page 1 of this issue.

Mar 7: BC HONEY PRODUCERS ASSOCIATION SEMI-ANNUAL MEETING, Kamloops BC. Info Ian Farber 250-579-8518 or Ian_Farber@telus.net.

Mar 9 - 13: BEE MASTERS SHORT COURSE, Simon Fraser University, Burnaby BC. Registration and details from SFU Conference Centre 778-782-4910 or conference_services@sfu.ca.

June 22 - 28: NATIONAL POLLINATOR WEEK. Info www.pollinator.org.

July 9 - 11: HEARTLAND APICULTURAL SOCIETY CONFERENCE 2009, Oberlin College, Oberlin, Ohio. Info Phil Craft (phil.craft@ky.gov) or President Bob Hooker (beekeeperbob17@hotmail.com) or visit the website (www.heartlandbees.com).

Aug 3 - 7: EASTERN APICULTURAL SOCIETY CONFERENCE, Holiday Valley Resort, Ellicottville, New York. Info Kim Flottum 330.725.6677 x3214 (work) or president@easternapiculture.org.

Hit the road for these important beekeeper events!



Aug 17 - 20: WESTERN APICULTURAL SOCIETY ANNUAL CONFERENCE, Healdsburg, California. Info Eric Mussen (ecmussen@ucdavis.edu)

Sept 15 - 20: 41st APIMONDIA INTERNATIONAL APICULTURAL CONGRESS, Montpellier, France. Info www.apimondia2009.com.

Nov 2 - 4: ALBERTA BEEKEEPERS ANNUAL GENERAL MEETING, Fantasyland Hotel, Edmonton Alberta. Info Gertie at albertabeekeepers.org.

Nov 6 - 15: ROYAL AGRICULTURAL WINTER FAIR, Toronto, Ontario.

Nov 17 - 19: CALIFORNIA STATE BEEKEEPERS ANNUAL MEETING, San Diego CA.

Nov 23 - 28: CANADIAN WESTERN AGRIBITION, Regina, Saskatchewan.

Jan 12 - 16, 2010: NORTH AMERICAN BEEKEEPING CONFERENCE - joint meeting of the American Beekeeping federation, Canadian Honey Council and Canadian Association of Professional Apiculturists, Wyndham Orlando Resort, Orlando, Florida.

Issues with Queen Honey Bee Quality

By James C Bach, WSDA (retired), Yakima WA

As early as 1969 while working as a county bee inspector in Washington State, I observed bee behaviors that I had not seen in previous years in my own colonies. As I came into contact with non-commercial beekeepers in northwest Washington I began to hear about their successes and problems. Some problems they could explain fairly well, for others all they could say was "the bees just don't seem right" or "I just don't have an explanation for that. I thought I had done everything right. I've been keeping bees for several (to 20) years and I've never seen this before." What were they attempting to describe? They mentioned unexplained queen losses, bees making a queenless roar though they had just received a young queen from someplace in the southern states or California.

I conducted an inspection of three 3-lb. package colonies belonging to a beekeeper, one of which was scent fanning in the one story hive; the workers did not form a retinue around the queen when she stopped for 30 seconds on the comb face, and the colony was not clustering properly for the ambient temperature. I surmised that the problem was that the queen was not attractive to the bees. I went to my vehicle and retrieved a recently purchased marked queen in a cage with attendants. I placed the cage across the back corner of the hive while I examined other combs in the hive looking for the queen. Within two minutes the bees (covering five Langstroth deep frames) increased their scent fanning as they moved as a group to cluster around the new queen cage. Within three minutes the bees became quiet. Even their scent fanning at the hive entrance became quiet. I found their previous queen, crushed and dropped her into the hive. I then removed the screen from the new queen cage and directly released the new queen into the colony. We checked this colony for several months and the queen was not rejected.

This experience was the genesis of my consuming interest in bee behavior, queen quality, beekeeper management practices and the cause and effect between them.

In 2008 I purchased five queens from a California breeder and two more from New Mexico to requeen two colonies and have two back-ups if any queens failed. I fed the parent colonies and top nucs with Fumidil-B (FB) before I introduced the queens and fed the queens with FB mixed into water for two days prior to introduction to the top nucs. The California queens lasted from 30 days to six weeks. Their queen retinues only had three to seven worker bees. As of this writing, I have three colonies, two with New Mexico queens and one with a California queen. So I purchased seven queens for \$175.00 to maintain three live colonies! Since these purchases were made in mid May and July, I doubt that mating weather should have been an issue. So what is the cause of these queen losses?

Dr. David Tarpy of NC State University, speaking at the WA/OR State conference, stated that he has found a lot of poorly mated queens in his studies of queens purchased from a number of queen producers. The queens mated with single drones had five bees in their queen retinue, those mated with multiple drones had seven. Dave also mentioned that queens with *Nosema* can't mate because they can't defecate. He said that well mated queens have 507 million sperm and poorly mated queens (often mated in April and May) have less than 3 million sperm, and the better mated queens have wider thoraxes and longer wing length.

In a recent conversation with a colleague, I was told that one person of his acquaintance produced 8,000 queens in a single week in 2008 and he was concerned whether the producer had enough mature drones available to mate with that many queens. With the queen problems in his state, he suspects that the drones were infertile for several reasons.

Over the years I've written several papers on my observations of bee behavior and the potential causes and possible explanations and solutions. In this paper I will limit my remarks to the issue of queen mating, queen health and their impacts on a colony.

January 2009: Recently I read pertinent parts of a publication by Friedrich Ruttner of Germany. On page 88 Dr. Ruttner discusses drone colonies. He says: "100 queens require approximately 1000 drones for mating. During the mating flights there must be available at the mating site 6 to 10 times this number (6,000 to 10,000) in order to ensure quick matings near the sites of the mating nuclei. But since one stock (colony) can at the most support no more than 2000 drones at a given time (or one deep drone comb, of which perhaps only half of the drones are sexually mature) several drone colonies must of necessity be set up." He advises that if 500 queens are to be mated at the same time "at least 12 drone colonies" must be in the vicinity of the mating site. These 12 colonies will produce 24,000 drones of which maybe 12,000 will be sexually mature enough to mate with the queens. That means 24 mature drones may be available to mate with each queen. Friedrich goes on to say if you have a mating apiary surrounded by a "4 km (2.5 mi.) drone free radius, at least 6 drone production colonies are needed for 50 to 100 mating queens." That means 6,000 mature drones (6 drone colonies) per 100 mating queens or 60 drones per virgin. This number may allow for the progressive age of drone brood and sexual maturation as adults.

Dr. Harry H. Laidlaw Jr. and Robert E. Page Jr. in their book state that one drone comb has about 4,150 drone cells (if it is fully drawn out) and may be expected to produce 3500 mature drones. They suggest that beekeepers provide 20 mature

drones for each virgin queen. One colony could then provide mature drones for 175 virgin queens. The authors also advise that additional colonies should be added into the vicinity of the mating apiary 16 days later (to insure a continuing supply of mature drones).

According to Dr. Ruttner, drones begin to fly 8-10 days post emergence as adults, become sexually mature about day 12 and live about 25 days so they are sexually mature for only 12 days. Laidlaw and Page on page 133 use drones for artificial insemination when they are ten days old.

All drones do not emerge from a comb on the same date because the queen does not lay all the eggs on the same date, so the drones do not become sexually mature on the same date. Also the queen usually doesn't return to the drone comb immediately after the drones emerge to refill the cells with eggs, causing a hiatus in the availability of mature drones. Therefore it becomes necessary to allow for the progressive maturation of the drones when calculating the number of drone colonies supplied to a mating apiary.

Issue 1: If you estimate the queen production season to be from April 15 to July 31 you have a period of 107 days. Drones take 24 days from egg to emergence from the cell and another 10 to 12 days to reach sexual maturity for a rough 35-day drone production cycle. There are then 3.06 drone cycles in the 107-day hypothetical queen production season. If you count only the useful 12 sexually mature day periods there are 8.92 in the 107 days. Since all drones are not sexually mature on the same date there will be over-lap of drone emergence, flight dates and sexual maturation dates. So the question arises whether the 24 mature drones of Ruttner and the 20 of Laidlaw/Page are sufficient to provide adequate numbers of

mature drones for commercial mating apiaries. The authors do not explain how they calculated the progressive maturation of drones into their recommendations.

Issue 2: We have information on studies of miticide residues in comb and wax foundation and its effect on queen and worker production. Do residues also have similar impact on drone production? If so, how do the residues effect drones and what percentage of drones produced for virgin queen mating are affected? A colleague recently suggested that miticide residues may be causing the infertility of drone semen before it is deposited in mating queens. WOW! If this is shown to be true we may have another cause of our queen failures and subsequent colony demise.

Issue 3: With Dr. Tarp's comments about the number of bees in the queen retinue being correlated with the number of drones that mated with them, the questions become: why didn't more drones mate with these virgin queens? Were they not very attractive as virgins; if so why not? Were they not fed sufficiently as larvae? Was the royal jelly they ate deficient in nutrients? Was this because the starter and finisher colonies that fed the larvae prior to cell capping were deficient in queen pheromones? Were the queen larvae themselves deficient in pheromone production resulting in deficient feeding of royal jelly by the nurse bees? How many of these emerged queen cells still had royal jelly inside? If no royal jelly was found, when did the developing queen larvae run out of food? Does this cause an unattractive virgin queen? If the answer is yes to any or several of these questions, perhaps a cascading effect resulted in the lack of worker bees in queen retinues and mated queen attractiveness.

Issue 4: Dr. Steve Sheppard in his work some years ago

TABER'S on the web ...



RUSSIAN QUEENS & PACKAGES

Phone 707-449-0440
P.O. Box 1672

Vacaville CA 95696
www.honeybeegenetics.com

Bees
Beekeeping Supplies
Glass Jars & Bottles



Bees 'n Glass
vancouver island apiary supply

Larry & Marilyn Lindahl

Tel/Fax: 250.749.3800
Toll Free: 1.877.256.3800 (in BC)
beesglass@thebeestore.ca
www.thebeestore.ca

Strachan Apiaries, Inc.

The world's largest producer of
the
New World Carniolans.



www.strachanbees.com
orders@strachanbees.com

2522 Tierra Buena Rd. Yuba City, CA
(530) 674-3881 (530) 674-5802-fax
(800) 368-3881-orders only

found that the commercial queens being produced in the U.S. came from about 400 queen mother lines. He did not verify how genetically diverse these lines were. His paper on the subject suggests that this number of lines is not sufficient to insure ideal genetic diversity. His students' work in the last two years reveals that genetic diversity has eroded further since Steve's initial research. So what is the best and quickest way to diversify our gene pool? Is it to propagate individual lines of imported stock for sale or to generally distribute genetic material across the U.S.?

Issue 5: I have observed so-called Russian queens several times since they came on the market in the U.S. and again recently in colonies in British Columbia, Canada. All of the colonies I have observed only had three to five worker bees in their queen retinues when there should be 12 to 15! Recent articles and conversations with several beekeepers with Russian queens suggest that they are observing the same aberrant behaviors. These colonies produce a fanning noise in the 60 to 70 decibel range. A four or five story quiet colony with a retinue of 12 to 15 workers produces about 50 to 55 dB. My questions are: Did the scientists not observe these traits in the source colonies they looked at in eastern Russia from which they imported eggs or semen? Did they not pay any attention to the bee behaviors? And during the selection and propagation of the Russian lines in Louisiana the last five years was any attention paid to bee behaviors such as queen retinue? The Russian colony is said to shrink to three or four combs of bees over winter. Is this because the queens aren't producing the pheromones to maintain a larger functioning colony?

Issue 6: Has the nutrient quality of pollens produced by native and hybridized agricultural crops become deficient over the years of crop variety selection? Has anyone examined the pollens the bees are collecting for its nutrient quality? Several

pollen supplement patties have come on the market in recent years. I know that one of them was designed around what the bees preferred to eat, not just what the patty developers thought was good for the bees after reading the literature. These one-pound patties cost between \$1.00 and \$1.25 each (\$1.11 average.) in 25 to 50 lb. lots or \$1.75 each in ten-pound lots, plus freight from the supplier. A colony that is deficient in natural pollen sources can consume between 0.75 to 0.81 lbs per week during a six-month period in western Washington. That is about \$26.64 per colony for six months or \$2,664 per 100 colonies. At \$1.07/lb wholesale, these 100 colonies will need to produce an additional 2,490 lbs (25lbs/col) of honey to pay for this increased cost of feeding them nutrients.

Issue 7: Without an acceptable and universal queen quality standard that includes bee behavior, queen attractiveness and worker retinues, beekeepers will never be able to identify and quantify bee behavior to evaluate queen quality and colony longevity.

So what? What will it cost in research dollars to answer these questions? How many years will it take to find the answers that will result in improved queen health, quality, longevity and genetics? The Washington State Beekeepers Association Colony Health Project has been formulated to begin to find answers to these questions. Washington State University and the Tucson USDA Bee Lab are cooperating on conducting this Project.

References

- Breeding Techniques and Selection for Breeding of the Honeybee, translated by Ashleigh and Eric Milner, published by The British Isles Bee Breeders Association in 1988.
- Queen Rearing and Bee Breeding, 1997, published by Wicwas Press, CT, USA

RUHL BEE SUPPLY

The Northwest's Best & Friendliest Resource for the Hobbyist, Sideliner and Commercial Apiarist



**Full Line of Beekeeping Equipment
Queens, Packages & Nucleus Colonies
Orchard Mason Bees, Tubes & Houses
Original & Innovative Products
Classes, Clinics & Customer Support
New Online Store**

West Coast Distributor for Walter T. Kelley Co.

RUHLBEESUPPLY.COM 503.657.5399 GLADSTONE, OR

PACIFIC NORTHWEST BRED QUEENS

**VSH / RUSSIAN / WILD
SURVIVOR STOCK**

OLYMPIC WILDERNESS APIARY



HYGIENIC • MITE RESISTANT

Selecting for Nosema Resistance

Isolated Mating Yards

Hardy. Work@Cooler Temperatures

~ No Package Bees ~

Queens Available Summer and Fall Only

866-204.3426 (toll free)

www.wildernessbees.com

Häagen-Dazs Launches Bee-friendly Garden Design Competition at UC Davis

From the UC Davis website

Honey bees will soon find a pollinator paradise at the University of California, Davis, thanks to Häagen-Dazs Ice Cream.

Häagen-Dazs has announced that it is making a \$125,000 donation to the UC Davis Department of Entomology to launch a nationwide design competition to create a one-half acre Honey Bee Haven garden at the Harry H. Laidlaw Jr. Honey Bee Research Facility at UC Davis.

From that gift, \$65,000 will be used to establish the garden. Häagen-Dazs and UC Davis will determine how the balance of the gift can best be used to benefit the health of honey bee populations.

"The Honey Bee Haven will be a pollinator paradise," said Lynn Kimsey, chair of the Department of Entomology and director of the Bohart Museum of Entomology. "It will provide a much needed, year-round food source for our bees at the Harry H. Laidlaw Jr. Honey Bee Research Facility. We anticipate it also will be a gathering place to inform and educate the public about bees. We are grateful to Häagen-Dazs for its continued efforts to ensure bee health."

The garden will include a seasonal variety of blooming plants that will provide a year-round food source for honey

bees. It is intended to be a living laboratory supporting research into the nutritional needs and natural feeding behaviors of honey bees and other insect pollinators.

Visitors to the garden will be able to glean ideas on how to establish their own bee-friendly gardens that will help improve the nutrition of bees. The bee haven is expected to be the first in a series of pollinator gardens at UC Davis.

"The garden will be extremely helpful in demonstrating that bees are not a nuisance in the backyard, but instead are obtaining food and water essential for their survival," said Eric Mussen, a Cooperative Extension apiculturist in the UC Davis Department of Entomology.

"Campus visitors will be able to see which flowers are most attractive to foraging honey bees and how to space the flowers in order to have bees flying in the most convenient areas of their gardens," he added.

The garden design competition funded by the Häagen-Dazs brand is being coordinated by the California Center for Urban Horticulture at UC Davis. It is open to anyone who can create a proposal by using basic landscape design principles.

For more information contact Melissa Borel, program manager 530-752-6642 or mjborel@ucdavis.edu.

Varroa-nator Screen Insert



a new IPM tool for the battle against the Varroa mite.

- Allows for physical separation of fallen mites & bees.
- Placed on traditional bottom board reversed 180 degrees.
- New landing area & front opening for the bees to come & go.

MANUFACTURED BY DIMO'S TOOL & DIE LTD.
12 BANGOR AVE. WINNIPEG, MB
PHONE FOR INFO: (204)-772-6998

RICHARDS
PACKAGING INC
WWW.RICHARDSPACKAGING.COM

Glass and Plastic Jars
375ml (500gr Honey) Cylinder Jars
750ml (1kg Honey) Cylinder Jars

Hex and Oval Hex Glass Jars
(Including 12oz Honey)



Plastic Pails
...and more!



ASK US FOR OUR STOCK ITEM
CATALOGUE
(604) 270-0111

Michael Young receives Order of the British Empire

If you have attended an EAS meeting anytime in the last four or five years (or the WAS conference in 2003), you have had the privilege of meeting Michael Young. Michael has introduced conference attendees to encaustic painting, exotic honey recipes, mead making and more stories about his travails in the world of beekeeping than you can imagine. I was privileged to travel to his home in Northern Ireland and speak to his group there, and spend time with his family and friends. He has brought to the U.S. an appreciation of honey judging that did not exist here, and his humor and good nature have produced a bond between Northern Ireland and U.S. beekeepers that is invaluable to both. Recently, Michael was awarded the MBE.

Another friend, Michael Badger, sends along this information on the OBE Award...

The Order of the British Empire recognizes distinguished service to the arts and sciences, public services outside the Civil Service and work with charitable and welfare organizations of all kinds. It was created during the First World War in 1917 by George V.

The King recognized the need for a new award of honour which could be more widely awarded, in recognition of the large numbers of people in the British Isles and other parts of the Empire who were helping the war effort both as combatants and as civilians on the home front.

For the first time, women were included in an order of chivalry, and it was decided that the Order should also include foreigners who had helped the British war effort.

From 1918 onwards there were Military and Civil Divisions, as George V also intended that after the war the Order should be used to reward services to the State in a much wider sense.

Today the Order of the British Empire is the order of chivalry of British democracy. Valuable service is the only criterion for the award, and the Order is now used to reward service in a wide range of useful activities.

Citizens from other countries may also receive an honorary award, for services rendered to the United Kingdom and its people. There are more than 100,000 living members of the Order throughout the world.

After some debate, St Paul's Cathedral was nominated by a special committee and approved by The Queen, as the Chapel of the Order.

As the cathedral of the capital city, it could accommodate services attended by very large

congregations.

In the words of one committee member, 'St Paul's symbolised the victory of the British spirit during the war of 1939-45 in that, although badly damaged and shaken, it survived the ordeal by battle in an almost miraculous way.'

Following is what was written about Michael Young in his local newspaper...

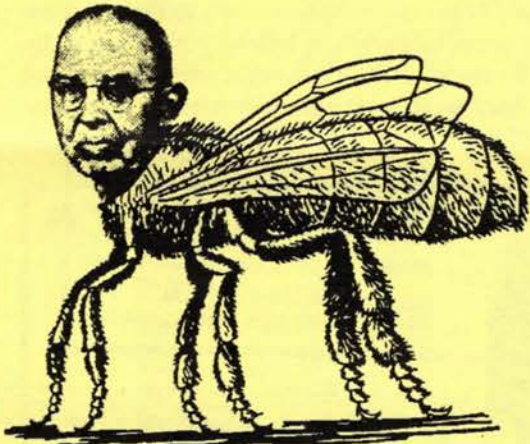
.....A Long-standing member and former chairman of Dromore Beekeepers' Association has been awarded the OBE in the Queen's New Year Honours List.



WALTER T. KELLEY CO.

1-800-233-2899

www.kelleyco.com



"FOR ALL OF YOUR BEEKEEPING NEEDS"

"Celebrating our 85th year"

www.kelleyco.com

• Woodenware • Wax foundations • Protective clothing • Extracting & bottling	• Tools • Books & DVD'S • Feeders & feed • Package Bees & Queens
---	---

Hillsborough man Mr. Michael William Young, sitting chairman of the Institute of Northern Ireland Beekeepers - an umbrella group for the Province's beekeepers, boasting BBC journalist and Breakfast news presenter Bill Turnbull as its president - was awarded the honour for voluntary service to apiculture (beekeeping) and conservation.

Mr. Young said he was humbled to have received the award and he paid tribute to his friends and family for all their support, also hailing the executive committee of the Institute of Northern Ireland Beekeepers as "the true hero", for all beekeepers and wider public alike.

"It is just unreal to have received this highly acclaimed award and I am still lost for words," he said. "I feel honoured and humbled to have been given this great accolade."

He added, "I am truly blessed and enriched with a bounty of friends and a beautiful family of four lovely daughters, Jodie, Jamie, Jasmin and Rachel Harley, two granddaughters, Sienna and Scarlet and of course, Rae, the Queen bee of the hive, and like any Queen, rules with a silver tongue but always warm and comforting.

"With all humility I acknowledge the support of my friends and family around me."

Mr. Young said of the INI executive committee that it spent a lot of energy promoting what he called "this man-friendly little beastie", the Honey Bee. "Only when one gets involved with the honey bee," he said, "is it possible to really appreciate the magnitude of the work done for humankind and the planet

alike by this insignificant little insect, for centuries milked like cattle, sometimes ruthlessly, for their five invaluable products, honey, beeswax, propolis, royal jelly and pollen, to provide sweetness, light and healing for humankind; to them I bow in homage."

A teacher of Hospitality at Belfast Metropolitan College and Executive Chef at Malone Golf Club, where he was surrounded respectively, he said, by terrific students, exceptionally helpful and friendly colleagues, excellent managers, staff and the best clientele he had ever cooked for, Mr. Young said 2008 had been for him a very fortunate year.

His place of work gave him new ideas to pass on to his students, he said. "As a teacher, when in class," he added, "I sometimes scan the practical kitchens where the students are busily working on their dishes.

"I imagine the students as a colony of bees within the hive; those students who are similar to the Guard Bees are always on the defensive side and looking for a bit of confrontation, ready to sting without notice; some students always keep their workstation and themselves immaculately clean, always dressed to perfection, very much like the House Bees keeping everything in order.

"Other students support and look after their peers, making sure that they are well, whilst willing to put their shoulder to the wheel to assist, no matter the burden, not unlike the Nurse Bees of the colony; others tirelessly gather all information on the course work to extend their knowledge in becoming a chef, the Forager Bees, whose job it is to gather the bounty of nectar and pollen for the wellbeing of the colony.

"The drones! Those lazy drones, always late, the class clowns, but as in the colony of bees, the drones provide a harmony, creating a spirit within the hive and they can't be done without."

Additionally, Michael has contributed an entire meal of honey recipes to the recently published book *The Honey Handbook*, by Kim Flottum.

Congratulations Michael.

Article provided by Kim Flottum of *Bee Culture Magazine* - www.beeeculture.com.



Purvis Brothers Queens and Cells

1-5	\$22.00
6-20	20.00
21-49	19.00
50-99	17.00
100-499	15.00
500+	14.00

All cells \$6.00 25 minimum order

931-852-3033

See www.purvisbrothersbees for more detail

Visa, MasterCard and Discover accepted



Trees 'n Bees, Inc.

Beekeeping Supplies
Queens & Packages
Honey and Gift Items

Saturday 10 - 4
Monday 5 - 8 pm
Thursday Noon - 7 pm

Loren & Carolyn Elliott
34747 162nd Ave SE
Auburn, WA 98092

253-939-1149

866-627-2857

carolyn@treesnbees.com

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

Concerns of the BC Honey Producers

By Stan Reist, Nanaimo BC

I guess the biggest thing for the BCHPA this last year is the compensation for lost hives. This spring was peculiarly bad for hive losses due to bad weather and, probably, Apis Cerana, with mite problems attached -- not a good combination. It now appears that all levels of government have washed their hands of the problem by saying "if you don't enroll in Agristability than don't expect anything, as you are well enough looked after under this program." The biggest problem with that is that it changes names under every administration. Some reports have it that it takes two years to get paid for your losses etc etc. Basically, what appears to be happening, is that governments are committing large amounts of money to programs, but how do you access them?

The second concern is the loss of two major operations in the North Peace region of the province. Long time, well established operations -- one due to the passing of Ernie Fuhr,

North Peace Apiaries, and the loss of Van Han Apiaries, which closed down when the folks retired.

However, on the bright side of things is the pollination of berry crops in the Fraser Valley. Seems there are not enough hives to go around, and we have out-of-province hives engaged in filling the need.

This spring (winter) although it has been cold, has also been much dryer than normal. The bees have had a lot of flying time, so dysentery is low and the hazelnut trees are coming into bloom on Vancouver Island, consequently the bees are taking advantage of the early pollen source. So let's be positive that we won't see the huge die-offs the third week of March to the second week of April again.

Our semi annual meeting is the 7th of march in Kamloops at the Desert Inn.



Bee Hive Candy Recipe

Here's a recipe for any hungry hives that can't wait for new spring food supplies.

Microwave recipe --

In a quart or larger microwave dish, mix thoroughly 1 1/2 cups granulated sugar and 1/2 cup light corn syrup.

Microwave on high, stirring every few minutes until the mixture is clear and bubbles become thumbnail size (about 10 minutes). STOP immediately if the mixture begins to brown. A wooden spoon is very effective for stirring, as it can be left in the dish while heating.

Pour into a shallow mold made of cardboard or a container lined with paper to cool. The candy will become brittle and can be slipped on top of the frames beneath the inner cover where the bees can consume it.

Thanks to the Massachusetts Bee newsletter



*Everything
for the Beekeeper*

Call our branch offices: Pat in Fresno or John in Chico
for fast courteous service. *Free Full Color Catalog*

PO Box 2837
2765 South Golden
State Blvd.
Fresno, CA 93745
Phone (559) 495-0230
Fax (559) 495-0232
Toll Free 1-877-432-3268

15 C Valley Court
Chico, CA 95973
Phone (530) 893-0921
Fax (530) 893-0922
Toll Free 1-877-332-3268





Website:
www.dadant.com

• Full & Medium Depth Langstroth Dimensions
• Available in NEW BLACK & Standard White



No assembly required
NOT DAMAGED BY THE HIVE BEETLE

American Made • 100% FDA Approved Food Grade Material

- One-Piece Plastic Frame & Foundation
- Full Depth & Medium Depth Plastic Foundation --



INCORPORATED
Pierco




CHECK OUT OUR WEBSITE
www.pierco.net

Nick Lissaman
3900 Hamner Ave., Mira Loma, CA 91752
800.233.2662

Call for Distributor nearest you!

2009 California State Beekeepers Association Convention

By Carlen Jupe, Editor, California BEE TIMES

The California State Beekeepers Association 2008 Convention, held at Harrah's in South Lake Tahoe from November 11-13, exceeded my expectations, which were already high, based on the 2007 convention! Not only were the first-rate accommodations used by large numbers of attendees and vendors, but a great deal of useful information was presented. (To quote a friend of mine, it was "like taking a drink from a fire hose".) For me, the best part was the sense of progress made in research, legislation, and cooperative efforts.

In the research realm, we heard (from Frank Eischen) that overwintered hives, started in September 2007 on pollen patties and followed up with pollen substitutes on a weekly basis, had 60% better populations by almond pollination season than did hives that were not fed. Frank's observations also suggest that colonies stressed nutritionally or by Nosema are hit harder by acaricides, so one might want to treat such hives for mites earlier and more gently, maybe with non-chemical means.

Robert Cramer of Montana State University reported on a survey of Nosema ceranae and some treatments against the disease, saying in general that it has evidently been here quite awhile and seems to have largely replaced Nosema apis. Fumagillin does work, but N. ceranae can come back after treatment, and Fumagillin is powerful: follow the dosage directions carefully! Field tests are planned with sodium hydroxide, which (if I understood correctly) can be fed to bees at concentrations that kill 99% of N. ceranae spores. If you need to clean equipment or combs, 6% acetic acid or 10% bleach will kill 100% of spores, as will heating to 50 degrees Centigrade (122 degrees F) for about 3 hours. Robert would like reports/samples from hobbyists on the efficacy of these treatments, in which connection please note that sample sizes of at least 30 bees are needed.

This was noted by several WSU researchers, who also

said a simple sampling method is to put a cup of bees from inside the hive cover into a jar of rubbing alcohol. Some exciting new diagnostic technologies will be coming into play during 2009: IVDS and proteomics via Jerry Bromenshenk and David Wick in Montana, a 1-shot Nosema test by Judy Chen, and virus detection on a computer chip via Michelle Flenniken through UCSF and UC Davis.

A country-wide study into CCD is under way, coordinated by Keith Delaplane at the University of Georgia, and promising work on bee genetics is in progress by Sue Cobey at UC Davis and by Wyatt Mangum in Virginia. Many other useful research reports were presented, as well as a best-practices panel by experienced beekeepers and a bee breeders' panel.

In the areas of cooperation and legislation, Eric Olson, a representative of Washington beekeepers, inspired us with the story of how they worked with WSU and their state legislature to kick-start bee research.

Project Apis m. reported funding over \$360,000 of bee research in just 18 months, CSBA and CDFA resurrected the California State Apiary Board, and scientists from Bayer's research division sought common ground in a meeting right at the convention with beekeepers, almond growers, and California State regulatory and Farm Bureau personnel.

David VanderDussen of NOD Apiary Products asked beekeepers for advice on further development of a gel for hot-climate formic acid Varroa treatment. Finally, two beneficial effects of the publicity about CCD were seen: increased hobbyist membership in bee clubs, and large research donations from Haagen-Dazs Ice Cream, both greatly appreciated!

In sum, I found this to be a very encouraging convention, and anticipate even more value from the next one, to be held in San Diego, November 17-19, 2009.

C F KOEHNEN & SONS, INC

Quality & Service Since 1907

QUEENS & PACKAGES

Italians & Carniolans

3131 Hwy 45 • Glenn, CA 95943

530.891.5216 • 530.934.5216

FAX 530.934.2613 • Office Hours 8 - 5

All You Need are a Few Good Queens



GloryBee®

Candle Making Supplies

Molds, Wicking, Wax Equipment,
Packaging, and more!

Fast Shipments, Friendly Service

Call today to request our free catalog

www.CandleMakerSupplies.com
800-456-7923 • Eugene, OR 97402

**Purebred Instrumentally Inseminated
MITE RESISTANT BREEDERS**

Save \$\$ - Raise your own queens

Minnesota Hygienic Italian

Cordovan Italian

VSH varroa resistant

USDA Russian - Carniolan

\$100 plus \$45 shipping - UPS Next Day

Free shipping on 5 or more queens

*Selected for hygienic behavior, gentleness,
mite resistance, and high honey production*



GLENN APIARIES

P.O. Box 2737

Fallbrook, CA 92088

(760) 728-3731

glennapiaries@gmail.com

Visit our website:

www.glenn-apiaries.com

Model BBB-6000

Beekeeper's Beehive Brander

from \$169.45



Integrally cast characters
Produce extremely deep brands
3 second branding
Heats up rapidly; holds the heat

-1-A136

Twice the
heat of our
original
Model 1021
Porto-Pro!

Use with our
HEAVY DUTY
Model 2100 PORTO-PRO
propane brander

BrandNew Industries, Inc.

375 Pine Ave, #22, Santa Barbara, CA 93117
800-964-8251 www.brandnew.net

Mite Away II™



**This doesn't
have to happen
to you!**

Mite Away II™ controls
Varroa & Tracheal Mites,
Save your Bees
Save Your Business.

*More Brood
More Bees
More Honey**

*Tested & verified by the OBA Tech Transfer
group in field trials between 2004-2006

Single Application * Cost Effective * Residue Free
Environmentally Safe * Ready to Use * Fully Registered

Recommended by the CCD Working Group

Roll Out the Barrel!



Mite Away II™ - now available
in commercial package
225 pads/barrel
4 barrels/skid

**Easy to Use
Stackable Skids**

Barrel Pricing

By the skid
4 barrels - 900 Treatments
Only \$2.75 /Treatment
Total ONLY
\$2,475. /Skid



"We're in the Bee Protection Business"

NOD Apiary Products

Call 1-866 483 2929 www.MiteAway.com
Email: Info@MiteAway.com Fax 1 613 398 0495



Ross Rounds, Inc.

Round comb section
equipment and
Sundance pollen traps.
Contact your dealer for supplies.

PO Box 11583 • Albany, NY 12211
V 518-370-4989 • F 518-381-6370
www.rossrounds.com

WEAVER'S famous QUEENS and Package Bees

★ Buckfast ★ All-American

The R. Weaver Apiaries Inc.

16495 C.R. 319, Navasota, TX 77868
Phone 936-825-2333 Fax 936-825-3642
Email: rweaver@rweaver.com www.rweaver.com

West Coast Bee Supply Ltd.

All Your Basic Beekeeping Needs:
Medication - Equipment - Suits -
And Much More.

Your Mail Order Specialists

Phone 604-272-1921 Fax 604-272-1928
Email: bluebob@shaw.ca
9351 #6 Rd., Richmond, B.C. V6W 1E5



Made from 100% Natural Vegetable Ingredients
Contains:
No Pollen - No Hive Products - No Animal Products
No Soy Products - No Chemicals.
Formulated to closely emulate the natural diet of honey bees
Available Dry and in Patties

AVAILABLE FROM:
Ellington's Inc. - 1-888-273-2300 Brushy Mountain - 1-800-233-7929
Walter T. Kelley - 1-800-233-2899 ~~1-800-233-2899~~
www.FeedBee.com



Patties available
30 day notice



Beekeeping Supplies
Local Raw Honey & Pollen
Candlemaking Supplies
Mason Bee Supplies, Gifts,
& MORE!

(360) 568-2191

beezneez06@earthlink.net
www.beezneezapiary.com

403A Maple Ave. Snohomish, WA

HONEY • POLLEN • ROYAL JELLY
CANDLE & SOAP SUPPLIES



(916) 451-2337
sacbeek@cwnet.com

2110 X Street
Sacramento CA 95818
Fax (916) 451-7008

Fred & Nancy Stewart
Donna Stewart
Pamela Hill

www.sacramentobeekeeping.com



Reduce Chemical Residues Consider an Environmentally Friendly Alternative

Iotron's High Velocity Electron Beam Radiation (HVER) process provides an effective solution to common hive and pollen microorganism problems. Research shows HVER to be effective on comb and pollen by eliminating rAFB, Chalkbrood and other harmful bacterium.



Incorporating Iotron's unique treatment process into your Integrated Pest Management (IPM) program will reduce the need for chemical use allowing for a cleaner and healthier environment for your bees.

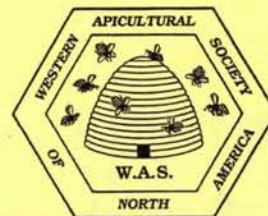


**Give Your Bees a Fresh Start with
IOTRON TECHNOLOGIES**
We're Part of the Solution!



1425 Kebel Way
Port Coquitlam, BC V3C 6L3
Tel: 604 945-8838
Fax: 604 945-8827
e-mail: rkhanen@iotron.com
www.iotron.com

MEMBERSHIP RENEWAL DUES PAYMENT FORM



Name

First

Last

Address

Street

City

Prov/State

Zip Code

Phone

Email

Enclosed is a check in the amount of \$_____ in payment of dues for the year(s) _____

Type of membership _____ New _____ Renewal _____

See page 2 for membership information. Make check payable to Western Apicultural Society and mail to:

Western Apicultural Society

Canada: 334 Walton Place
Saanich BC V9E 2A4

USA: #324 - 1121 Harrison Avenue
Centralia, WA 98531-1852

PLEASE NOTE CHANGE OF THE SOCIETY'S ADDRESS
DON'T FORGET TO SEND CHANGE OF ADDRESS IF YOU MOVE!



MEDIVET PHARMACEUTICALS
Phone 403 - 652 - 4441 • Fax 403 - 652 - 3692
medivet@telusplanet.net
www.medivet.ca

A reliable partner

Beekeepers have had to broaden their management skills even farther with increasing challenges by diseases and pests.

We can help by supplying you with the information you need to make informed decisions about disease prevention and the role of pharmaceuticals in your management practices.

Fumagilin B
now available
in the US
at your favorite
bee supply store.

Bee Livestock - 2009



Honeybee Centre

7480 176 Street, Surrey, B.C. V3S 8E7

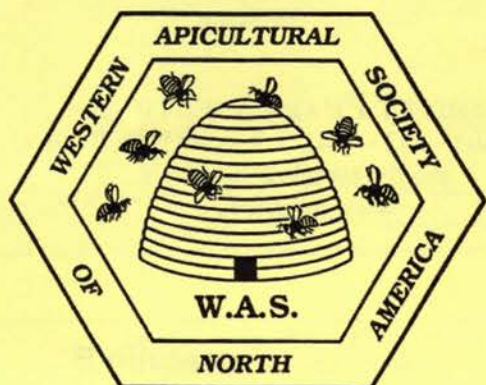
Tel: (604) 575-BEES (2337)

Toll Free: 1-877-975-BEES (2337)

Open EVERY DAY from 9:00 am to 6:00 pm

www.honeybeecentre.com

www.honeybeecenter.com



Return non-deliverable copies to

Western Apicultural Society Journal

PO Box 397

Selah WA 98942-0397