

November 2006
Vol 19 # 4

Hive Rights

www.honeycouncil.ca

Canadian Honey Council





Be ready this spring. Save time, money, hassle and mess.

Call now and order

Ready-Made Pollen Patties

made to *your* specifications

Global is faster, better and cheaper than your other options.

Order one of our standard formulas using yeast, soy, pollen*, BeePro and sugar, or request your own recipe and patty size.

We'll supply all the ingredients, or use supplies you provide.

Bees need both protein and carbohydrate for good build-up and large honey crops.

Feed protein patties in spring to ensure colony health, maximum build-up and maximum production

Global Patties can be delivered in boxes or on pallets

Visit us at www.globalpatties.com

*Pollen in our formula is irradiated by Iotron for prevention of bee disease

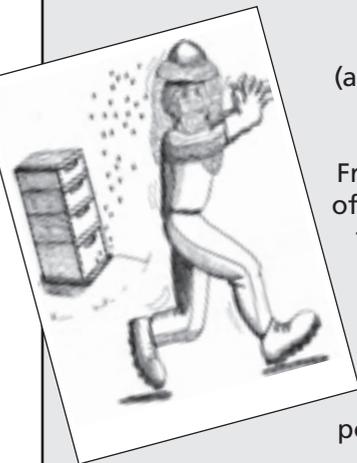
Bad Beekeeping

by Ron Miksha

(a book about really, really, really BAD beekeeping)

From the prairie badlands of southern Saskatchewan to the palmetto swamps of Florida, this is the story of a beekeeper and his family who survived drought, low prices and Canadian politics, to make a million pounds of honey.

Available from Ron Miksha
 \$30 CAN or \$25 US
 email: miksha@shaw.ca
www.badbeekeeping.com



Herb Isaac Sales Ltd.

Box 45, Sinclair, Mb. R0M 2A0
 Ph: 204 662 4401
 Fax: 204 662 4547
www.herbee.com

Honey Bees Equipment

New & Used
 Beekeeping Equipment

Extracting Lines

Some replacement parts
 New Cowen uncapper knives

New Supers, Frames & Foundation

Wax dipped supers available

Ezyloaders & accessories

to save your back, time & money



Membership Application

Name

Company

Address

City

Province Postal Code

Phone

Fax

Email

Visa #

Expiration date

Membership Fees

- | | |
|---|---|
| ▶ HOBBYIST
(1 TO 49 COLONIES)...\$50 | Please make cheque payable to the Canadian Honey Council and mail to:
CANADIAN HONEY COUNCIL
Suite 236, 234-5149
Country Hills Blvd NW
Calgary, AB T3A 5K8
Fax 403-547-4317 |
| ▶ SMALL COMMERCIAL
(50 TO 299)\$100 | |
| ▶ LARGE COMMERCIAL
(300 +).....\$200 | |
| ▶ INDUSTRY\$250 | |

Join the CHC and support beekeeping in Canada

CHC is the national organization of the beekeeping industry. It is the vital link between beekeeper associations, governments and provincial apiculturists. Beekeepers in business can claim CHC membership and travel to the annual meeting as eligible business expenses for tax purposes.

Editor..... Heather Clay
Design and Production Rudy Gelderblom

Hivelights is published quarterly (Feb./May/Aug./Nov.) by the Canadian Honey Council. Hivelights goes free of charge to members of the CHC. Non-member subscriptions are welcomed: \$30/year (U.S.) outside Canada. Deadline for submissions: six weeks prior to publication (i.e. Dec. 15th for Feb. issue). A free sample copy will be sent on request. The opinions expressed in the articles printed in Hivelights are those of the authors, and do not imply the endorsement of the Canadian Honey Council for the promotion of any product, goods or services mentioned in this publication unless specifically stated.

Publication Mail Agreement number

40031644

ISSN 1489-730X

Return undeliverable Canadian addresses to
CANADIAN HONEY COUNCIL
Suite 236, 234 -5149 Country Hills Blvd. NW
Calgary, AB T3A 5K8
chc-ccm@honeycouncil.ca
www.honeycouncil.ca
(403) 208 7141

HiveLights

November 2006 Vol 19 #4

Pierre made his official public debut in Winnipeg. He is seen here at a retail outlet over seeing the branding of honey as 100% Pure Canadian Honey



Table of Contents

- 4** Canadian Honey Council Activities
Heather Clay
- 4** CHC Board of Directors
- 5** 66th CHC and CAPA convention registration form
- 6** Provincial Reports
- 7** Plants for Bees
Douglas Clay
- 13** US Customs calls Canadian Melter Honey Chinese
Heather Clay
- 14** Beekeeping without a Hive
Amanda Van Haga and Stephen F. Pernal
- 15** Karo Rooftop Honey hits the streets
Rudy Gelderblom
- 16** Pierre the bear visits Winnipeg
Ron Rudiak
- 17** CBRF call for proposals
Rob Currie
- 20** Medivet: Keeping bees healthy
ron Miksha
- 25** Classifieds

Illustrations

- | | |
|---------------------------------|-----------------|
| Front cover | Jim Campbell |
| Directors | Billy Burgos |
| Rooftop honey | Rudy Gelderblom |
| Beekeeping without a hive | Steve Pernal |
| Pierre visits Winnipeg | Shirley Rudiak |
| Plants for bees..... | Douglas Clay |



A reliable partner

Beekeepers have had to broaden their management skills even further 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.

Suppliers of
Oxytet-25 Soluble
Fumagilin-B
Formic Acid
Bee Repel
Apistan
FoulBrood Mix



66th Canadian Honey Council and British Columbia Honey Producers Association and Canadian Association Of Professional Apiculturists Annual General Meeting And Convention



Research Symposium

- Saskatraz project
- Treatment thresholds for varroa
- AFB research
- Alternative pesticides
- Environmental Sources
for Antibiotic Residues

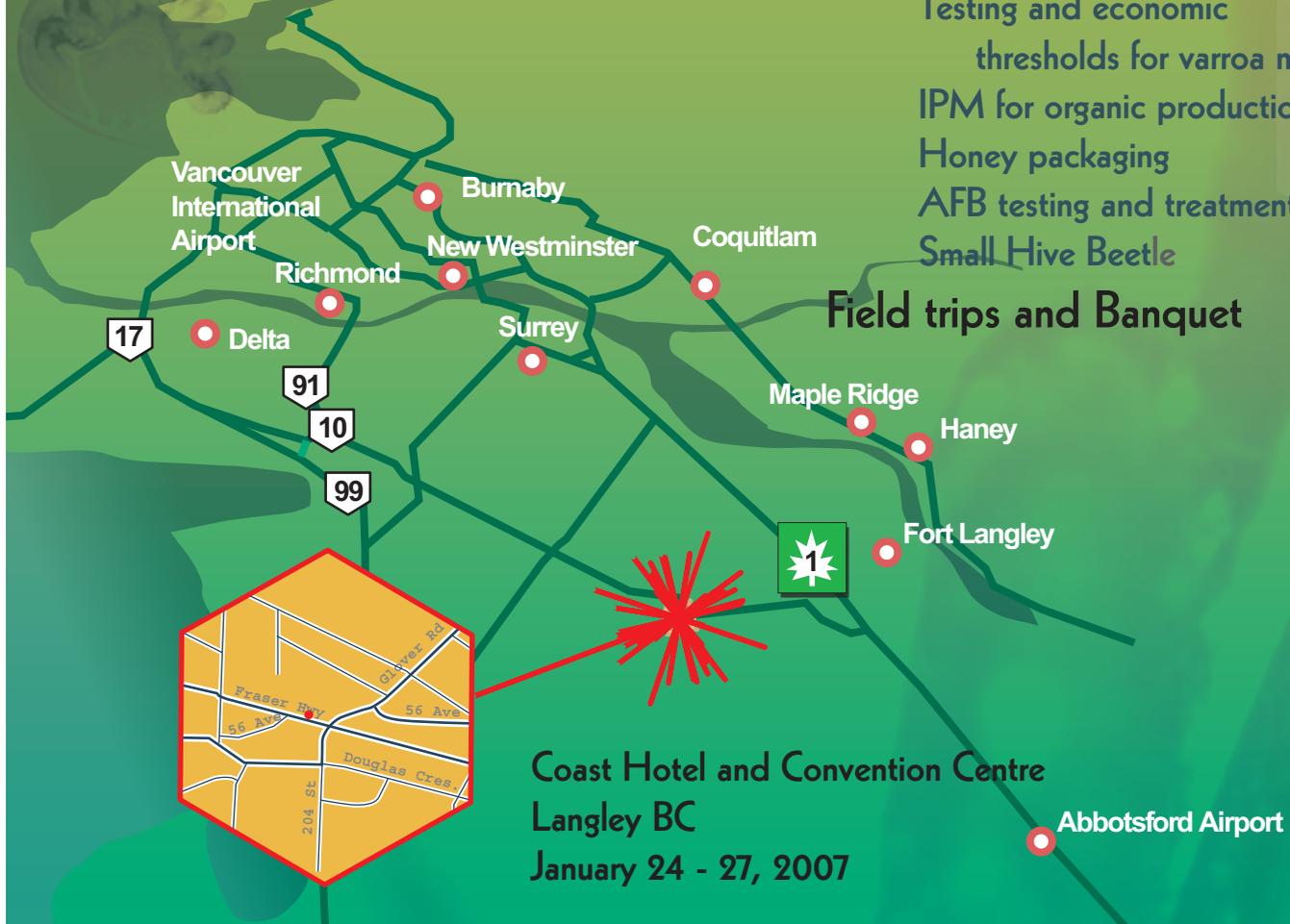
The Business of Honey

- Branding Honey

Work shops

- Formic Acid – Mite Away II treatments
- Oxalic Acid treatment
- Testing and economic
thresholds for varroa mites
- IPM for organic production
- Honey packaging
- AFB testing and treatment
- Small Hive Beetle

Field trips and Banquet



Coast Hotel and Convention Centre
Langley BC
January 24 - 27, 2007

CHC - CCM Delegates 2006 Canadian Honey Council Board of Directors

PRESIDENT Alain Moyen,
Fédération des
Apiculteurs du Québec
Les Joyaux de la ruche s.e.n.c.
15651 Petite Cote des anges
Mirabel QC J7N 2G5
tel : 450-475-1065
fax: 450-475-1066
email moyen@sympatico.ca

VICE PRESIDENT Ed Nowek
British Columbia Honey
Producers Association
5011 Bella Vista Rd
Vernon BC V1H 1A1
ph. 250-542-8088
beeworld@junction.net

EXECUTIVE DIRECTOR
Paul Kittilsen, Maritime
Beekeepers Association
RR 1
Debert NS B0M 1G0
ph. 902-662-4072
pl.kittilsen@ns.sympatico.ca

EXECUTIVE DIRECTOR
Corey Bacon
Saskatchewan Beekeepers
Association
B's Bee Ranch
Box 84
Kinistino SK S0J 1H0
ph. 306-864-3774
beeranch@sasktel.net

NATIONAL COORDINATOR
Heather Clay
Suite 236, 234-5149
Country Hills Blvd NW
Calgary AB T3A 5K8
ph 403-208-7141
fax 403-547-4317
chc-ccm@honeycouncil.ca

DIRECTORS
John Van Alten
Ontario Beekeepers
Association
Dutchmans Gold
Carlisle ON L0R 1H2
tel: 905-689-6371
fax; 905-689-7730
info@dutchmansgold.com

Ron Rudiak, Manitoba
Beekeepers Association
Sunnybrook Bee Farm
Steinbach MB R5G 1N2
ph. 204-326-3763
manbeekr@mts.net

Barrie Termeer,
General Delivery
Rollyview AB T0C 2K0
ph 780-986-3040
fax 780 986-3040
btermeer@telusplanet.net

Ron Greidanus
Alberta Beekeepers Association
PO Box 1581
Stettler AB T0C 2L0
ph 403-742-8723
pattiron@telus.net

NON VOTING MEMBER AT LARGE
Wink Howland, Saskatchewan
Beekeepers Association
Howland's Honey
Box 55 RR #3
Yorkton SK S3N 2X5
ph. 306-783-7046
fax 306-786-6001
whowland@accesscomm.ca\

NON VOTING CAPA DELEGATE
Stephen Pernal, AAFC
Research Station, P.O. Box 29,
Beaverlodge AB T0H 0C0
Ph. 780-354-5135
Fax: 780-354-8171
pernals@agr.gc.ca

Canadian Honey Council Activities

Heather Clay, National Coordinator CHC

Thanks to President

Alain Moyen has submitted his resignation as president of the CHC. This has been a difficult year for him trying to juggle his business and assist with CHC activities. There was a lot of pressure on our association to pursue an anti dumping campaign and Alain worked hard to achieve the desired result. As well the CHC has benefited from his energetic ideas and enthusiasm to push ahead on our revitalization project. The directors thank Alain for his contribution to the organization.



Their recommendations will be presented at the annual meeting in Langley BC.

For current information or to post your

questions or comments visit the ACAAF project on the CHC website www.honeycouncil.ca.

ACAAF Project

The contract agreement between CHC and Agriculture Agri-Food Canada has been signed and the CHC is now ready to begin the Advancing Canadian Agriculture Agri-Food (ACAAF) project. The first step was to form a steering committee. This committee will oversee the project begin the process to revitalize and restructure the CHC.

There are four committees and the chair of each working committee forms the steering committee. The chair of each committee is

1. **Ron Greidanus, AB**
Future role & structure of CHC

2. **Paul Kittilsen, NS**
Membership & participation

3. **Corey Bacon, SK**
Budgets & funding sources

4. **John Van Alten, ON**
New format national & int'l conference

Fair Labelling Practices

A conference call was held 12 September between Canadian Food Inspection Agency representatives of the fair labelling practices group and CHC representatives Heather Clay, John van Alten, Corey Bacon with Gordon Marks representing BeeMaid. The discussion document that was circulated by CFIA the day prior to the meet d submission of misleading honey labels, the CFIA has decided not to make any changes to the Fair Labelling regulations. Under the current regulation, the word "flavoured" can be used without any of the product described being present e.g. there is no honey in honey

66th Canadian Honey Council and Canadian Association of Professional Apiculturists Convention

Coast Hotel and Convention Centre, Langley BC
January 24 - 27, 2007

REGISTRATION FORM

Registration Fees: Advance Registration deadline is December 15, 2006.

Registration Forms post-marked later than December 15th will be charged the Full Registration rate. Send registration form and payment to:

South Fraser Division B.C. Honey Producers Association
C/O Gail Leighton, 3806 254 Street Aldergrove, BC V4W 2R3
E-Mail langleybee@yahoo.ca

Name of Registrant: _____
Accompanying Spouse: _____
Mailing Address: _____
Telephone () _____
E-mail: _____

Advance Registration* :\$185 _____
Full Registration* :\$225 _____
Saturday only Registration (includes lunch):\$80 _____
Banquet (Friday, January 26, 2007)\$45 _____
Tour Friday including lunch\$35 _____

Promotion of 100% Canadian Honey Project

Canadian Honey Council Membership

\$50 (1-49 colonies); \$100 (50-299 colonies);

\$200 (300+ colonies) \$250 (Industry) _____

Canadian Bee Research Fund Donation (optional)

(charitable donation tax receipt will be mailed separately)

TOTAL _____

VISA Number _____

Expiry date _____

Name of Cardholder _____

Signature _____

Wednesday January 24 th

Registration and Trade show 2 - 5 pm
CHC Directors' Business Mtg 9 - 5 pm
CAPA Business Mtg 9 - 5 pm
BCHPA AGM 9:30 - 5 pm
Open Joint Mtg CAPA/CHC/BCHPA 7:30 pm - 10 pm

Government Reports

Thursday January 25th

Provincial Presidents Mtg 7 - 9 am
CAPA Breakfast Mtg 7 - 9 am
Registration 8:30 - 5 pm
Trade show 9 - 5 pm
CHC AGM 9:30 - 5 pm
industry reports
AAFC Canadian Honey Statistics
Global honey situation
Resolutions and elections
Meet & Greet 7:30 pm - 10 pm
Apimondia 2007 Presentation

Friday January 26th

CBRF committee b'kfst meeting 7 - 9 am
Registration 8:30 - noon
Trade Show all day
Research Symposium 8:30 - noon
Oxalic acidPierre Giovenazzo
Saskatraz project.....Albert Robertson
Treatment thresholds for varroa....Rob Currie
AFB research.....Steve Pernal
Alternative pesticides..... Ernesto Guzman
Environmental Sources for
Antibiotic Residues.....Medhat Nasr
The Business of honey 11 am
Branding HoneyBob Bailly, Karo Design
Field trip to Fort Langley noon - 5 pm
Banquet and awards ceremony 6:30 - 10:00 pm

Saturday January 27th

Speakers TBA 9:00 - noon
Concurrent Workshops 1:30 - 4 pm
Formic Acid / Mite Away II treatment
David VanderDussen
Oxalic Acid treatment Medhat Nasr
Testing and economic thresholds for
Varroa mites Rob Currie
IPM for organic production Alison Skinner
Honey packaging Paul VanWestendorp
AFB testing and treatment
Adony Melathopoulos
Small Hive Beetle Rhéal Lafrenière

ACCOMMODATION INFORMATION

Coast Hotel & Convention Centre
Langley City
20393 Fraser Highway

Langley, BC, V3A 7N2
Ph. (604) 530-1500
Res 1-800-716-6199
Room Rate- \$99.00 + tax
<http://www.coasthotels.com/home/sites/langley/>

Alternate Hotel:

Best Western Hotel
5978 Glover Road, Langley B.C. V3A-4H9
Corner of No10 Hwy and Glover Rd.
Phone 1-888-530-9311 or 604-530-9311
Refer to BCHPA Room Rate of \$ 89.00

* Includes: W/Th/Sat lunch +meet & greet



Provincial Reports

Maritimes

In Nova Scotia the wet weather of pollination season continued throughout the honey flow season. Many beekeepers are reporting very poor honey crops and are hoping for a strong fall flow to increase their yield. Not only did the wet weather of pollination season have a negative affect on the honey crop it also reduced the blueberry yield due to poor pollination.

Bear damage seemed to be lower this year. More than ever blueberry growers are fencing the bees during pollination to avoid the high cost of hive replacement from bear damage.

There is a notable increase in the level of mite resistance to Apistan in Nova Scotia and most beekeepers are using Check-mite this fall.

Till next time.

Ontario

What happened to summer? It seems like just the other day we were preparing the bees for spring pollination

and suddenly we are arranging for winter feed, making Varroa treatment decisions, and thinking about what we will be doing during the long winter ahead. I am looking forward to the annual AGM in British Columbia, in January. Before that the OBA is holding its



Paul Kittilsen

annual meeting in Windsor on Nov. 17 and 18. You are all invited. We usually have a great line up of speakers and topics and this year is no exception. Check the OBA website for further details.

These meetings are a great opportunity to catch up on the latest developments in beekeeping and socialize with fellow beekeepers and their families. I look forward to seeing a lot of you there.

Ontario has seen a mixed bag this past season. In talking to beekeepers around the province, most are predicting a slightly below average crop for this season, with a few areas reporting bumper crops. My sense is that overall the provincial average will fall in the 90-100 lb range.

Varroa mite levels seem to be slightly higher than

last year, going into the fall. Our tech transfer team is offering mite scouting services, on a fee for service basis. It is a lot more efficient to make your mite treatment decisions when you know what your actual mite levels are.

We have had some reports again this year of pesticide damage to apiaries. This is a perennial problem that seems not to want to go away. Even though we have set up protocols for beekeepers and commercial spray applicators to co-exist, we are still experiencing intermittent spray damage.

OMAFRA is once again selecting Ontario honey for testing and label compliance. So far we haven't heard of any serious offences. As CFIA is bringing about labelling changes, our provincial regulators are looking



John van Alten

to change our regulations too. Wouldn't it be nice if we could see these changes finalized in time to allow us to comply with the new nutritional requirements as well.

I was reading a survey a couple of weeks ago that put Canadian farmers in the top 5 occupations that the public trust. We are right up there with firemen, and doctors. (Incidentally only 15% of respondents trusted

politicians). However, even though the public supports Canadian farmers, this support was described as 'a mile wide and an inch deep'. In other words Canadians will support us as long as it doesn't cost them more. I think we have our work cut out for us as we try to educate Canadian consumers that our product is the best available, and well worth the extra expense. Without promotion the consumer will base their purchasing decision primarily on price. Let's get the word out.

Manitoba

A mild winter gave most Manitoba honey producers a head start this year. For those few who did experience higher than normal wintering losses, remaining colonies built up quickly on dandelion and other spring blossoms and plants allowing beekeepers to split their colonies into two or more productive units. Early seeding and warm weather throughout most parts of the province produced a good canola nectar flow during July and into early August. Much of the province had very little rain this summer and would have profited from more soil moisture. In these areas, much of the available moisture from last years heavy rainfall has been used up and will need to be replenished during the fall and winter season. Honey

Plants for Bees – The Aster

Douglas Clay, Research Scientist, Calgary, AB



Common Name: Aster

Related groups:

sunflower (*Helianthus spp.* L),
dandelion (*Taraxacum spp.* L),
knapweed (*Centaurea spp.* L),
thistle (*Cirsium spp.*),
goldenrod (*Solidago spp.* L)

Scientific Name: *Aster spp.* L – The word aster comes from the Greek meaning star. In North America, the wildflower aster is often referred to as daisy (or day’s eye in old English referring to the sun) or fleabane.

Native Range: Asters belong to the family Asteraceae or Compositae and are often referred to as asters or sunflowers. There are over 475 genus in North America, and 20,000

species worldwide. We will look specifically at the genus *Aster spp.* of this family, a worldwide group of 600 species. In Europe the aster are generally cultivated as garden flowers. As an attractive and popular flower, the genus has been moved around the world through gardeners’ desire for something different or a memory from their homeland. About 10% of North American asters are considered naturalized, generally from Europe.

In taxonomic terms, the genus Aster is now generally restricted to the Old World species, the New World species have been reclassified into the genera *Almutaster*, *Canadanthus*, *Doellingeria*, *Eucephalus*, *Eurybia*, *Ionactis*, *Oligoneuron*, *Oreostemma*, *Sericocarpus* and *Symphytotrichum*,

but are still widely referred to as “Asters”. I will use the term aster to refer to this group in particular.

Canadian Distribution: The aster group forms a large genus, of which, in North America, there are over 200 species. The asters are usually found in dense aggregations and are one of the latest blooming wild flowers – important for the fall honey crop in eastern Canada. In the Maritimes they appear along with goldenrod (*Solidago spp.*) in September, flowering profusely in white and some shades of pink and blue. They can often survive several frosts until they disappear in November. In the prairies they have generally gone to seed by late August to mid September. While the aster is a readily identifiable group, it is one that presents a considerable challenge if one is sorting out the many similar genus such as the fleabane (*Erigeron spp.*).

The New England aster (*A. novae-angliae*), a native, is found throughout much of North America except the southern USA. In Canada the distribution is from Quebec to Alberta.

The white aster (*A. umbellatus*) is a spectacular Maritime plant; it is white, tall (up to 2 m) and common. It likes wet ground and bears its flowers in flat-topped clusters up to 30 cm across. The plant can grow from 0.3 to 2m in height.

▶ pg 12

Use round comb section equipment by Ross Rounds, Inc. and see how this low cost investment can increase your profits.

8 oz. sells for same as 12 oz.
Minimal Labor • Bees Fill Completely
No Breakage • No Propolis
Attractive Durable Package

Comb Honey Has Come Full Circle

Contact your dealer for supplies.

ROSS ROUNDS™

Ross Rounds, Inc.
PO Box 582 Guilderland, NY 12084
V 518•370•4989 F 518•381•6370 www.rossrounds.com

production fared a little better in the Interlake and western half of Manitoba which received more moisture. Honey production is expected to be somewhat higher than normal this year. Overall production is expected to be about 10 to 20 pounds above the long term average of 165 pounds. The recent rising prices for bulk honey is encouraging to producers.

In many areas, alfalfa was available to the bees and with continuing warm temperatures a minor nectar flow continued into the first two weeks of September. In many other areas where canola fields finished blooming early beekeepers were able to start feeding at the beginning of September. Few producers this fall are able to use Fluvalinate because of mite resistance and others have switched to Coumaphos or organic acid applications to control varroa. Occasionally nosema has also been a problem for some operations.

The upcoming CHC Honey Test Market and Promotion throughout the Winnipeg area will be featured as part of the annual Manitoba Beekeepers' Honey show at the St. Vital Shopping Centre during October. This attractive and informative promotion, staffed by members of the Red River Apiarists' Association and MBA, draws thousands

of shoppers to look at the displays, ask questions and buy or sample the many outstanding varieties of Manitoba honey.

Saskatchewan

Saskatchewan Beekeepers enjoyed a relatively good spring and early summer flow following an excellent winter for most Saskatchewan bees. Moisture levels were excellent for spring seeding aided by large rains in May and June leading into the



Ron Rudiak

honey production season. Unfortunately, some areas received excessive rain and seeding was delayed or unable to be completed. Many beekeepers reported hive strengths above average as the honey flow began. While rainfall during July was almost non-existent in much of the honey producing areas, the spring moisture was enough to hold the canola, clover and alfalfa blooms. Good weather conditions allowed for a reported above average first honey pull, leading to expectations for a bumper crop. These prime conditions continued with a heavy flow throughout August and into early September for most areas. For many beekeepers expectations of a bumper crop were not dampened by rain, drought or frost as in previous years. There are

many reports of honey crops averaging around 300 lbs per colony and above. For those beekeepers in some of the lighter soil zones, bumper crop expectations were not quite realized, though average crops in the 200 lb per colony range were still prevalent. With a good honey crop and all indications of an upswing in the honey price, optimism abounds in most Saskatchewan beekeeping operations.

This was Saskatchewan's first official year of the Saskatchewan Beekeepers Development Commission (initiated by, but separate from the SBA). A mandatory check-off (refundable if requested) is levied against all Saskatchewan beekeepers operating 100 colonies and above at a current rate of \$0.50/colony. Beekeepers operating under 100 colonies can voluntarily participate. It was a huge success!!! Of the eligible and voluntary beekeepers, 97.5%



Corey Bacon

forwarded their check-off fees with only 3% requesting a refund. The other 2.5% of the eligible beekeepers were delinquent and will be dealt with according to Commission guidelines and provincial laws. We hope the incredible success of our Commission can be an example to be followed by other CHC member provinces.

Alberta

September and March are the two most difficult months in a beekeeper's calendar. In March after a long cold winter, a beekeeper is eager to get out to the bees – do the hives have enough feed, how many died, are the bees healthy. In March a beekeeper is often struggling to get out to the bees because of weather - too much snow, too cold, too wet.

September has the same struggles only in reverse. After a long hot sticky summer the beekeeper is looking forward to a long winter of R&R. The problem is deciding whether September is the time to cut hives down and prepare them for winter or is September a production month. Most Alberta beekeepers this fall were plagued with the problem "Do I put another box back or leave the hives two high and start the fall medications?"

The total production for large parts of Alberta has been nothing less than phenomenal. The season had a slow start and the heat at the beginning of July held back a number of key crops. After a few key thunderstorms rolled through the province the nectar production boomed and honey poured into the supers. Additional rains at the beginning of August guaranteed an excellent regrowth of Alfalfa. This second cut started an end of season honey flow that pleasantly

surprised virtually all beekeepers in the province.

Unfortunately, not all beekeepers experienced the same high yield. Production varied throughout the province. The central and southern region beekeepers have reported yields that are of legendary proportions – 210 to 300+ lbs/ hive. The peace country seems a little more variable. Some beekeepers are confessing to yields in the bumper crop range, while others are indicating an average crop.

Very few beekeepers have sold any honey at all. The rumored barrel price is in the \$1.00/lb range. Some buyers are reported to have bought honey for \$1.10 per pound. I haven't talked to anyone that has sold at that price. The US has been very slow to import honey, German packers are indicating that they currently have adequate supplies. US packers are indicating that they have approximately 6 weeks of supply on hand. Even Canadian packers are taking a sideways step out of the market. It would appear that many honey buyers "saw" the bottom of the honey market and took the opportunity to buy forward. It seems we are in a wait and see situation – who is going to blink first? Will there be a bidding war? Is there a global honey shortage? Did the Dakotas really have "No Honey". What was the actual production of honey



Ron Greidanus

in the US? At this time in the year – September, the numbers are still coming in and no one is in a hurry to jump into the arena.

The small hive beetle has been making the news here in Alberta. After the initial find in Beaverlodge, our provincial apiarist, Medhat Nasr has been busy chasing this silly little bug all over the province. And, as expected, several additional finds have been made in the province. Each find has been isolated and limited to one or two beetles probably related to packages imported from Australia in either 2006 or 2005 (no one has been able to determine which year). DNA examination has been able to determine that none of the tested specimens originated in the US. Efforts are currently underway to determine if the specimens did in fact originate in Australia. Additional finds of SHB are expected throughout the prairie provinces (AB, SK and MB) as well as possibly in BC and Quebec. So far no evidence has been found to indicate that there is an infestation or an established population of SHB.

This brings me back to September. After agonizing for two long weeks about whether or not I should put a box back or bring all the supers home, I saw rain five days away – the year

was over. My employees and I let out a huge sigh of relief. Throwing all those heavy supers on the back of the truck wears a guy out. Now along with most other beekeepers I am looking forward to a winter slowdown to rest up, satisfied that despite everything else, the last box came off plugged out.

British Columbia

At the time of this writing our honey flow is completely finished and the winter preparations are in full swing. Initial crop estimates indicate an average crop for the interior areas of the province, some slightly higher yields in the Fraser Valley and above average in other pockets of the province. Fireweed from the coastal mountains produced a honey of very high viscosity and quality. Mite levels are reported very high again in certain areas but the fall weather has been cooperative

for treating and feeding. I personally had very good results with the oxalic vaporizer in November last fall.



Ed Nowek

The BCHPA honey and beekeeping displays at the Pacific National Exhibition this year were an astounding success being viewed by tens of thousands of people. The weather was fantastic throughout

the 16 days of the exhibition and over 2000 jars of honey were sold out in the first 6 days. The \$10,000 worth of honey was donated by four commercial beekeeping members of the BCHPA.. Well over 1 million people passed through the turnstiles at the PNE this year breaking all previous records.

On behalf of the BCHPA and the host Langley beekeeping club, we would like to invite everyone out for their AGM and Convention being held in conjunction with the CHC and CAPA annual meeting and symposium on January 24 – 27 at the Coast Hotel, Casino and Convention Centre in Langley B.C. The weather should be quite exceptional compared to the rest of the country for late January. Tours are planned along with other spousal activities during the week and the area ski mountains and recreation facilities will be beckoning the entire family and for hockey fans, the Vancouver Canucks are hosting the Los Angeles Kings on January 26th.

BeeMaid

Bee Maid's "Eat Right, Take Flight" promotion campaign is in full swing and is creating excitement in the honey section of the grocery store. As you can see from the following press release, Bee Maid honey consumers are entering our contest via our website and winning great "healthy lifestyle" prizes. We plan to continue to focus on

► pg 21

BeeMaid Honey Ltd.



Alberta Honey Producers

70 Alberta Avenue, Box 3909,
Spruce Grove, Alberta T7X 3B1
Phone: (780) 962-5573
Fax: (780) 962-1653

Manitoba Co-operative Honey Producers

625 Roseberry Street,
Winnipeg, Manitoba R3H 0T4
Phone: (204) 783-2240
Fax: (204) 783-8468

BeeMaid Honey Ltd.

1210 - 100 Street,
Tisdale, Saskatchewan S0E 1T0
Phone: (306) 873-2521
Fax: (306) 873-3455

Carrying a full line of beekeeping equipment from several manufacturers:

- **Dadant & Sons Ltd.** • **Mann Lake Supplies**
- **Maxant** • **Dakota Gunness** • **Walter T. Kelly**
- **Medivet** • **Perma-Dent Foundation**
- **Pierco Canada** • **Cook & Beals** • **Plus Many More.**

Whatever your requirements we would be glad to help. Quality products for the beekeeping industry, including:

- **Woodenware** • **Queen Rearing Supplies**
- **Package Bees & Queens** • **Bee Apparel**
- **Honey Containers** • **Extracting Equipment**
- **Beekeeper Tools** • **Novelties** • **Foundation**
- **Medication & Chemicals.**

Buyers of Light & Dark Beeswax at Competitive Prices. We can arrange your sugar requirements - dry or liquid sugar in small lots or trailer load lots delivered.



Eliminate AFB and Chalkbrood



Iotron's treatment program offers beekeepers a cost effective, environmentally friendly solution for managing bacterial and fungal disease.

Iotron's proven technology has been recognized as a useful defense against antibiotic-resistant strains of AFB.

Iotron has successfully treated more than 50,000 supers and thousands of kilograms of pollen.

For more information please contact:

Robert Krag-Hansen

Iotron Technologies Corp.

1425 Kebet Way

Port Coquitlam, BC V3C 6L3

Tel: 604 945-8838 Fax: 604 945-8827

e-mail: rkhanen@iotron.com

www.iotron.com





T L S **Tony Lalonde Sales Prt.**

Buy

Honey
Wax
Propolis

Bentley extractors
Cowan extractors
Swinger Forklift
High Fructose Corn Syrup
Sucrose Syrup
Inland Plastic Winter Wraps
TLS Bee Apparel
Mahurangi Hiveware
Bee Pro Pollen Supplement
Mountain Bee Products - bee suits, veils
Oxytet
Permadent
Frames
Supers painted and unpainted

Sell

Beekeeping Supplies
Extracting Equipment
Used Equipment

Supers assembled and unassembled
Lumber for supers
Helmets
Hive tools
Hive lifters
Smokers
Honey containers
Feeder pails
Barrels
Liners
Barrel Grabber
Barrel Carts
Pallet puller

Distributors for some or all of the supplies

Alberta
Alberta Honey Producers Coop.....780-960-8010

Manitoba
Manitoba Honey Coop204-783-2240

Maritimes
Claude Hachey.....506-546-6687

Ontario
Munro Honey 519-847-5333

Quebec
Réjean Lambert819-828-2549

Saskatchewan
Tony Lalonde Sales..... 306-931-0155
tonylalondesales@sasktel.net



Tony Lalonde Sales Prt.
Box 42, Clavet Sk,
Canada S0K 0Y0
Ph: 306-931-0155
fax: 931-1646

More species of aster are found in western Canada than in the east, however they are not as significant for the fall honey flow. Asters are a key component of both the tall-grass and mixed-grass prairie ecosystems.

Description: The 'flower' is actually a 'flowering head' made up of a cluster of many small flowers – generally < 50. There are two types, the showy ray flowers (2 to 5 cm), and the disc flowers with inconspicuous petals. Most species have from 10 to 30 flower heads. The ray flowers are what most people think of as asters or daisies. Some of the disc flowers are referred to as everlasting flowers. Each of the small "component flowers" results in a seed. The species with more and smaller flowers generally bloom in fall.

The aster has flowering stems generally erect, unbranched, 0.20 to 1 m high. These stems have many branches with flowers clustered at the ends. The stems are sparingly leafy, with a short woody base. Leaves are alternate, 2 to 15 cm long, broad linear or lanceolate. Some species, eg ciliolate aster (*A. ciliolatus*) and large-leaved aster (*A. macrophyllus*), have creeping rhizomes. The fruit or seeds are small, linear with bristly hairs; forming a small dandelion-like ball; appearing in late summer to early fall.

The New England aster has the upper part much branched and hairy with many of the hairs of the flower stalks and involucre (a series of bracts or small leaves beneath the flower) bearing small glands. The flower heads are arranged in rounded clusters on ends of the main stems. Individual flower heads are up to 5 cm across. The flowers are faintly fragrant.

Asters, especially white prairie aster (*A. falcatus*), can become a competitive problem in turf areas where soil conditions are moist, especially in heavy clay soils.

Ecology: The preferred soil type is well drained, often along roadsides, in

old fields and clearings. Some species such as the ciliolate aster can be found in fresh to wet forest habitats on both mineral and organic soils. The large-leaved aster is found mainly in moist locations (especially calcareous soils) along upland streams and prairie soils and peaty partly drained marshes.

Although some asters are found in the boreal forest of Canada they generally prefer the direct sun of open grasslands. As most species of aster are late season they are often used in gardens for attracting fall butterflies and insects. The flowers generally appear from July through October with many species blooming from August to the first severe frost or an extended drought period.

Methods of Reproduction and

Spread: Asters reproduce by airborne 'parachute' type seeds (about 600 seeds per g) but some such as the white prairie aster also spread by underground roots or rhizomes. Propagation for culture can include seed, plant division, root or stem cuttings.

Honey/Pollen Potential: The New England aster is very attractive to bees. In late autumn it provides a source of nectar and pollen and bees can be seen working the flowers when the temperature is cool and the days are short. Poor climatic conditions do not seem to hinder the bees visiting the flowers. Observers have noted that only about a quarter of the bees observed working New England aster were collecting pollen. This, plus the fact that the yellow pollen pellets were small, suggests the asters may not be important for pollen. Some authors identify aster as high for attractiveness to bees but only low for nectar secretion because it does not produce a surplus.

Although it is unlikely aster honey is ever produced in surplus in such quantities to produce a unifloral honey, the mixture of aster and goldenrod produces a light golden honey with a tendency to crystallize

quickly. Where common, the species is important in fall honey production.

Reference:

- Larsson, H. C. and R. Shuel. 1990. *Nectar Trees, Shrubs and Herbs of Ontario*. (C. D. Scott-Dupree, Ed.). Ontario Minister of Agriculture and Food. Publication 82. Toronto, Canada. 15 pp.
- Lovell, H.B. 1977. *Honey plants*. Gleanings in Bee Culture. Medina, USA. 96pp.
- Ramsay, J. 1987. *Plants for Beekeeping in Canada and the northern USA*. IBRA, Cardiff, UK. 198pp.
- Whitson, T.D., L.C. Burrill, S.A. Dewey, D.W. Cudney, B.E. Nelson, R.D. Lee, and R. Parker. 1997. *Weeds of the West*. University of Wyoming. Jackson, USA. 630pp.

2007 BEE MASTERS SHORT COURSE

The 2007 Bee Masters Course will be offered February 26 - March 2, 2007 at Simon Fraser University, Burnaby, British Columbia, Canada, just outside the scenic city of Vancouver.

Bee Masters is a week-long, intensive course in advanced beekeeping that has been held every second year for 55 years. The course is offered jointly by the BC Ministry of Agriculture, Food and Fisheries and Simon Fraser University, and includes topics such as spring, summer and fall management, overwintering, queen rearing, swarming, bee behaviour, hive products, adult bee diseases, exotic mites, nucleus production, bee brood diseases, pollination, and much more. The course combines illustrated lectures, laboratory periods, social events, lots of discussion, and an optional final examination. Participants are expected to have previously kept bees and to have some knowledge about bees and beekeeping; hobbyists, sideliners, and commercial beekeepers are welcome, and all will benefit from and enjoy this course.

For further program and registration information contact:

Conference Services,
The Halpern Centre
Simon Fraser University,
8888 University Drive,
Burnaby, B.C. CANADA V5A
1S6
t: (604) 291.3012 or (604)
291.4910
f: (604) 291-3420
E-mail: Conference_Services@sfu.
ca

US Customs calls Canadian Melter Honey Chinese.

Heather Clay, National Coordinator, CHC

In a bizarre series of events US Customs and Border Protection (CBP) agents recently sampled two loads of Canadian melter honey that were in transit from Manitoba to the USA. The samples were sent to a laboratory in Savannah to determine the country of origin of the honey. On the basis of their tests they declared it was of Chinese origin. The USA has anti dumping measures in place for Chinese honey and this triggered a duty rate of 183.8% on the Canadian honey instead of being duty free. The exporter was charged an extra \$89,721 on the two loads of honey.

To add insult to injury a further six truckloads of Ontario honey from the same exporter, were not sampled but were still charged at the 183.8% tax rate. The extra taxes amounted to over \$800,000 with payment due immediately. Elise Gagnon, President of Odem International Inc., the exporting company, says, "I was so insulted! Odem has been shipping honey to the US for 20 years and never had a problem. I do not buy Chinese honey and my suppliers have good traceability programs. The shipments were loaded and sealed by registered Canadian producers. We

have a good reputation and now CBP speaks to us like we are criminals."

The laboratory uses sophisticated ICP-MS equipment that compares honey of different origins by a profile of the background metals present. Samples of Canadian honey in their database would not match Chinese honey when comparing their metal profile. However the laboratory did not have any samples of melter honey for comparison. Melter honey is very dark as a result of heating during handling and not typical of Canadian honey. They have agreed to expand their database to include melter honey in the future. There is no indication that CBP agrees that the method is not validated for melter honey and no assurance that the unfairly applied duties will be reimbursed.

Honey exporters are powerless to appeal the CBP decision. The only option is through the US court system, which is incredibly expensive and time consuming. Elise is hoping to resolve this problem through a more co-operative approach, negotiating for a valid testing program and for a short time, having every load sampled. She hopes that the issue will be settled soon but practical enough to know that CBP has a great deal of power regarding future inspections and protection of trade. It is not just the process that bothers Elise but the attitude of CBP. She resents that they assume guilt based on invalid analytical techniques. Elise laughingly says, "I will not be satisfied until I get an apology from George Bush". Some people think that she may be waiting a while for word from the top.



**Fraser
Auction
Service Ltd.**
Brandon, Manitoba

**SERVING BEEKEEPERS
IN ALBERTA, SASKATCHEWAN,
AND MANITOBA
FOR OVER 20 YEARS**

If you are thinking
of buying or selling,
please call
1-800-483-5856 or 204-727-2001
Fax: 204-729-9912

or check our website:
www.fraserauction.com

July 26, 2006

Dear Sir:

Enclosed is a cheque for \$1,000.00 from the Kamloops Division of the B.C. Honey Producer's Association to assist in your efforts to make changes to the labeling regulations for Canadian Honey and the issue of dumping of foreign honey into the Canadian market.

The Kamloops Division currently has 13 active members and fully supports the efforts of the CHC. We recognize that legislative changes and lobbying for changes is very time consuming and expensive.

We are hoping that other clubs will also take up this cause and donate what they can to assist your organization in resolving these important issues to benefit both commercial and hobby bee keepers.

Yours truly,

Joan Uhrig
President, Kamloops Division
BCHPA

Beekeeping Without a Hive

Amanda Van Haga and
Stephen F. Pernal,
AAFC Beaverlodge

For the past two summers at the Agriculture & Agri-Food Canada Research Farm in Beaverlodge, Alberta, we have

been rearing worker honey bees in the laboratory. An incubator has become the new home away from hive for thousands of newly-hatched larvae as we study the effects of antibiotics and alternative treatments for American foulbrood and chalkbrood disease.

The first detailed study on the diet and development of larval honey bees outside the hive was published in 1933 by a German scientist, Werner von Rhein, in a series of feeding experiments designed to identify mechanisms underlying queen-worker differentiation. In the early 1940's von Rhein's techniques were adapted by P.S. Milne, a researcher at Rothamsted Experimental Station in England, where they were used to study brood diseases.

S. Cameron Jay, from the University of Manitoba, compiled a comprehensive review of brood rearing outside of the hive in 1964 and also published meticulous observational studies of honey bee larval development using laboratory rearing techniques. In the 1980s formulations of a basic larval diet that increased survival of larvae to adulthood were refined by Heinz Rembold and Bernd Lackner in Germany and also at the USDA by John D. Vandenberg and Hachiro Shimanuki. More recently, the laboratories of

Christine Peng at UC Davis and the Danish scientist Camilla Brødsgaard have both used artificial rearing techniques to study American foulbrood.

The Larval Diet

Honey bee larvae live the life of luxury - after all, during the first week of their life larvae simply lie around their cell and eat. Nurse bees will inspect each larva an average of 1926 times and will supply food rich in carbohydrates and proteins during 143 of these visits. A single worker bee will consume almost 2 mg of food during its larval life. Nurse bees produce brood food, which is comprised two substances: a clear component made up of secretions from the hypopharyngeal glands and honey, and a milky white component secreted from the mandibular glands. For the first two days after hatching larvae will consume the clear and milky-white components in a 3:1 proportion; as the larvae age the amount of the milky-white component provided in the brood food will decrease. Older larvae will be fed small amounts of pollen and honey directly.

In the laboratory, larvae are fed an artificial diet mixture rich in royal jelly, often purchased from a commercial supplier, supplemented with simple sugars and yeast (Fig. 1). The artificial diet has a viscous consistency and the larvae will float upon it without drowning.

Artificial or "In Vitro" Rearing

The process of rearing larvae begins with newly-hatched larvae (less than 24 hours old). Larvae are grafted into rearing trays derived from 24-well tissue culture plates, made of polystyrene (Fig. 2); these also function as the pupation trays. A

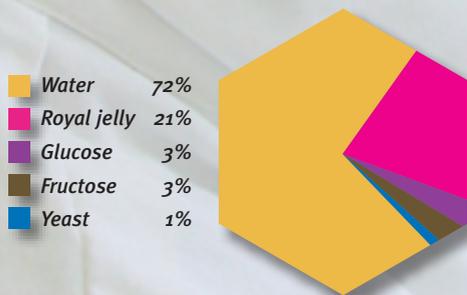


Figure 1. Composition of artificial larval diet.

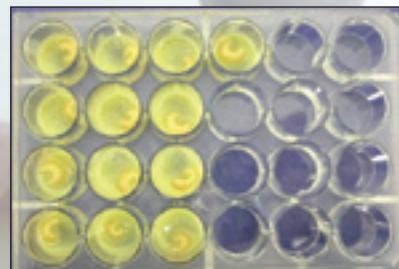


Figure 2. Honey bee larvae in a 24-well tissue culture plate.



Figure 3. Stages in the development of worker bees reared in the laboratory. 1st/2nd instar in floating larval diet, 3rd instar larva, 4th instar larva, various stages of defecation to transfer to pupation trays lined with tissue, (D) pupation, (E) pupa emerge.

e Danish
oth
study

single well is 16 mm in diameter, much larger than brood comb cells at 5.2 mm.

The rearing trays are kept in a humid incubator at 35° C. Larvae are inspected and transferred daily onto fresh food until defecation occurs, 5 to 7 days after the initial transfer. The larval stage consists of 5 moults with the first four occurring approximately 24 hours apart. Upon each successive moult, in which the outer exoskeleton is shed, larvae consume larger amounts of food and continue to increase in size. Initially larvae are grafted into a single well in groups of 10, but as the larvae grow the number per well is decreased, via transferring, until only a single larva occupies its own well (Fig. 3).

Defecation signals the end of the larval stage and the start of pupation. It is marked by the appearance of clear crystals (uric acid) and a yellow excretion surrounding the larva. The larvae are removed from their feeding wells and cleaned by rolling each across soft tissue to wipe away excess food and excretions. They are then placed into a tissue-lined well so that during the pupal stage they do not stick to the sides of the tray and sustain injury. In a colony setting, larvae are capped within their cells prior to defecation and will spin a cocoon. No cocoons are spun in the laboratory because the large-diameter wells used for rearing prevent larvae from attaching silk to the walls.

The prepupae are extremely sensitive to vibration and as a consequence the prepupae are inspected but not handled in the pupation trays. The final larval moult will take place 3-5 days after transfer and metamorphosis from larva to pupa occurs. The pupa begins to resemble an adult bee in form following metamorphosis as the external and internal adult structures gradually take form. Eight to nine days after transfer to pupation trays adult worker bees will “emerge”. Because there is no cell cap to chew through, emergence is marked by the movement of the adult bee in its well. As in nature, development from egg to adult requires 21-24 days.

► pg 18

Karo Rooftop Honey Hits the Streets

Rudy Gelderblom, company apiarist

Always willing to try something new Karo Design consented, after some lobbying by its resident beekeeper, to host some bee hives on the roof of its office near downtown Calgary. The two-story building is home to the design firm on the top floor and another company on the ground floor. Access to the roof is through a trap door in the ceiling.

The Karo staff, as well as the company administration, collectively financed the operation. Honey futures were sold to the staff and the money collected covered the cost of two nucs and some equipment. Many of the staff made field trips to



A bemused beekeeper at Scandia Honey helps load the Karo Smart car. It is just big enough to hold 2 nucs side by side behind the seats.



Faye Crooks, one of the investors, inspects a frame of bees. Regular field trips were undertaken by clients, neighbours and HVAC service personnel

the roof to observe the progress of their investment and overall the bees had good entertainment and educational value. Even a few visitors ventured on the roof to check out the bees.

There was some concern that the bees would make a nuisance of themselves in the parking lot which is lined with rose bushes, but the girls were very well

behaved and the company on the ground floor now wants their own colony next year.

The colonies were a little late in starting, they were not installed until the second week in June, which didn't leave the colonies a lot of time to build up numbers before the major flow in July. One colony was particularly slow in building up and rather than have two weak colonies the two were combined with the hope that the combined colony would be able to build sufficient comb and collect enough nectar for a bit of a honey crop.



Jar of Karo Rooftop Honey

The supers were left on as long as possible, but when the weather threatened and it seemed likely the bees themselves would want to take advantage of their summer's work, the supers were pulled off and extracted. The crop was about 75 lbs. Not a big crop, but still large enough to distribute honey to the investors. Karo has designed a label for the jars and is planning to distribute its share of the honey crop to friends of the company.

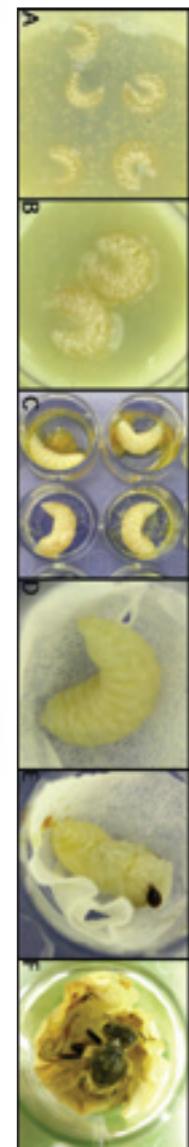


Figure 3. Various stages in the growth and development of worker honey bees reared in the laboratory: (A) 1st/2nd instar larvae floating on basic larval diet, (B) 3rd instar larvae, (C) 4th instar larvae in various stages of defecation and ready to transfer to pupation trays lined with tissue, (D) prepupa, (E) pupa, and (F) emerged adult.

Pierre the Bear Visits Winnipeg

Ron Rudiak, Sunnybrook Bee Farm, Steinbach, MB

Pierre the Bear recently made his appearance

during each of the three days

of the Manitoba Beekeepers' Honey Show. His arrival coincided with the roll out of CHC's promotional campaign in the Winnipeg area and was met with enthusiasm from children of all ages along with their parents. Hugs from children were frequent while many teenagers would walk over to Pierre for high fives. Several women shoppers even felt compelled to hug the adorable Pierre.

Wearing the Pierre outfit, Alex Fernandez from Chile, was able to make the CHC bear appear lifelike and move around with realism.

The Honey Show continues to be a very popular event at the St. Vital Shopping Centre as it has been for many years. This year, besides a variety of beekeeping equipment, there was a display of competition honey in a setting of colourful fall leaves, a "Colours of Manitoba" honey display and a "Read the Label" section where containers of honey from several



packers and producer graders were on display. Many shoppers stopped to look at the various labels and most were confused where the grade labelling didn't match the country of origin on the label. This section also featured a large display emphasizing the new label with the words "Pure Honey - 100% Canadian" and the new CHC maple leaf logo.

Individuals who wanted to learn more about bees and honey production

could visit the live bee display where volunteers from the Red River Apiarists' Association and Manitoba Agriculture Food and Rural Initiatives (MAFRI) were on hand to answer questions and provide advice. Shoppers who wanted to taste some of the many varieties of Manitoba honey could visit the sales area where three producer graders had large displays of packed honey, samples for tasting and a variety of honey for sale.

MiteGone™ FORMIC ACID DISPENSER



Available in Canada
and World Wide!
Treatment method & video: www.mitegone.com
e-mail: info@mitegone.com
tel / fax: 1-250-762-8156

Varrox® Vaporizer

Oxalic acid (vaporization method) for treating beehives against varroa mites is inexpensive, effective in broodless colonies and well tolerated by honeybees.

The Varrox® Vaporizer is easy to use, just insert it through the entrance with a 12 V battery hookup. The cost is \$145 plus 7% GST and shipping.

For more information or to purchase the oxalic acid Varrox® Vaporizer contact Daniel or Beatrice Ficza, 902-675-3690 or honeydew@pei.sympatico.ca



MENTHOL BOARDS

Please order early
HAMILTON BEE RANCH LTD.

Box 1169, Nipawin SK S0E 1E0

Phone 306-862-4194

Fax 306-862-4193

Producers of Northern Blossom Honey

Canadian Bee Research Fund Call for Proposals

Rob Currie, Chair Canadian Bee Research Fund

The directors of the Canadian Bee Research Fund (CBRF) invite the submission of proposals for the 2007 competition. Grants will be considered in any area of apiculture or pollination research, but preference will be given for subjects identified by the Canadian beekeeping industry as high priority.

The CBRF was established to counteract the problems caused by severe reductions in federal and provincial funding for honeybee research. It is now in its ninth year of operation. Grants have been awarded annually for research considered important for the survival and prosperity of the Canadian beekeeping industry. Donations received for the fund are invested in a long-term endowment account and the interest generated is used to support bee research through the awarding of annual grants.

Projects awarded funding for 2006 were:

Dr. Rob Currie, University of Manitoba, \$5,000

“Integrating Chemical Control and Host Resistance to Increase Treatment Thresholds for Varroa destructor.”

Dr. Ernesto Guzman, University of Guelph, \$5,000

“Varroa mite resistance to current chemical treatments, alternative control products applied with different delivery methods, and chemical residues in honey.”

Dr. Steve Pernal, Agriculture Agri-Food Canada, \$5,000

“Management of Honeybee Diseases Using Lysozyme.”

Albert J Robertson, Sask. Beekeepers Association, \$5,000

“Evaluation of Varroa and Tracheal Mite Tolerance in Selected Honeybee Lines and Attempted Correlation of Tolerance with DNA Markers

Dr. Medhat Nasr, Alberta Agriculture Food and Rural Development, \$5,000

“Study of Environmental Sources for Antibiotic Residues in Honey”

Reports of these current projects will be given at the annual CHC/CAPA research symposium in Langley BC, 26 January 2007.

Applications for this round of grants should be sent to Dr Rob Currie, University of Manitoba, Winnipeg MB R3T 2N2. The deadline for submission of proposals is 30 November 2006. Application details can be found on the CHC Website www.honeycouncil.ca



Lewis & Sons
Enterprises Ltd.

BOX 316, AUSTIN, MANITOBA
Toll-free 1-866-800-2077
Phone: (204) 637-2277 Fax: (204) 637-2033
Murray or Adam Lewis

**QUALITY WOODENWARE BOXES,
FRAMES, ETC.**
Unassembled, Assembled
and/or Wax-dipped
Food-Grade Finish

**Call for 2006 Pricing
Please order well in advance.**

**BEEKEEPERS
BUILDING FOR BEEKEEPERS.**



Honey Wanted

Call for Current Market Conditions

**Toll Free
1-800-789-4391**

Trusted By Beekeepers for Over 50 Years!

ELI GROSSMAN - EXT 230

e-mail: egrossman@billybee.com

**Billy Bee Honey Products Ltd. 68 Tycos Drive,
Toronto, ON M6B 1V9**

TEL: 800-789-4391

FAX: 416-789-9112

www.billybee.com

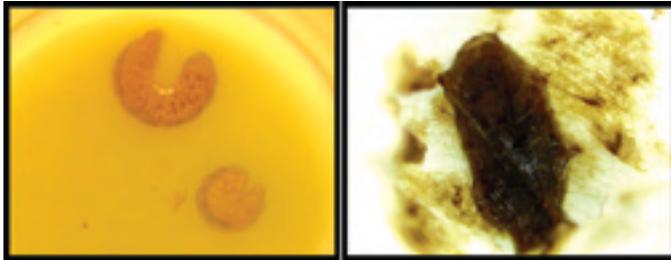


Figure 4. Larvae infected with spores of *Paenibacillus larvae* and exhibiting symptoms of American foulbrood.

Uses of In Vitro Larval Rearing

Rearing worker larvae outside of the hive provides us with a powerful vehicle to study brood diseases and their treatment. It eliminates variation in the environment and food consumption, which can affect larval disease susceptibility, and standardizes disease infection and treatment application. For example, nectar and pollen availability in colonies

varies throughout the season. In times of dearth not all larvae are fed adequately and this can affect their susceptibility to diseases. Similarly, larvae located on the periphery of the brood nest tend to be more affected by changes in temperature, and as a consequence, are more vulnerable to infection with a disease such as chalkbrood. Furthermore, other variation in within-hive factors may affect

the progression of disease in colonies. In the case of American foulbrood, two well known defences against the disease are hygienic behaviour, which reduces the number of infectious spores in the colony, and the proventriculus, which filters spores out of the food given to larvae by nurse bees. By removing the influence of the colony on the larvae we are better able to understand the progression of brood

diseases, the effects of various treatments on the expression of disease as well as the effects of the treatment on the larva itself.

In vitro larval rearing techniques are also well suited to evaluate the ability of different antibiotics to prevent or suppress brood diseases. To do this, larvae are infected with American foulbrood or chalkbrood by mixing spores of the ▶ pg 26

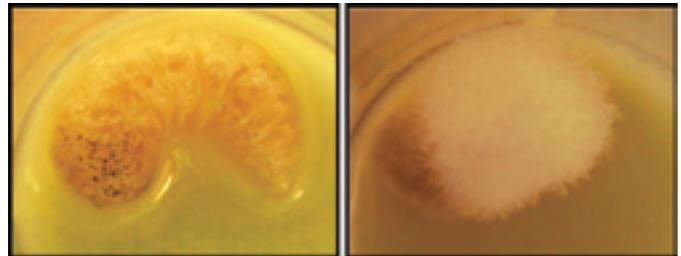


Figure 5. Larvae infected with spores of *Ascospaera apis* and exhibiting symptoms of chalkbrood.

TREAT YOURSELF!
Jack's Scale™
HONEY COLOR GRADER
 Color Chart With Pfund Equivalents
 For Less Than 50\$

www.jacksscale.com
 F.W. Jones & Son Ltd. (800) 665-6637
 Beemaid Honey Ltd. (780) 962-5573 www.beemaid.com

AllJill™
 thingsJill

Offer a unique line of honey-based natural bath & body products to your customers!

Our Canadian-made Honey Line includes:

- Hard Workin' Hands Salve
- Hand & Body Wash
- Tub Truffles
- Body Polish
- Lip Smackin' Stuff

For wholesale info:
 403.283.2502
sales@allthingsjill.ca
www.allthingsjill.ca

simply.naturally.you.

The 38th Annual Convention of the American Honey Producers Association

Phoenix Arizona
January 9-13, 2007

Sheraton Crescent Hotel
602-943-8200

Start practicing
for the Forklift
Rodeo!



- Meet beekeepers from all over the US and Canada.
- Get the latest updates on the anti-dumping legislation.



- Informative break out sessions on all the hot topics.

- Vendors from all over the US and Canada display the latest in supplies!

**American Honey
Producers Assn.
PO Box 158
Power, MT 59468**

**Get the latest convention updates
and registration information by visiting**

www.americanhoneyproducers.org

Medivet: Keeping Bees Healthy

Ron Miksha, Calgary-based scientist and a hobby beekeeper

In a small windy town on the Canadian prairies, there is a company pioneering medicines for honey bees. High River, Alberta, is home to Medivet – one of the world's largest suppliers of Fumagilin-B®. Medivet has been innovating treatments for nosema, mites, and foulbrood for 25 years.

The company – Medivet Pharmaceutical - had an unlikely beginning. Its founder, Willy Baumgartner, was a young Swiss chemist who wanted more experience. While in his twenties, Willy had graduated from a prestigious university in Switzerland and was working as a chemist. "I wanted more experience, so I thought I'd work in Canada for a year," says Baumgartner. That was 1958. He stayed. In Ontario, Baumgartner worked for pharmaceutical companies, developing life-saving medicines. By 1980, he was ready for a change, headed west from Ontario to Calgary, and started Medivet Pharmaceutical.

"At first," Willy says, "we developed medicines for veterinary suppliers – drugs for horses and cattle. But beekeepers began calling, asking for tetracyclines. At the time, we didn't realize bees needed medicine. We quickly became interested in the whole apiarian science. Bees are fascinating."

Medivet began by finding sources of terramycin (to fight foulbrood) for beekeepers - testing the purity, standardizing dosages, and packaging the product. In High River, Alberta, Willy Baumgartner formulated carriers and buffers to enhance the delivery of his medications. Acidifiers were developed to counter alkali water which effects product stability; solubilizers were attached to some products so they

could dissolve more easily in water. This allows the beekeeper to create a more uniform mix.

An important part of Medivet's job has been to help the beekeeper with the problem of delivering proper dosages to the bees. "A small mistake with any drug can harm bees and the entire beekeeping industry. Too little or too much medicine can cause disease resistance, kill brood, or worse, contaminate honey. A lot of our work has involved getting dosage and delivery systems right for the beekeeper," says Willy Baumgartner. Then he adds, "Most beekeepers know the hive tool is not supposed to be a measuring spoon."

Nosema Still Kills Bees

The business of mixing and improving tetracyclines quickly led to calls from beekeepers for an improved form of fumagillin, the stuff that controls nosema. Nosema kills colonies and fumagillin is the only effective treatment. Three years ago, with a cool, wet spring, Germany lost half its wintered colonies – nosema was implicated as a complicating factor along with viruses and other stresses on the bees.

Nosema, one of the easiest bee maladies to treat, is sometimes called an 'invisible' killer. Novice beekeepers often complain that bees simply 'disappeared' in the spring. Observant beekeepers may notice dwindling colonies, bees crawling about in front of their hives, and especially signs of dysentery when honey bees have been confined for several weeks during cool wet springs. Obviously, untreated hives can die under such conditions.

The antibiotic fumagillin, mixed in syrup and fed in the spring, kills the protozoa responsible for nosema.

Baumgartner's Medivet company started working with fumagillin in 1983 – thirty years after Upjohn and Abbott Laboratories researched the antibiotic as a possible substitute for penicillin for humans. Fumagillin didn't have much effect on improving people's health, but was discovered to cure bees with nosema. The pharmaceutical giants eased their patents, which made it possible for the much smaller beekeeping industry to use the treatment.

In the 1970s, most of us old-timers remember that early forms of fumagillin clumped badly in sugar syrup – it simply would not dissolve easily. Medivet Pharmaceuticals got involved with the problem and the result was beekeeper-friendly Fumagilin-B®. The improved product is now used by beekeepers throughout Canada, the USA, Israel, and South America. ▶ pg 24

Foundation made up from
\$1.50-\$1.75 lb
4-5 sheets to the pound
Nucs and resistant queens
FERGUSON APIARIES
Hensall, Ontario
519-236-4979
ferga@hay.net

First In Candle and Soap Making Supplies!
Pourette
www.pourette.com
Pourette@aol.com
PO Box 70469 • Seattle, WA 98107-0469
Order Desk: 1-800-888-WICK (9425)
Outlet Store: (206) 783-7312
Fax: (206) 789-3540

promoting the Bee Maid brand as a healthy choice as a spread for breakfast or a sweetener for a favourite recipe. Encouraging consumers to keep Bee Maid 100% Pure Canadian honey as their choice of honey and increasing honey usage remains the top priority of this campaign. Don't forget to tell your friends and neighbours to buy Bee Maid honey and enter to win great prizes!

WINNIPEG, Aug. 29 /CNW/ - Honey lovers like Roy Richmond of Nanaimo, British Columbia have

discovered that choosing 100% pure Canadian Bee Maid Honey is rewarding - great taste, and great prizes too! Roy received a sports watch by purchasing Bee Maid Honey and entering the unique "Eat Right Take Flight" Sweepstakes PIN number at www.beemaid.com. The next phase of Bee Maid Honey Limited's "Good For You" Campaign, "Eat Right Take Flight" encourages consumers to adopt a healthy lifestyle



Barrie Termeer

by choosing Bee Maid Honey and becoming more physically active. To date, more than 200 prizes have been awarded.

The ANNUAL MEETING of the Alberta Honey Producers Cooperative Limited will be held on November 16, 2006 at the Fantasyland Hotel in Edmonton. For Hotel Reservations, please contact 1-800-RESERVE (737-3783) or www.fantasylandhotel.com.

This year's ANNUAL MEETING of the Manitoba Cooperative Honey Producers Limited will be held at the Victoria Inn in Winnipeg on November 27, 2006 and a sound and video feed will be supplied to a meeting room reserved at the Travelodge Hotel in Saskatoon. We are pleased to report that arrangements have been made to conduct this year's AGM of the Manitoba Cooperative Honey Producers Limited with a video conference connection in Saskatoon.

CHC Report from pg 4

flavoured popcorn or honey flavoured syrup. This is bad news for the honey industry when substitutes can be sold as honey using familiar symbols of honey comb, honey dipper etc. so long as the word "flavoured" is present.

A second problem is the use of the word honey when it does not constitute more than 50% of the sweetener present. The current regulation would require products with a small percentage of honey like Honey Nut Cheerios to be labelled "Honey Flavoured Nut Cheerios". We feel that this requirement to add the word "flavoured" when there is some honey present would encourage the manufacturer stop using any honey. The CFIA claims the door is not shut and they will entertain further comments. It has been suggested that the Canadian Packers Association and the CHC submit a joint document asking for

changes to the regulations that are particular to honey. This would show consensus and be more likely to receive CFIA approval.

Promotion

The pilot promotion campaign started October 9, 2006 in Winnipeg. Samples of the billboard art, 100% pure Canadian honey logo and radio ads can be accessed on the CHC website www.honeycouncil.ca. A brochure has also been produced with assistance from the ACAAF project to help promote consumer awareness of the superior qualities of Canadian honey. Our mascot Pierre the Bear will make an appearance at various malls and Fall Fairs. He is the spokesperson for Canadian bees. Mascots do not speak but our radio ads have the voice of Pierre the Bear. The performer is

musician who has played with numerous famous artists like Stevie Wonder, Chet Atkins, Bonnie Raitt,



A focused Amos Garrett at a recording session

Maria Muldour and many more. His voice has a wonderful quality that captures the essence of Pierre and we thank him and Frank Laratta at Sync Spot for producing these ads for the honey industry.

For more information about honey and the quality of

Canadian honey visit our new website www.canadianhoney.ca

AGM

Our annual meeting will be held in Langley BC at the Coast Casino and Convention Centre 24-27, January 2007. It promises to be informative, fun and a great place to meet. For recreation avid golfers can play gumbot golf and skiers can find their

way to Whistler for some fun in the snow. There is something for everyone and families are welcome. Early bird registration ends December 15th. A registration form is on page 5 and on the CHC website www.honeycouncil.ca. See you in Langley.

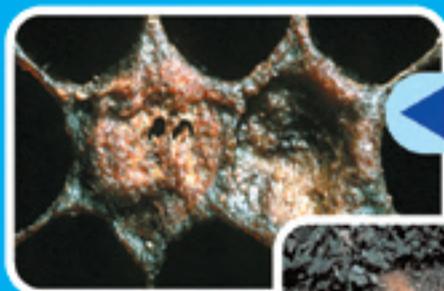
VANCOUVER ISLAND APIARY SUPPLY
 Beekeeping Supplies Equipment & Glassware
 Larry & Marilyn Lindahl
 6456 Cowichan Valley Hwy
 PO Box 1491 - Lake Cowichan BC V0R 2G0 -Canada
 250-749-3800 - www.thebeestore.com



EFB



AFB



TREATMENT!



European Foulbrood (EFB) is a bacterial brood disease caused by several agents the main being the bacterium *Melissococcus pluton*. It occurs most

frequently in the spring or early summer during brood rearing and is thought to be caused by stress in the colony and lack of pollen. Symptoms can be variable which makes EFB difficult to identify with certainty; frequently disappearing once there is a nectar flow. But EFB can seriously affect brood development and needs to be identified in a colony as soon as possible.

American Foulbrood (AFB) is an infectious brood disease caused by the spore-forming bacterium *Paenibacillus larvae var larvae*. It is the most destructive and widespread of the honeybee brood diseases.



AFB disseminates rapidly through the colony and, if left unchecked, spreads quickly to other healthy colonies both in the same apiary and those nearby.

2 NEW VITA DIAGNOSTIC KITS *For the early detection of* EUROPEAN FOULBROOD OR AMERICAN FOULBROOD



It is vitally important to detect EFB & AFB as early as possible in order to prevent its further spread to healthy colonies.

Vita's quick and effective Diagnostic Kits, developed with Central Science Laboratory Pocket Diagnostics enables every beekeeper to test their hives at the first suspicion of the presence of EFB or AFB.

Vita's Diagnostic Kits take just 3 minutes to give a result and have been validated with 98%+ accuracy



Vita (Europe) Limited
Investors In Beekeeping
www.vita-europe.com

Sold in Canada by Medivet Pharmaceutical Ltd.
+1 (403) 652-4441
www.medivet.ca



Take care of your bees
and your bees will
take care of you!

Mite-Away II™

Formic Acid Pads
For treatment of varroa and tracheal mites



A natural choice:

- Mite-Away II™ is a proven treatment and fully registered with Health Canada.
- Formic acid is found naturally in honey and the environment.
- Food Grade formic acid ensures a residue free, quality, end product: pure honey.
- Mite-Away II™ is easy and safe to use.

"We're In the Bee Protection Business!"

NOD Apiary Products Ltd.

P.O. Box 117, Frankford, Ontario, Canada K0K 2C0
Toll free info: 866-483-2929 Fax: 613-398-0495
www.miteaway.com info@miteaway.com

APINOVAR

Key Tool
for an Easy
Control
of
Varroa

Maintain easily

Treat efficiently by the "flash" method

Full IPM guide on our website

Les Reines Chapeaux

distributors:
F. W. Jones & Sons
Tony Lalonde Sales

reineschapeaux.wd1.net



Making Tomorrow's Products Better

Introducing EB Treatment for AFB Decontamination!

AcSION's EB (electron beam) treatment process has been shown to be extremely effective for disinfecting AFB-contaminated supers.

Equally effective in treating pollen.

- Low cost affordable process
- No heating
- No damage to wax combs
- No residues



Disinfection using EB Treatment at AcSION's Manitoba Service Centre

AcSION Industries • P.O. Box 429 • 402 Ara Mooradian Way, Pinawa MB R0E 1L0
tel:204-753-2255 • fax: 204-753-8466 • e-mail: acsion@acsion.com • www.acsion.com

New Battle Against AFB

The wonder drug of beekeeping – sulfathiazole – ended the scourge of rotting bee larvae - American foulbrood - in the 1940s. But the medicine has a very long activity life and could find its way into honey. In the early 1980s, it became the first treatment to be banned from beekeeping. An alternative medicine – oxytetracycline – was recommended as a treatment against AFB because this pharmaceutical breaks down quickly and poses a very low risk as a honey contaminant.

But by 2000, beekeepers began to notice that AFB spores were germinating on bee larvae even in hives that were properly fed oxytetracycline. Some strains of the AFB agent had become resistant to the tetracycline family of drugs. Thousands of colonies of bees were dying and highly infectious resistant- AFB (rAFB) was spreading across the continent. The search was on for a substitute.

Among the projects to investigate efficacy and dosage levels for rAFB treatments was a study by federal scientists at Agriculture Agri-Food research station, Beaverlodge, Alberta. According to Adony Melathopoulos, a Beaverlodge researcher, several companies expressed interest (and provided funding) in the studies, but, “Medivet went a step further by supporting research to develop safer formulations of drugs.” Medivet helped with product formulation and design throughout the study. Adony signals Medivet as a company which “gives a disproportionate amount of its revenue to research.”

I discussed Tylosin with Willy Baumgartner. “Again, it is timing, dosage, and care in treatment,” he told me. “Tylan is 100% active – a small mistake in dosage can cause huge problems. The MRL (maximum residue level) varies from country to

country and in Germany, for example, it is zero. Beekeepers need to be careful.”

Optimal Way to Fight Mites

The entire business of safely handling and formulating medicines for bees has interested Baumgartner for years. Beekeepers who know him say his first interest is genuinely to help beekeepers. His vast pharmaceutical experience has led to his latest project – a better way to treat mites.

Again, Willy is trying to help beekeepers deliver the right amount of medicine safely. Conventional treatments (Apistan, Checkmite) may be losing their efficacy. Beekeepers are mostly to blame. For example, some beekeepers use half the recommended strips to save money. Or they pull Apistan strips out after two weeks or leave them in all winter. To compound the problem, the active ingredients may end up in honey.

Beekeepers began experimenting with alternative treatments, including oxalic acid which naturally occurs in honey. Oxalic acid is showing great promise in the battle against varroa. But it is a bit tricky to use, frustrating to measure, and slow to administer. A good treatment requires an even distribution in the hive.

To solve these problems, Willy spent a year at lab testing various dispensing prototypes. The result is Medivet’s OPTIMA Vaporizer. The device heats a measured amount of oxalic acid and blows it softly into the hive, which needs to be sealed for about ten minutes. A fog is created in the hive’s brood chambers. The mist precipitates, settling on the bees. The apparatus is moved on to the next hive right away.

With two devices and three people, 50 hives can be treated in less than an hour. At a cost of only ten cents per hive for the acid, this treatment has many advantages over the impregnated chemical treatment strips used by the industry over the past twelve

years. With strips at about \$4.50 per hive (for two strips) and hives being opened twice (two trips to the bees – to install, then to remove) the savings in time and money with the OPTIMA vaporizer are obvious.

A sliding door on the tool measures the chemical, moves it to the vaporizing unit (heater), and a fan blows it through the hive entrance. Bees are not disturbed, hives aren’t opened. As long as the outside temperature is at least 5 C (40 F), honey is off the hives, and the queen has slowed down a bit (after first frost), says Baumgartner, a single fall treatment should be sufficient.

The new OPTIMA vaporizer for killing varroa mites seems like the most effective treatment developed for this pest. This new product takes the guess-work out of dosage application and uses a natural compound that is not likely to result in mite resistance.

Stress-free Beekeeping

Willy Baumgartner of Medivet Pharmaceuticals says chemicals alone are not the answer to healthy strong colonies and big honey crops. He fervently believes beekeepers can assist their bees by using systems of integrated pest management. “Beekeepers can help their bees be more hygienic. That might mean replacing old dark brood combs. Keeping honey supers separate from brood chambers. Destroying diseased or contaminated equipment. Using disease and pest-resistant stocks... doing things to reduce the stress that bees might suffer.”

Willy says there are six keys to reducing stress in bees:

- Nutrition – make sure bees have more than enough honey and pollen;
- Location – a dry, well-drained site with good nectar and pollen flows;
- Swarming – if bees swarm, there is a strain on colony resources;
- Wintering – ensure large bee populations and lots of honey and pollen;

Classifieds

- Heat – prevent overheating through shade, ventilation, and water;
- Pesticides – avoid pesticides around your bees, stay notified.

These are basic, common-sense strategies. Combined with appropriately applied medicines, beekeepers can (and do) continue to produce huge, profitable honey crops - even in our era of mites, hive beetles, and resistant foulbroods.

A Life of Helping Beekeepers

Willy Baumgartner and his wife Ursula have a very genuine interest in honey bees and beekeepers. They love to attend bee meetings – whether the local Calgary Bee Club or Apimondia in Dublin. They say they learn a lot from beekeepers and have fun meeting people and staying in touch. It has been 25 years of pharmaceutical design and serving beekeepers, but both Ursula and Willy say their association with beekeeping has “been nothing but fun.”

Adony Melathopoulos, the Beaverlodge scientist, summed up our collective gratitude towards Medivet's Willy Baumgartner, “We are incredibly lucky to have someone of his intelligence and caliber in this industry.”

If you would like to know more about Medivet Pharmaceutical and its products – and learn more about beekeeping medicines and stress-free beekeeping, visit the web site at <http://www.medivet.ca> or phone the office at 403-652-4441 and ask for either Willy or Ursula.

This article was prepared with careful attention to fact and with the desire to help beekeepers improve their beekeeping practices. This magazine, the author, and Medivet Pharmaceuticals Ltd. (MEDIVET) cannot be held liable for any damage resulting from inaccuracies and/or inadequacies in this article. The user must ensure that all products that are used are registered and/or legal for use in their area/country.

For Sale 74

Dakota Guinness model 200 uncapper with adjustable flails, \$2000.00 or would trade on a Hubbard 80 frame SS extractor. Stinger Apiaries 306-862-3991.

Foundation 54

For all your foundation needs, any size, wired or without, organic or conventional, place orders by phone 780-835-2115 or fax 780-835-2873 or email tegart@telusplanet.net.

For Sale 55

RV Cut Comb Honey Trays (340g)

Tight Snap-On Clear Plastic Lid - Cream Coloured Base Sold Coast to Coast by Mail. 2006 Prices: \$46.80/100 - \$210.70/500 F.O.B. River Valley Apiaries - P.O. Box 142, Stirling, ON, K0K 3E0 - Visa/Master Card Accepted - 613-395-4257, rvapiaries@yahoo.com

For Sale 56

Manual benchtop system for making your own honey straws.

Reliable, Affordable, Profitable. Check it out at www.AnthonysKansasHoney.com. Or phone 785-842-9268 or 913-206-2188

For Sale 60

Beeswax candlemaking supplies including bulk wicking and silicone moulds at wholesale prices. Free Spirit Candles and Supplies. www.freespiritcandles.ca or 1-877-335-3769.

For Sale 80

Small honey filter machine including filters, elect/hydraulic pallet stacker, whirl dry, two heat exchangers, 30 barrels, misc carts etc. Also 25 double brood hives, 150 honey supers, 400 hive shells. Call MacKenzie Honey 519-368-5363 or fax 519-368-7152.

For Sale 81

Strong double brood chamber hives, excellent equipment, bees selected for over 16 years in Manitoba, tracheal mite resistance, high honey producers. Member of Manitoba Queen Breeders Association. Contact Terry, Meadowlark Honey Ltd. tfehr@mts.net or phone; 1-204-385-2337 Available September 1, 2006

For Sale 57

1000 colonies. Contact Jack Cage Beaverlodge Alberta 780-354-2728.

For Sale 82

Active Beekeeping business with retail packaging market. Registered packer, stainless steel extracting plant. Equipment for 500 colonies, queen rearing, package and nucleus colony production, pollination. Contact Mike McLennan, Flower Power Apiaries, 4550 Hillview Rd Grand Forks BC V0H 1H5 phone 250-442-2933.

For Sale 84

4 stainless steel honey vats of various sizes for sale. Approximate sizes are: #

A. 4' w. X 4' l X 3.5 H,

B. 7'8" l X 3'7" w X 2'8" h, 3' 7" l

C & D 7' 8" l X 3'7" w X 2'8" h

Please phone 250-679-2715 evenings

For Lease

Bee Yard/Orchard/Farm in Tropical Central Mexico (4 hours from Acapulco); 20 acres, including orchard with mangoes and other exotic fruits and wild flowers, surrounded by vegetation and farms with abundant nectar sources. Plentiful water supply by adjoining creek. Paved road access. Near town. Reasonable offers considered. Contact: E-mail: tropicalmexico777@yahoo.com or tel. 858-775-4893, Attn. Francin

Wanted to Buy 59

Buckwheat honey in drum. Contact Henry Nauta phone 905-640-1564, fax

Help Wanted

Beekeepers with a minimum one year of experience are required at Golden Eagle Apiaries for the months of February to November, 2007. Qualified candidates will have knowledge of honey bee colony pathology and management, experience in queen rearing, and good driving skills. This position pays \$1800 - \$2200 per month, plus accommodation benefits. Interested applicants should contact the Apiary Manager by Email (neilm@aquilini.com) or Fax (604-460-0944) with a resume of experience and qualifications.

Help Wanted

to 6 experienced beekeepers wanted from March-November. Preference will be given to candidates with queen rearing experience. Must be able to operate truck and fork lift. Wages based on experience. Golden Ears Apiaries BC. Phone 604-820-6924 email jmcshiple@shaw.ca

SHERRIFF

INTERNATIONAL
Established 1968

THE PROFESSIONAL'S CHOICE

ORIGINAL
& BEST

THE
ALL-IN-ONE

\$36



Size: S/M/L/EL*
Col: White/Khaki**
Gold (pic) whilst stocks last
Price \$185.00

- ✓ Proven Protection
- ✓ Created for Quality
- ✓ No Hat needed
- ✓ Built to Last
- ✓ Quality Polycotton
- ✓ By Beekeepers for Beekeepers

\$21



Size: S/M/L/EL*
Col: White only
Price \$79.00

\$41



Size: S/M/L/EL*
Col: White/Khaki**
Price \$149.00

*Extra Large - add 10%
Prices DO NOT include Shipping

www.bjsherriff.com

Ray Gresham, Ph (250) 477 5732
1212 Pearce Cres. Vio, BC V8X 3S2
F.W. Jones & Son, Ph (514) 249 3323
44 Dutch St, Bedford, Q'bec J0J 1A0
Alberta Honey, Ph (780) 962 5573
Box 3909 Spruce Grove, AB T7X 3B1

BJ SHERRIFF INTERNATIONAL
Ph +44 1872 863304
Fax +44 1872 865267

in vitro from pg 18

disease-causing agent into the artificial diet. Treatments for the diseases are also administered through the larval food and effects of the treatment alone, or in conjunction with the disease, are monitored (Figs. 4, 5). Larvae are most susceptible to infection by American foulbrood within 48 hours of hatching however the reverse is true for chalkbrood as susceptibility increases with larval age. The disease-killed larvae show symptoms similar to those seen in colonies. A successful antibiotic prevents the disease from infecting without being toxic to the larvae themselves.

Challenges

Rearing worker honey bee larvae in the laboratory is not without its challenges. Because of the high proportion of royal jelly used in the artificial diet, a small proportion of intercastes are produced (approximately 1 in 30). Queen-like workers (Fig. 6) tend to emerge a day or two earlier than the rest of the workers and have slightly larger abdomens.

Other physical characteristics used to identify intercastes include the absence of a corbicula (pollen basket) on the hind legs and the presence of bilobed mandibles. Transferring larvae without incident has also taken some practice and minor deformities and deaths due to rough handling or dropping has

been reduced to a minimum.

A major problem is contamination of the larval food and larvae themselves (Fig. 7) by opportunistic fungi not normally encountered by brood in the hive.

Sterilizing equipment used in the process and reducing exposure of the larvae and their food to the surrounding environment helps decrease contamination. Methyl paraben, a mould inhibitor and chemical used as a preservative in many foods and cosmetics, is added to the humidity chambers of the incubators to diminish fungal contamination.

In summary, we have been able to establish artificial rearing practices with success at AAFC Beaverlodge and have been able to assess the efficacy of

antibiotics and alternative treatments such as lysozyme for the prevention of American foulbrood and chalkbrood disease. We are confident this will contribute to our understanding of these diseases and we hope may lead to new insights for novel control techniques.

We thank the benefactors of the Canadian Bee Research Fund which, in part, has enabled us to carry out this research.



Figure 6. A laboratory reared worker honey bee with a slightly enlarged abdomen.



Figure 7. Fungal contamination of the paper tissue surrounding a newly-pupated honey bee larva.



Right for Every Reason...

- Up to 100% Varroa control
- Cost effective and convenient to use
- Safe for bees and beekeepers
- Considered the best anti-Varroa product by beekeepers around the world
- No detectable residue in honey
- No risk of applying too much, or too little

**Get control of
Varroa mites
with Apistan.**

For additional information contact your favourite bee supplies company or call *Wellmark International* direct at 1-800-263-2740

Please read label carefully for directions and precautions. APISTAN is a registered trademark of Wellmark International



F.W. JONES & SON LTD.



SINCE 1878
44 DUTCH STREET, BEDFORD,
QUEBEC J0J 1A0
(450) 248 3323 PHONE
(450) 248 2592 FAX
E-MAIL: info@fwjones.com

We stock a complete line of beekeeping
Equipment for all your needs.
Woodenware, Queen excluders,
containers in glass and plastic.
Queen rearing equipment,
Queens, Comb Honey
Containers, Foundation, smokers,
Extracting Equipment
Beekeeping Tools and much more.

Please call or write to receive your
Free catalogue.

Branch Office: F.W. Jones & Son Ltd.
105 St. Regis Crescent, Toronto, Ont. M3J 1Y6
416 783 2818



Your Leading Supplier of:

*Natural Menthol Crystal
Please indicate your interest in Thymol Crystals, Call for
Availability

*Bee Feed Pollen

*Fresh, Frozen Royal Jelly

Call for Competitive Pricing and for a Free Copy of our
Full Color 2004 Mail Order Catalog.

PO Box 2744 _ Eugene, OR 97402 USA
Toll Free (800) 456-7923 _ Fax (541) 762-7173
www.GloryBeeFoods.com
Sales@GloryBeeFoods.com



**WE CONSIDER
YOU
OUR PARTNER**



WE BUY HONEY, BEESWAX, AND POLLEN

CALL *Elise* TOLL-FREE 1-800-567-3789

193 A, TURCOTTE STREET, ROSEMERE, QC, J7A 3A7
TEL.: (450) 965-1412 FAX: (450) 965-1425
WWW.ODEM.CA
ELISE@HONEY.CA



ONE PIECE PLASTIC FRAME & FOUNDATION

Canadian Distributor

Tim Townsend

R.R.1, Stony Plain, AB T7Z 1X1

780-963-7573

E-mail: ttownsen@telusplanet.net

Eastern

Guy Anderson, Kincardine ON 519-396-3529

Central

Lewis Farms, Austin, MB 204-637-2277

Manitoba Co-op Honey Producers, 625 Roseberry St,
Winnipeg, MB 204-783-2240

West

Alberta Honey Co-op, 70 Alberta Ave.

Spruce Grove AB, 780-962-5573

Stawn's Honey, Vernon BC 250-542-9977

J.J. Bee Supplies 5693-176 St.,

Surrey BC Ph 604-574-3400 Fax 604-574-9728

Flying Dutchman 6124 Metral Drive,

Nanaimo BC ph/fax 250-390-2313

Now available

One-piece plastic drone comb



Wanted

your quality honey call Dick at GloryBee Foods Inc. Eugene OR 1-800-456-7923.

GloryBee Foods Inc.



WIPE OUT YOUR MITE PROBLEMS

Safe and least expensive method for applying formic acid to control bee mites in honeybee colonies. Available at your local beekeeping supplier or call:

Telephone (519) 847-5333 Fax (519) 847-5340

E-mail: dbryans@xcelco.on.ca

BETTER BEE SUPPLIES

265 AVENUE RD., CAMBRIDGE ON N1R 5S4

Phone (519) 621-7430

A complete line of beekeeping supplies.



Delivered to Door on Time
At Temperature 80-90 degrees F.

High Fructose Corn Syrup
Food Grade Sweetener
Dealer for ADM Corn Processors
Serving Manitoba & Saskatchewan

PO Box 190 Fisher Branch MB R0C 0Z0

Telephone 1-800-990-1390

E-mail-paul@interlakeforageseeds.com



PLANET BEE HONEY FARM TOURS & GIFTS

5011 Bella Vista Road
Vernon, B.C. V1H 1A1
Phone 250 542-8088
email: info@planetbee.com
website: www.planetbee.com

Retail / Wholesale &
Distributor Pricing,
Re-sellers Wanted

Specialty Honey, Pollen,
Propolis, Royal Jelly,
Filtered Beeswax

BEEKEEPERS' SUPPLY Co.

Everything for Beekeepers, their Bees, and more.

P.O. Box 227, St. Davids ON L0S 1P0

Phone/Fax 905-685-8111

Candle making supplies in stock.



Blaine & Jan Hardie
Ph/Fax 250-746-4389

Duaine Hardie
Ph 250-748-8471

Hardie Honey

Package bees, honey, wax, bulk bees
4035 Robson Rd., Duncan BC V9L 6G7



Benson Bee Supplies Ltd.

Box 9, (8358 Victoria St) METCALFE ON K0A 2P0

Rendering & Refining Beeswax

Honeycomb Candle Supplies • Bee Equipment

Art & Audrey Benson 613-821-2797 or 1-800-214-7366 Fax: 613-821-2621



Cook's Bee Supplies

A complete line of Beekeeper's Supplies
Quality & Service for over 70 years
91 Edward St., Aurora, Ontario L4G 1W1
Phone/Fax 905-727-4811 1-888-645-9722
A CANADIAN DISTRIBUTOR FOR DADANT & SONS

Quality Bee Pollen

Peace River, Alberta
Rural Ontario

Custom pollen cleaning and drying services
Buying Canadian bee pollen.
Fresh frozen pollen available

Call Chris Toll-Free 1-866-624-8175

Tel. (519) 773-5902

11302 Imperial Road, Aylmer, Ontario, N5H 2R3

www.apinutrition.com

chris@apinutrition.com

VESPER TRANSPORT LTD.

Fully reconditioned and #1 Quality Export Drums - Offering custom trucking across western Canada and western states.

Office/Cory 250-499-5773 - Lee 250-499-5753 -

Fax 250-499-5752

Mite-Away

Use Mite-Away II Single Application Formic acid Pads in the spring and fall for control of varroa and tracheal mites. See our updated web site at www.miteaway.com or call toll free 866-483-2929.

You can purchase Mite-Away at the following distributors:

Ontario: F.W. Jones & Sons Ltd, Toronto, 800-665-6637

Cook's Bee Supplies, Aurora, 888-645-9722

Better Bee Supplies, Cambridge, 519-621-7430

Benson Bee Supplies Ltd, Metcalfe, 800-214-7366

Peter Mewett, Stirling, 613-395-3225

Grey-Bruce Bee Supplies, Markdale, 519-986-4980

Clovermead Apiaries, Aylmer, ON 519-773-5503

Tannenhof Farms, Oro Station, 877-772-8753

Sudbury Bee Supplies, Sudbury, 705-566-0743

Quebec: F.W. Jones & Sons Ltd., Bedford, 800-665-6637

Maritimes: Country Fields Beekeeping Supplies,

Upper Coverdale, N.B., 506-387-6804

Western Canada: BeeMaid, Winnipeg MB, 204-783-2240

Vancouver Island Apiary Supply,

Duncan, BC 250-746-1676

Country Fields Beekeeping Supplies Ltd.

1848 RTE. 112, UPPER COVERDALE, N.B. E1J 1Y5

Serving the needs of large and small beekeepers alike

• Extraction equipment • Medications • Hive parts • Honey containers
• Books • Beeswax candle sheets • Protective clothing

Tel: 506-387-6804

Fax: 506-386-2599



CAPILANO

CANADA Inc.

A New Beginning!

HONEY WANTED

TROIS RIVIERES QUEBEC C9A 5M6

TEL: 819 378 8406

FAX: 819 909 1469

NEED MORE 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 for the upcoming pollination season.

Bees Love BEE-PRO® Patties!



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

High Fructose Corn Syrup

Available For
Delivery In
The US and
Canada!



Fast, courteous
customer service!
Most competitive
price guaranteed!

Type 55 and Type 42 in full or half loads delivered nationwide.

Ask about our Pro-Sweet 50!

Mann Lake Ltd.

501 S. 1st Street
Hackensack, MN 56452-2001
Fax 218-675-6156
beekeeper@mannlakeltd.com
www.mannlakeltd.com

1-800-880-7694

Call For A FREE Catalog

Authorized Dealers:
Manitoba Cooperative
(204) 783-2240
Alberta Honey Producers
(780) 962-5573