



HiveRights

May 2008
Vol 21 # 2

www.honeycouncil.ca

Canadian Honey Council

Sustainable and Bee-friendly Beekeeping
Royal Jelly triggers queen genes
Introducing the Directors
Sweet Schizophrenia
Toxic tutu honey
and more...





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

Call Frank at 1-866-948-6084 today

or email frank@globalpatties.com

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



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



Herb Isaac Sales Ltd.

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

**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



CHC Forging a New Direction

CHC is the national organization of the Canadian beekeeping industry and Hivelights is the industry's magazine.

Over the past two years CHC has been in the process of restructuring to better serve the industry. The new structure means that we are an "organization of organizations". We no longer have individual membership. One of the benefits of the new arrangement is that Hivelights will be sent to members of our member organizations. In order to continue receiving Hivelights you must be a member of your provincial association.

In future, associate members and sponsors will also receive Hivelights and other benefits, in return for their financial support. If you want to become an associate member or sponsor, please contact the CHC office at 403-398-02914.

If you are a school, library, non beekeeper, university or government personnel it is possible to receive Hivelights magazine as a "Friend of Canadian Apiculture". Please contact the CHC office.

Canadian Honey Council
Suite 236, 234-5149
Country Hills Blvd. NW
Calgary, AB T3A 5K8

Hivelights is published quarterly (Feb, May, Aug, Nov) by the Canadian Honey Council. Deadline for submissions are 6 weeks prior to publication (i.e. Dec 15th for Feb issue). The opinions expressed in the articles printed in Hivelights are those of the authors and do not imply endorsement of the Canadian Honey Council for the promotion of any product, goods or services mentioned unless specifically stated.

Hivelights is published quarterly (Feb./May/ Aug./Nov.) by the Canadian Honey Council. 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.

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

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-cm@honeycouncil.ca
www.honeycouncil.ca
(403) 208 7141

HiveLights

May 2008 Vol 21 #2



Honey bee foraging on cosmos flower. Can pesticides applied to plants influence bee behaviour? See article on page 24

Table of Contents

3	Canadian Honey Council Activities	..... Heather Clay
5	CHC Directors	
7	Provincial Reports	.....CHC Directors
9	Manitoba Government Supports CHC Transition	..... Heather Clay
10	Letter to the editor	
11	CBRF Grants announced	.....CBRF Board of Directors
12	Bee Maid Honey Supports Bee Research in Canada	.....Gordon Marks
12	P.E.I. opens up to queen bees	.....CBC news
14	Sustainable and Bee-friendly Beekeeping	.....Dr. David Heaf
20	Sweet Schizophrenia the Sweet and Sour Physiology of Honey	.....Mike McInnes and Dr.Ron Fessenden
21	Bee Maid Honey Report	..... Lorne Peters
22	Classifieds	
23	Honey and Spice: A natural fit for McCormick & Company	..... Heather Clay
24	Royal jelly triggers queen genes	..... Anna Salleh
24	Epigenetics and Bee Behaviour — the Future	..... Editor
26	Toxic tutu honey scare frustrates beekeepers	..... Laura Basham

Illustrations

Cover	..... Tracy Orr
AGM / Directors	..... Doug... Clay
Warré Hives	..... Dr. David Heaf
Bee cartoon	..... Rudy Gelderblom



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



Canadian Honey Council: A New Beginning

Heather Clay, Chief Executive Officer, CHC

Forging a New Direction



The CHC held its 2007 Annual General Meeting in Calgary in January, 2008. The event was very successful with a good turnout of beekeepers, industry and government personnel. There was a slate of excellent speakers at the research symposium and some timely presentations on hive health and economic issues facing beekeepers. Reports presented at the symposium are printed in the proceedings of the meeting and will be distributed through the Hivelights supplement publication.

Organizing an event like this takes teamwork and the CHC Events Committee did a great job in working out the details. In particular Cherie Andrews did a lot of the groundwork organization with the hotel. Together with Ursula da Rugna and their volunteers from the Calgary Bee Club, they made the registration and field trip effortless. Geoff Todd, our new office manager, organized the trade show and helped behind scenes to keep everything running smoothly. Even Pierre the Bear turned up at hospitality night and entertained our guests. In a departure from normal, our banquet was held at Ranchman's Nightclub, a popular western style bar



Pierre the Bear in his Calgary stetson hat and Janet Tam

in Calgary. It was crowded and noisy but we had a rousing good time. The next day some were complaining about aching body parts after riding the mechanical bull but these young 'uns said they would do it again as soon as they recover.

The AGM was a turning point for CHC in establishing our new direction. At a meeting in Winnipeg, October 2007, stakeholders of the industry voted unanimously to support the new direction. The CHC Board of Directors carried this forward and formally voted

for a change in the organization and to implement the new structure. The new association is an organization of organizations. Our members are the provincial associations and industry organizations. We no longer have individual memberships. One of the benefits of the new structure is that all the members of the provincial associations receive a subscription to Hivelights. The change in membership arrangement may necessitate an increase in some provincial association membership dues. If everyone joins their association, the increase will be minimal. We encourage all beekeepers to join their provincial association in order to continue receiving Hivelights magazine and support our industry.

Queen Bee Importation

There have been some problems associated with US queen bee importation this season. The Canadian Food Inspection Agency (CFIA) has specific import protocols and inspections by USDA Animal and Plant Health Inspection Service are an important part of the process. Strict protocols afford some protection to our industry from unacceptable diseases and pests. The current requirement is for an inspection within 45 days of export. In some cases because of an extended season for queen orders, the US production period is longer and there is a need for a second or possibly even third inspection of the originating apiaries. The CFIA is working with CAPA and the CHC to determine

if it would be an acceptable risk to implement a longer period between inspections. Another protocol under CHC review is the requirement for a three hole cage for shipping queen bees. This is more labour intensive method and not as popular with queen suppliers. The CHC has struck an Importation Committee to review the battery box shipping situation. Any



John Van Alten auctioned queens from Chile on banquet night.

recommendation accepted by the CHC will be taken to the CFIA for their consideration. They will assess the risk and make a determination as to any changes in the protocol. There will not be any changes for the current (2008) season.

Honey Prices

There has been an upward trend of honey prices. Last November the price offered by buyers at the Alberta Beekeepers meeting was 90 cents per pound. At our AGM in January, brokers were offering \$1.00. Shortly after at the SBA meeting the price had risen to \$1.10 and in April it was hovering around \$1.40. This is better news for beekeepers. We hope the trend continues and we look forward to an improvement in cash flow situation.

Overwintering Losses

It is early but there are some reports of severe colony losses in various parts of Canada. Many beekeepers are recovering from the devastation of last years losses. They cannot afford to have several seasons of losses. The CHC recognizes the current critical situation and is pursuing funding for a Hive Health initiative.

CHC - CCM Delegates 2008 Canadian Honey Council Board of Directors

Chair

Ed Nowek

B. C. Honey Producers Association
Planet Bee Honey Farm
5011A Bella Vista Road
Vernon BC V1H 1A1
ph 250-542-8088 fax 250-542-8072
beeworld@junction.net

Vice Chair/ Treasurer

Corey Bacon

Saskatchewan Beekeepers Association
B's Bee Ranch
Box 84
Kinistino SK S0J 1H0
ph. 306-864-3774 fax 306-864-3260
beeranch@sasktel.net

Secretary

Lorne Peters

Bee Maid Honey
Peters Honey Farm
Box 98
Kleefeld MB R0A 0V0
ph 204-377-4242
lppeters@mts.net

Director

Tom Trueman

Maritime Beekeepers Association
200 Etter Ridge Rd
Aulac NB E4L 2V2
ph 506-536-2854 fax 506-536-3088
ttrueman@eastlink.ca

Director

Jean François Doyon

287 Rang Beaurivage
Saint Sylvestre QC G0S 3C0
ph 418-596-3037
rucher@altanet.ca

Director

Dan Walker

Ontario Beekeepers Association
9327 Scotchmere Dr
Strathroy ON N7G 3H3
ph 519-245-5361
walkerb655@hotmail.com

Director

Bruce Podolsky

Manitoba Beekeepers Association
Box 1
Ethelbert MB R0L 0T0
ph 204-742-3535
podolskihoneyfarms@hotmail.com

Director

Ron Greidanus

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

Director

Luc Desaulniers

Alberta Beekeepers
Box 613
Falher AB T0H 1M0
780-837-0416
beehive@serbnet.com

CHC OFFICE

Chief Executive Officer

Heather Clay

Suite 236
235-5149 Country Hills Blvd NW
Calgary AB T3A 5K8
ph 403-208-7141 fax 403-547-4317
chc-ccm@honeycouncil.ca
www.honeycouncil.ca

C-BISQT

The Canadian Bee Industry Safety Quality Traceability (C-BISQT) project is well under way. The C-BISQT committee has completed a Good Production Practices Manual and the CHC has now applied for a Technical Review by the CFIA. This is expected to be a lengthy process as many people are involved in the review. After a pre review screening by CFIA, past history with other commodities shows that there will be suggestions for edits and changes to the manual before the GPP manual can progress to the final review stage. As soon as the manual passes the final review it will be made available to beekeepers for use in their operation.

IPM Poster

The spring of 2007 was a bad season for a large number of beekeepers in Canada. Colony losses averaged 30% and some provinces like New Brunswick lost 60%. The CHC held an ad hoc meeting on hive health in Winnipeg in June 2007. There were 37 recommendations but one of the most important was a need for information on controlling Varroa mites, tracheal mites, American Foul Brood and Nosema. The CHC with CAPA advice has put together an Integrated Pest Management poster for beekeepers. It graphically shows cultural controls, monitoring techniques and treatments across the seasons. This poster is being mailed to all our provincial association members. Extra posters can be ordered at a cost of \$5 each including shipping and handling. Please contact Geoff at the CHC office 403-389-2914 for more details.

Media

CCD has created a lot of public interest in honeybees. The media was very interested in our AGM and reporters from radio and TV turned up every day, with microphones and cameras to capture the event. Corey Bacon was kept busy meeting the press and answering questions. Our eastern director Tom Trueman talked to the media about the importance of pollination. Guest speaker Ron Fessenden did an excellent presentation on honey and health that was broadcast nationally. This was a great opportunity to tell the public about the value of honey bees.



Corey Bacon interviewed by local TV at the AGM

British Columbia

Ed Nowek



I have served for 5 years on the CHC Board and this year I am pleased to be the first "Chair of the Board" under the new structure. Over the years I have watched the work of the CHC increase as resources decreased and I am excited about participating in the changes which will occur over the next year to continue to strengthen the CHC.

Alberta

Ron Greidanus



For the past 3 years I have served on the CHC Board as director representing the Alberta Beekeepers. I have enjoyed the contact with directors from the rest of Canada and the work we are doing together. Last year the Alberta headline was significant bee loss, but losses have been recouped and stock regained. The strongholds of the industry are commercial production of honey and canola pollination. The bio-fuel push has driven demand for canola and related demands

for pollination. As for honey production, we hope that a "sold-out" situation will have a positive effect on depressed prices, causing them to rise. Prices have improved and we look forward to a good year.

Luc Desaulniers



My beekeeping operation is in the Peace River District of Alberta and I am pleased to represent Alberta Beekeepers as their second director under the new bylaws of the organization. I have been in the beekeeping business for thirty years and I hope to be able to help the CHC Board to solve the problems that we all face.

Saskatchewan

Corey Bacon



I have served 3 years on the CHC Board representing the Saskatchewan Beekeepers Association. As the Vice-Chair/Treasurer of the new board, I know that we still have work to do but I am pleased with the new direction. I am

CHC Directors

a 4th generation beekeeper. My operation includes honey colonies, nuc colonies, bee supply and equipment, and is poised to double in size. During my time on the Board, my colleagues have become my friends.

Manitoba

Bruce Pololsky



As a new director from the Manitoba association I am replacing retiring delegate Ron Rudiak. I come from a 50-year plus beekeeping family. Manitoba losses were about 29% in 2007 and we are looking for a better result this year. The provincial honey production average is down about 5 lbs. There are a number of important issues that affect Manitoba beekeepers such as access to foreign workers and importation of queen bees. I hope to do the industry proud and am willing to work hard.

Ontario

The Ontario director is Dan Walker, President of the OBA. Dan is a commercial beekeeper from Strathroy Ontario. He was unable to attend the AGM and devolved his duties to

Brent Halsall a commercial beekeeper from the Ottawa area. In the past Brent has participated in the process of determining a future direction for the CHC. He has a background in honey bee inspection and has been active on the OBA, serving on their board of directors.

Quebec

The Quebec association is undergoing internal changes at this time and no director from that province has participated on the CHC Board of Directors. Quebec's involvement in the New Direction project has indicated support for the new direction and the national Board looks forward to having a Quebec director at the table at the earliest opportunity.

Maritimes

Tom Trueman



I am the new director for the Maritime Region replacing retiring Delegate Paul Kittelsen. I operate a wild blueberry farm and honey bee enterprise in New Brunswick near the Nova Scotia border. The bees are for mainly for pollination but I am also a honey producer. I look forward to serving on the national board of the industry.

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



Although I am new to this board of directors I have been a delegate to CHC in the past. This time I am replacing the retiring Beemaid delegate Barrie Termeer. I am happy with the new direction of the CHC and I have agreed to work in the position of Secretary of the Board. BeeMaid is the marketing arm for the Manitoba honey co-op which celebrates 70 years, this year, and also the somewhat younger Alberta co-op. Members of these co-operatives have bee operations extending from Dawson Creek in the northwest to the southeast corner of Manitoba where my family has its own operation. Beemaid has been a part of CHC since its inception and the co-ops wish to continue to support the organization in its new direction. We pack 100% Canadian honey and I look forward to continuing to promote this quality product through participation on the CHC Board.

Provincial Reports

British Columbia

Ed Nowek

Some nice weather in early March got many beekeepers out looking into their colonies and most reports seemed to be initially encouraging but this was followed by a couple weeks of cooler weather with cold nights placing extra stress on hives beginning their spring build up. A better fall season in 2007 for formic acid application and the extensive medication for nosema(s) are credited with what initially appears to be lesser winter mortality than last year at this time.

The demand for honeybee pollinators in the Fraser Valley continues to grow and once again there appears to be a potential shortage for the early blueberry blossom. Pollination fees should continue their upward movement considering the raising prices of transportation, production and management.

The BCHPA has been actively exploring numerous options as alternatives for funding the new dues required for participation in the Canadian Honey Council. The membership committee recommendations will be presented to the central executive shortly and a new fee structure should be voted on at the Prince George AGM coming up in late October. All previous CHC members from British Columbia as well as any others willing to financially support the newly restructured national

body are encouraged to submit their contributions marked "CHC 2008 transitional dues" to the BCHPA treasurer.

The Bee Master Short Course 2009 is being planned again for February with alternate locations being considered since the departure of Dr. Mark Winston and the closing of the SFU Bee Lab. An announcement of location, dates and costs will be made this fall with provision for on-line registration.

Best wishes to all for healthy bees and record crops in 2008.

Saskatchewan

Corey Bacon

It has been a long and cold winter in Saskatchewan, one we haven't seen in a long time.

Weather forecasts are indicating that spring will be late, perhaps by several weeks. From November through to March Saskatchewan had at least one week of weather conditions in the -30°C range. Snowfall was abundant in the North and tapered off into the far south. There are some worries in the south about a lack of adequate moisture, though an early spring storm dumped several inches of wet snow. In spite of the cold weather, reports from beekeepers indicate that colonies are looking good. However, as was the case last year, we have at least one pocket anticipating extremely high winter losses likely due to mite issues.

Reports from beekeepers wintering colonies indoors indicate good to excellent colony conditions.

The price for bulk honey has finally taken a decent jump into profitable territory. Before the Sacramento meetings in January the price offered to SK beekeepers was in the low \$0.90/lb range. By the CHC AGM and Convention we saw prices rise to \$1.00/lb and by the end of January following the SBA AGM and Convention beekeepers were being offered \$1.10/lb. Prices have continued to rise and mid March there were offers around \$1.40/lb FOB. The higher prices have beekeepers heading into the season with anticipation of good year. We are anxious for spring to arrive. The SBA annual field day will be held this year at Dan and Carol Valleau's operation near Nipawin on June 14th. All beekeepers are welcome. Check the CHC and SBA website for further information. Good Luck in the upcoming season!

Manitoba

Bruce Podolsky

This winter has been one for the history books, cold, cold, and colder weather. We're used to getting three to four weeks of extreme cold. This season the cold never seemed to end. At the end of March we received 2 back to back storms with heavy wet snow and cold nights. We shouldn't see any floods this year, although cold, many regions didn't receive much snow.

Normally at this time of the year beekeepers that have checked their colonies can expect a 10- 15% mortality rate. Some areas have reported very high losses 50% and higher. What caused these high losses? I've heard high mite levels, too much feed, not enough, too harsh of a winter with not enough snow, poor queens, and nosema. It's getting hard to make up the losses. The availability to get good queens seems to be harder than in the past. Queens are coming to Canada from a number of countries including breeders in Canada all claiming to be superior. Do they have proper mating time, sufficient drones, genetics, what was the weather like, humidity, location? Are they being bred for cold long winters or a mild short winter, honey production, mite resistant, all these things need to be looked at when looking for queens? These days queens need to be ordered months in advance to ensure your order. We all want them at the same time, what if conditions aren't favourable. Reputable breeders will have a hard time filling orders, or you might get poor queens, or drone layers. Beekeepers are having to pay through the nose for packages, were buying nucs from other beekeepers but are we getting them early enough and strong enough to produce a honey crop. All these things may be working for you but farmers have larger machinery, they are putting the crops in earlier and faster leaving us less time to prepare our hives for harvest. It always pains me to see a hive get strong early in August only to see the bloom end because the farmer seeded early. Now I have to move that hive, treat and feed it and pray it comes through the winter strong enough to split.

Almond pollination is big business. It's estimated half the colonies in the U.S. are needed for pollination, when their done the hives are boiling over with bees. Why are we not willing to get inexpensive packages from them? Before the boarder was closed Canadian beekeepers had

record honey crops with minimal inputs. Feed, fuel, and labour are on the rise. We're expected to pay \$9.50 to \$14.00 per hour for an employee with no experience, which may or may not speak English. Fuel may cost \$1.50 /litre or \$6.81 / gallon this summer. With rising honey prices we need to act. They are our biggest trading partners for the bee industry, we should help each other. We could have fresh young bees in the spring; many beekeepers make splits through the spring and summer. These bees could be sold back to the Americans. It's time we put our differences aside and work together to build a stronger more profitable industry.

Ontario

Dan Walker

The Ontario Beekeepers' Association' Spring Meeting was held in mid March and included keynote speaker Keld Brandstrup, a buckfast queen breeder from Denmark. Ontario is importing new buckfast stock to incorporate into its breeding program so it was an opportune time to get Keld's reports on "What's Happening in Europe". Dennis van Engelsdorp, the Pennsylvania State Bee Inspector and one of the leaders in CCD research in the United States also attended and reported on the situation and their findings to date.

The Ontario Bee Breeders' meeting was held in conjunction with the Spring meeting. Keld reported on the buckfast breeding program and where it is going, Dr. Ernesto Guzman spoke on heritability and the effectiveness of selection, Alison Skinner and Janet Tam reported on Ontario's "Queen Breeders Project", and Doug McRory spoke on regulations relating to shipping queens and nucs to the United States.

Alison Skinner spent three weeks in February working with Marla Spivak and Sue Cobey in Northern California looking at Queen Producing Operations. Marla is quoted in the press as saying that these breeders are "controlling the genetics of our bees for much of the U.S." and she

"expressed interest in the possibility of developing a technical transfer team that is modeled after a program run by the Ontario Bee Breeders' Association". This reinforces what we've been saying for years. The Technology Transfer Program (TTP) has enabled Ontario to be self-sufficient in high quality queens and bees with characteristics that are continually selected and improved. Kudos to all who got this program going and those that have worked in it to get us where we are today. Thank you.

Maritimes

Tom Trueman

Winter is dragging on much longer than hoped here in the Maritimes. With snow still covering most of the ground and temperatures hovering below freezing its hard to believe than in a few short days we will be back in the bee yards getting ready for this years pollination season.

The general consensus last fall was that overall colony health was better than the fall of 2006 which should indicate lower wintering losses for 2007 however the winter season will likely take its toll. All beekeepers are anxiously waiting for the first warm days of spring when colonies can be assessed and 2008 truly starts for the bees.

The NBBA is continuing with its process of renewal, with meetings being held to review its governance structure and to develop a new strategic plan. All aspects of the organization are being reviewed. This is a laborious process but one that promises to reinvigorate the beekeeping industry in New Brunswick and will provide lasting benefits for all stakeholders in the industry.

The NSBA recently held their AGM which was well attended. Guest speaker Kirk Webster spoke to the meeting about his operation in Vermont and highlighted his management strategies with particular

regard to the development of varroa resistant genetics within his breeding program and his apiary. Mr. Webster's particular system may not work for every beekeeper but it is absolutely clear that improved genetics will play a vital role in the ongoing fight against varroa and in overall hive health. The NSBA is also in the final stages of

developing a beekeeping short course at Kingstec community college this promises to be of significant value to the industry.

The wild blueberry industry continues to be strong in eastern Canada providing an ever increasing demand for pollinators. There will

be a significant shortfall of local bees in New Brunswick requiring the importation of bees from Ontario. With the NBBA's revitalization it is hoped that the New Brunswick beekeeping industry will expand to meet this opportunity.

Manitoba Government Supports CHC Transition

Heather Clay, Chief Executive Officer, Canadian Honey Council

With the help of funding from Agriculture Agri-Food Canada (AAFC) over the past two years, the Canadian Honey Council (CHC) is now moving decisively in an exciting new direction. As a re-invented and re-invigorated national organization, we need additional staff to help our industry meet national and global challenges. Knowing that we need special expertise and skills for the immediate future, the CHC Board of Directors approached Rhéal Lafrenière, Provincial Apiculturist for Manitoba to help CHC through the transition. We are very happy to announce that he has accepted the position of Projects Coordinator and that the Government of Manitoba has consented to allow him to spend 75% of his work time on projects that will benefit not only Manitoba beekeepers but the entire national industry. This is a very generous gesture from the Manitoba

government and we are delighted to have such strong support.

As Projects Coordinator the plan is that he will develop and implement Projects to support the honey bee industry and help forge a new era of industry/government cooperation to benefit all Canadian beekeepers. In particular we expect to:

1. expand the "100% Canadian Honey" promotion campaign that was successfully test marketed in Manitoba last fall
2. raise awareness of federal and provincial governments and Canadian consumers of the value of honey bees to the Canadian economy, agriculture and the food chain
3. complete the On Farm Food Safety Project to bring positive changes to both the pricing and traceability of



- our products and the quality of food for Canadian consumers.
4. develop and test a "virtual office" for the organization
5. establish a national hive health database

Rhéal will work closely with the CEO in negotiations with industry and the federal and provincial governments. We hope to substantially increase honeybee R&D

funding that will advance industry research priorities on hive health, marketing, and bee breeding. Such activities will lead to better communication, more research, product traceability, improved testing and monitoring of bees and bee products. We welcome Rhéal to the new organization and we look forward to a dynamic year of transition.



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.**

Letter to the editor

The February 2008 issue of Hivelights included an article by Ron Miksha extolling the virtues of importing queens from Chile (Chilean Queen Breeding, Hivelights Vol 21 #1, pg 14). In his article Mr. Miksha states that, "Despite some really good results from exceptional Canadian bee masters, domestic queen production never covered more than ten percent of commercial demand."

I do not feel this statement accurately reflects Canada's beekeeping industry. Since 1987, when the importation of bees from the mainland U.S.A. was prohibited, many Canadian beekeepers have become self-sufficient by producing their own queens and bees. Are these beekeepers included in Mr. Miksha's statistic?

By independently raising their own queens, Canadian beekeepers have greatly increased the genetic variability of their stock, thereby reducing the risks inherent in depending on a few large queen producers. It is time-consuming and expensive to raise queen bees, but those that invest the time and effort are rewarded with the strength and safety provided by self sufficiency. Depending on beekeepers in other countries to supply us with queens creates weakness and risk; weakness in depending on others and the risk of importing pests and diseases. Raising your own queens is also the surest way of selecting genetic stock that best suits your area.

We now have a pattern in Canada where some beekeepers declare that if we can just import queens from Country X, they will solve all our problems. Then, as Mr. Miksha points out, once these queens are available, they complain of "...[h]igh rates of supercedure, drone layers and generally listless stock..." Every country runs the risk of accidentally importing new pests and diseases, so by continually increasing the number of countries from which we accept bees, we exponentially increase our own risk. Certainly we try and limit this risk using importation protocols but some risk remains.

This worldwide quest for cheap queens creates the greatest risk for the large number of Canadian beekeepers who have succeeded in becoming self sufficient. But they have agreed once again to put their investment in breeding programs at risk by allowing the importation of queens from yet another new source - Chile - in an attempt to accommodate their fellow beekeepers who, for various reasons, are unable or unwilling to raise their own queens. Doing so not only creates increased risk but makes it unlikely we can develop an export market for Canadian stock.

I acknowledge that queen rearing is not for everyone, and that there are efficiencies found by specializing in

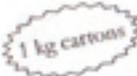
one task such as honey production. However, I believe importing bees into Canada requires a debate about how our industry should structure itself to succeed in the future. The importation and management decisions

we make now will determine how resilient and sustainable our industry is in the long term. By not examining the overall impact of our combined actions it is easier to ignore the effect our individual actions have on honey bees and their environment.

The dilemma our industry seems to be facing is that we cannot agree amongst ourselves how a profitable, sustainable beekeeping industry should operate. The danger in continually trying to accommodate those who want to find cheap bees and queens without having a long term plan is obvious. By making many, small, seemingly benign decisions and concessions, we may incrementally blunder into a future we did not expect or want.

For example, we could find our industry is suddenly forced into accepting the free flow of hives across our southern border with the U.S.A. In his last report, Alberta's CHC representative Ron Greidanus states: "The scientific reasons for keeping the border closed, is somewhat vague and out of date". Some beekeepers feel we should open the U.S. border to the importation of package bees and the free movement of hives immediately. I am surprised that this is being suggested despite the fact that the

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

 New Zealand Packaged Honeybees <small>Direct from Kiriati Honey on the North Island of New Zealand</small> <ul style="list-style-type: none"> * Pick-up or delivery * With or without Queens * Dates available throughout March, April and May of 2008. 	 Queens <small>We also supply Queens from both New Zealand and Hawaii.</small> <i>Call for pricing & availability</i> Scandia Honey 403-362-3951
---	---

U.S. beekeeping industry is suffering from a mysterious malady in which entire colonies disappear (Colony Collapse Disorder), and even though this malady has not flown across our border to any significant degree as predicted, and even though this malady appears to be connected with migratory beekeeping as practised in the U.S. , and even though the U.S. is now a net importer of packages bees, and even though the queens we currently import from the U.S. are described by Mr. Miksha as "... generally listless...", and even though the U.S.A. harbours Africanized bees and Small Hive Beetles not found in Canada! I feel these circumstances necessitate caution and are sound reasons for maintaining current import protocols.

Some argue that our industry is too small to determine its own fate, that our activities will be dictated by other entities such as the almond industry or government, that we are nothing but 'a leaf in the wind of other men's plans'. But then how do you explain the beekeepers in France successfully winning their fight against a multi-national chemical company to have the use of Imidacloprid banned? Apparently someone forgot to tell them that they do not control their own destiny.

I am proud that Canadian beekeepers continue to work together. I appreciate that as reasonable people, we have agreed to disagree on the border issue yet remain united within the Canadian Honey Council. I also feel reasonable people should respect the majority opinion in debates, even though it is tempting to insist one's opinion deserves greater consideration when it is in the minority.

Thank you for taking time to consider my opinions on this important matter.

Yours Sincerely,
 Ted Hancock
 Hay Meadow Honey
 Dog Creek, B.C.

CBRF Grants announced

CBRF Board of Directors

The Canadian Bee Research Fund (CBRF) was established to counteract the problems caused by severe reductions in federal and provincial funding for honey bee research.

It is a joint project of the Canadian Association of Professional Apiculturists and the Canadian Honey Council.

The CBRF is entirely supported by donations. Beekeepers influence the type of research that they want to support through participation of two members in the decision making by the board of directors of the CBRF. It is a unique partnership between CAPA researchers and CHC members.

This year the directors are pleased to announce a total of \$20,000 has been awarded for five research projects .

Dr. Rob Currie,
 University of Manitoba, \$3,000.
 Cultural and chemical treatments to synergize honey bee resistance mechanisms against the parasitic mite, *Varroa destructor*, and the diseases it vectors.

Dr. Steve Pernal,
 Agriculture Agri-Food Canada,
 \$8,000.
 Integrated Management of Nosema & Detection of Antibiotic Residues

Albert J Robertson,
 Saskatchewan Beekeepers Association,
 \$3,000.

Mite Tolerance in Selected Honeybee Lines and Attempted Correlation of Tolerance or Sensitivity with DNA and Viral Markers associated with CCD

Leonard Foster
 University British Columbia, \$3,000.
Apis mellifera Proteomics of Innate Resistance (APIS)

Karen Burgher-MacLellan,
 Acadia University, \$3,000.
 The use of real time PCR to identify the microsporidian *Nosema* spp. and other pathogens in honey bee (*Apis mellifera*) colonies in Nova Scotia.

Are you interested in a premium price for your Mono-floral honey ?

Canadian Medicinal Honey Company is supporting ground breaking research into the medicinal properties of Canadian Honey being conducted by Dr. Katrina Brudzynski at Brock University, St Catherines Ontario.

Our Goal: To bring standardized grades of Canadian medicinal honey to market.

We are currently testing mono-floral honeys for their level of antibacterial activity.

We need samples of your honey that are:

- Mono-floral
- Repeatable annual crop

For more information or to obtain a *Honey Sampling Kit* please contact:

Canadian Medicinal Honey Co. Ltd.
 Email: samples@CanMedHoney.com
 Tel: 250-308-0666

We are dedicated to bringing the healing powers of the hive to people everywhere

Bee Maid Honey Supports Bee Research in Canada

Gordon Marks, BeeMaid Honey, Winnipeg, MB

Bee Maid Honey is proud to announce that they will be contributing financial assistance to the following research projects this coming year:

Dr. Stephen Pernal, Agriculture and Agri-Food Canada, Beaverlodge Research Station, Beaverlodge, Alberta

A study on the integrated Management of Nosema & Detection of Antibiotic Residues. *Nosema ceranae* is an emergent world-wide pathogen, and it, in combination with *N. apis*, have been linked to wide scale depopulation of colonies in North America and Europe. This study will search for more effective chemotherapeutic controls for these parasites and generate a modern antibiotic residue dataset for fumagillin-based therapies.

and

Dr. Dave Shutler, Associate Professor, Acadia University Wolfville, Nova Scotia

A study of the immune response of Western honey bees to parasitism by Nosema and Varroa mites. Western honey bees (*Apis mellifera*) are exposed to a number of parasites. *Varroa destructor*, *Nosema apis*, and *N. ceranae* have particularly detrimental effects on colony productivity and survival. This study will compare honey bee immune responses to these three species of parasites as well as determine the effects of infection intensity and co-infection.

and

Anna Birmingham, MSc, R&D Specialist, Pherotech International Inc. Delta, BC

To develop and evaluate an inexpensive granular formulation of 2HHA (2-hydroxy hexanoic acid – a naturally occurring compound) that can be sprinkled on bottom boards to attract varroa and increase the effectiveness of mite boards.

Bee Maid considered project proposals in the area of apiculture or pollination research. Preference was given to the area of honey, and the production of pure quality honey in

the Canadian beekeeping industry. Bee Maid Honey is the marketing organization owned by the Alberta Honey Producers Cooperative Ltd. and the Manitoba Cooperative Honey Producers Ltd. Both member owned Cooperatives have lead the beekeeping industry in their support for beekeeping research.

For further information, please contact:

Gordon Marks
Bee Maid Honey Limited.
Phone: (204) 783-2240 Ext 235
E-Mail: gordonmarks@beemaid.com

P.E.I. opens up to queen bees

Eases restrictions on bee imports to protect blueberry crop

CBC News, PEI

P.E.I. has eased its restrictions on the importation of bees in order to help blueberry growers pollinate their crops.

The province worries there could be a shortage of bees on the Island within a few years. The province worries there could be a shortage of bees on the Island within a few years.

Until now, the import of bees was tightly restricted to protect local hives from diseases such as honey bee tracheal mites. Bees could only be imported from New Zealand, Australia, Hawaii and Nova Scotia.

Under the new rules, bees can be imported through a program called Capped Queen Bee Cells. The queen bees have to come from a recognized breeding program and be declared disease-free.

“Blueberry growers need bees in order

to ensure maximum pollination and fruit sets, to get the best yield they possibly can from their crop,” Chris Jordan, P.E.I.’s berry crop development officer, told CBC News Monday.

As the Island’s blueberry acreage has grown over the last five to 10 years, beekeepers have been able to keep up for the most part, said Jordan, with only a couple of years where there weren’t enough bees. The province is making the change to protect against a shortage in the future.

“On a long term basis, we see that the blueberry acreage is expanding quite rapidly still, and with the current number of bee hives we have available, we’ll definitely be in a shortage position in the next few years,” he said.

Allowing more diversity will help the bee population and blueberry growers, he said. The new program is effective immediately.





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 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

APINOVAR

Key Tool
for an Easy
Control
of
Varroa

You can now buy
directly
from the warehouse
(pallets of 150 units)
(819) 828-3396

Monitor easily

MADE IN CANADA

distributor:

F. W. Jones & Sons

Treat efficiently by the "flash" method

Updated IPM guide and new IPM schedule on our web site

reineschapeau_wd1.no1



**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



**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

Sustainable Bee-friendly Beekeeping

Hafan, Cae
Crici
UK Email: 101622.27



Background

The media has featured honeybee health more than usual lately, largely because of reports from the USA of huge losses of colonies. Random tests on honey show that some beekeepers routinely treat colonies with antibiotics. The worldwide spread of *Varroa* has forced beekeepers to dose hives with acaricides. And relatively recently in the history of beekeeping, bee disease bureaucracies were set up at public expense.

This small selection of bee health phenomena justifies the question: is modern framed-hive beekeeping, spanning little more than a century out of some three millennia of beekeeping, laying the foundations for its own demise?

In case it is, I describe here a bee-friendly way of keeping bees that is arguably healthier as well as being more sustainable in the broadest sense of the term. I hope to encourage readers to experiment with it — as I am doing alongside my hives with frames — and to join a network to exchange experience.

I started beekeeping in 2003 with five 11-frame hives and by 2006 had covered my start-up costs for 20 hives and all equipment. I was just considering starting a top-bar hive experiment when a friend interested in 'bee-appropriate' (wesensgemäß) beekeeping sent me a copy of chapters from a book which describes the hive of Pfarrer J. L. Christ (1739-1813).¹⁾

The main message in that article is that Nestduftwärmebindung, i.e. keeping in place the scents and heat of the brood nest, is absolutely essential for optimal colony health. Wild and skep colonies have this characteristic through the sides and top of the combs being fixed to the walls. Inter-comb cul-de-sacs, opening at the bottom, allow the controlled ingress of fresh air, the discharge of CO₂ and the maintenance by the bees of optimal heat and humidity in the nest. The integrity of the almost closed cavities is essential for creating a 'germ-free' atmosphere in the nest. By contrast, hives with so-called moveable frames constantly thwart the bees' efforts to maintain nest integrity, mainly by letting out the nest atmosphere and heat into voids above and beside the frames, and into supers. This stresses bees, increasing honey consumption and risk of disease.

Intrigued by the article's arguments, I decided to experiment with its beekeeping concept. The same friend then told me that the modern equivalent of the Christ hive is that of Abbé Émile Warré (?-1951) and sent me plans of it, which, however, were by Jean-Marie Frères and Jean-Claude Guillaume from L'Apiculture Ecologique de A à Z, not by Warré himself.²⁾ Their

Figure 1: Artificial swarming from an 11-frame brood box shortly before removing the 11-frame box: the brood with an advanced queen cell is above and the queen and field bees are in the Warré hive. In between is an adapter board and queen excluder.

boo
illus
bee
mai
a sh
thes
six

Wa
orig
boo
it w
to h
Pat
pub
the
Pec

War

In h
win
an a
hom

Two
per
gar
Dac
cou
be t
som
The
wit
aba
ther
was
and
anim
also
pp.

But
skep
by s
and
to 's
syst

ble and keeping

Dr. David Heaf
Hafan, Cae Llwyd, Llanystumdwy,
Cricieth, Gwynedd, Wales
Email: 101622.2773@compuserve.com



Figure 2: View through a hive body window (Frères & Guillaume modification)

book has a wealth of meticulously illustrated practical detail about Warré beekeeping, and their hive differs mainly in that each hive-body box has a shuttered window. I made some of these hives in the winter and populated six of them in spring/summer 2006.

Wanting fully to understand Warré's original beekeeping concept, I read his book *L' Apiculture pour Tous*.³⁾ As it was well worth translating, if only to have handy for quick reference, Pat Cheney and I translated it and published it as *Beekeeping For All* on the Internet.⁴⁾ He called his hive *The People's Hive*.

Warré's beekeeping concept

In his book, Warré recounts: "Each winter, all my childhood friends ate an abundance of delicious bread and honey, just as I did.

Twenty years later, I was the only person who had beehives. In some gardens, there was an abandoned Dadant or Layens hive, empty of course. The owners had let themselves be tempted by the advertisement of some on displays at agricultural shows. They believed they would do better with these modern hives. In fact they abandoned the only hive that suited them. [...] At my parent's home there was always plenty of honey for masters and workers, even for the farmyard animals. All our friends in the village also had their share each year". (Ref. 2, pp. 35 & 37)

But Warré regarded the practice in skep beekeeping of harvesting honey by sulfuring the bees as barbarous and thus did not advocate returning to 'skeppism'. Instead, he sought a system that was just as simple and

economical as skeppism so that bees would once again be commonplace in gardens. The ideal hive had to be easy to construct by anyone with elementary woodworking skills. The annual management had to require little time, be easy and need minimal and inexpensive equipment. The bees had to winter on their own honey, yet leave a reasonable surplus for the beekeeper. The method had to give rise to docile bees so that people would not be fearful of starting beekeeping.

Construction

A Warré hive is a tiered top-bar hive comprising a stack of at least two boxes each of internal dimensions 300 x 300 x 210 (deep) mm with eight 8 x 24 mm top-bars at 36 mm centres. The floor, a plain board, is notched to form a 120 mm wide entrance and has an alighting board nailed underneath. The internal dimensions of the box resulted from long researches involving the construction of some 350 hives, but are essentially developed from features, such as cavity size and shape as well as the number and dimensions of combs, embodied in the hives of Abbé Voirnot and Georges de Layens.

The box walls are at least 20 mm thick; mine 25 mm. The top-bars rest in 10 x 10 mm rebates, but, to ease construction, can just as securely rest on battens nailed 10 mm below the box rim. The bars have a bead of wax or starter-strip fixed to the centre line of their rough-sawn undersides and a coat of linseed oil on the planed upper surfaces. My first boxes had unnecessarily robust jointing. Warré recommends simple butt jointing fixed with nails. Each box has ample, firm handles. (Figure 1)

► pg 17

Fred Rathje Award

Ed Nowek, Chair of Board

The Canadian Honey Council presents the Fred Rathje Award each year to a person who has made a significant positive contribution of innovative, creative and effective effort for the betterment of the bee industry of Canada during the past year. This year Heather Clay received the Award at the CHC Annual Meeting held in Calgary, January 2008.

Heather has been involved with the beekeeping industry for the past twenty years and brought her many skills to the CHC almost ten years ago. It was her initiative that led us to where we are today. She always believed the CHC should be the one national voice for our industry and she has worked tirelessly to bring the industry together. She brought the concept of facilitated stakeholder meetings and helped us seek agreement on such divisive issues as honey bee importation protocols, labeling standards and to draw attention to the immediate concern of hive health. She has worked long hours preparing the documentation for the registration of the low risk pesticide oxalic acid. This has been a great benefit to the beekeeping industry. It was her vision for a strong national organization and her pursuit of funding assistance for the Future Direction project that encouraged the CHC board to make the decision to forge a new direction. This is a monumental change in the way we do business. We are grateful to Heather for her continuing energy and drive to help the CHC forge ahead to become the powerful organization that it should be.



Ed Nowek Chair of Board presents Heather Clay with the Fred Rathje award.



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 Lambert.....819-828-2549

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

► continued from pg 15

On the top box rests a layer of coarse-weave hessian sacking stiffened with flour paste. Above that is a 100 mm deep box, the coussin which we have translated as 'quilt', as this term conveys its function better and is not unfamiliar in this context. The underside of the quilt is covered with sacking and the top left open. It is filled with natural insulating material such as wood shavings, sawdust, straw or dried leaves. Apart from its insulating function this helps control humidity through absorbing excess moisture onto the large area of hydrophilic surface. This probably has a humidity buffering function. There is no condensation in winter.

On the quilt is a wooden ridged roof containing a board to keep mice out of the quilt and a ventilated cavity, which not only reduces solar heating of the top of the hive but also, so I am told, prevents the roof lifting off in strong winds. For various reasons, my first batch of roofs were on a conventional, not Warré, hive pattern, i.e. flat, containing a cavity ventilated in four directions and covered with recycled sheet aluminium. There are two arguments against this pattern.

One is that sheet metal has a high carbon footprint and therefore violates a criterion of sustainability. The second is that, according to Warré, the drumming of rain on flat metal-clad roofs disturbs the bees.

Warré discovered that the hive body height of 210 mm, under the conditions of natural comb development, is crucial to the ease of separation of the boxes at harvest. The square box and tall, narrow format results in a brood nest whose dimensions correspond closely to a natural swarm when suspended, and, in approximating to a cylinder, is thermally efficient compared with most modern hives. The unit is reminiscent of a hollow tree with the quilt forming a roof that has a thermal conductivity not too unlike rotting wood.



Figure 3: An acrylic Warré hive, casing removed. Photo: Marc Gatineau 5)

Management

Basic management needs only two visits a year and on only one of these is the hive really opened. A swarm or artificial swarm of at least 2 kg is introduced at the start of the main nectar flow and, if necessary, fed with diluted honey from the same apiary. Three boxes can be given at the outset to save adding another later.

If windows are used, comb growth can be monitored without lifting the hive (Fig.2), otherwise windows are of little observation value, increase the hive's carbon footprint and reduce its cost advantage.

Comb growth starts in the top box, continues as far as a bee space above the top-bars of the box below and resumes under the bars. An artificial swarm I hived in April 2007 extended to three boxes of comb by the

► pg 18

Beekeeping Safari

To South Africa with Robin and Stella Mountain
December 2 – 15, 2008
February 1 – 14, 2009

This Beekeeping Safari is for beekeepers from around the world as well as their non-beekeeping companions. While beekeepers are in the bee yard, an alternative activity will be available for the non-beekeepers.

Tour Price: US\$5495 per person sharing*
Single Supplement: An additional \$750.00

For more details and registration visit www.ntabatours.com
Email Robin at robin@ntabatours.com Call 1-866-466-8222.

Ntaba Tours



*This price is subject to change should the airfare costs increase significantly between time of quoting price and actual booking of air tickets.

September, similar to the situation shown in Fig. 3, despite it being the worst season in 30 years.

In a good season, further boxes may have to be inserted underneath. If an assistant is not available, this can be done with a simple fork-lift. (5) Mine was made mostly of scrap, but there was no escaping the £20 outlay for the pulleys and cord. Note that inserting boxes does not involve opening the hive, i.e. does not let the heat out. I have inserted boxes on busy foraging days without needing smoke. The bees seem wholly unconcerned, although Warré recommends smoking the hive entrance at every intervention.

The real hive opening occurs only at harvest, in my locality in late August or early September. The top box is gently loosened with the hive tool. The roof, quilt and cloth are removed and the bees smoked down into the box below. Any wax bridges to the top-bars below are sheared by gentle rotation of the box in both directions and the underside of the comb is inspected for brood. If there is no brood the box is taken for harvest by draining or pressing the comb. If the hive has extended to four boxes, the next box can be examined and removed in the same way provided that 12 kg of honey and two boxes are left for winter: the upper box with mostly honey and the lower with mostly comb and a diminishing brood nest. The rim and top-bars of the upper box are scraped clean, a new cloth fitted, the contents of the quilt renewed, the quilt and roof replaced and a mouse guard affixed for wintering. The wintering situation just described applies to the climate of lowland France. In colder climates, a greater weight of stores may be required, perhaps three boxes and, in extreme cases, insulation and wrapping.

In spring, the mouse guard comes off, a clean floor is substituted and a fresh box or more added underneath the two that overwintered. That is all.

Mobility of combs

Unlike in skeps, this hive is designed for removing comb if the beekeeper wishes. This is particularly important in countries where beekeeping legislation does not allow honeybees to build a bee-appropriate nest, i.e. to fix their comb to the sides of the hive, the importance of which is described above. But as with all top-bar hives, much greater care is called for when removing comb, because the comb attachments to the walls have to be cut with a thin, serrated knife and the comb, fixed to the top-bar, kept vertical at all times.

Warré commented on the so-called moveability of framed comb and said that he found cutting through the comb bridges in his hive easier than unsticking propolised frames. Another advantage of removing comb is to have some drawn comb spare for the various standard beekeeping manipulations. Accordingly, Warré describes a simple adapter cage for extracting honey from unframed comb in a tangential extractor.

However, reusing comb is not done to the extent that it significantly undermines the brood nest renewal process that is built into the Warré hive concept.

Roger Delon introduced a modification of the Warré hive by inserting a 3 mm thick stainless steel wire in the top-bars so as to pass round the three remaining edges of the comb. (6) This wire is essentially 'invisible' to the bees in that, unlike with wooden frames, they still allow a natural nest with comb touching the walls.

Although this counters Warré's aims of simplicity and cheapness – and stainless steel has a high embodied energy – it might be an acceptable temporary help to comb mobility while legislatures are catching up with the ideas of bee-friendly beekeeping.

Swarm control

Swarming is greatly reduced in the Warré hive because of its potentially infinite brood nest expansion and ample space for bees to hang under the developing comb. Most of the manipulations of beekeeping are possible with a Warré hive but only one additional manipulation is mentioned here, namely Warré's 'pioneering method' of swarm control. At the start of the main nectar flow, whether or not hive entrance 'beards' or other phenomena warn of incipient swarming, an entire colony may be artificially swarmed into three fresh boxes, the old brood destroyed, the honey harvested and the wax rendered. A colony with no brood to hold it back generally develops very rapidly and usually gives a honey surplus.

Varroa control

Frères and Guillaume recommended that, in combination with the pioneering method of swarm control, the colony spends a short time hanging in a decontaminator box fitted with a fluvalinate strip. With Varroa developing resistance, in the author's region this is no longer an option. Some Warré beekeepers put thymol, for example Apilife Var, in their hives. This risks undoing the whole point of Warré beekeeping, namely letting the bees maintain their health by suitably structuring their home. Reports that Warré hive mite counts are about one tenth those of framed hives in the same locality still need to be verified scientifically.

However, several beekeepers are letting their bees co-evolve with Varroa without chemicals. One has three out of three colonies entering their fourth season without Varroa treatment, so I am risking my six colonies that way, at least until the end of summer 2008, to see how things develop.

Warré's aims achieved

The Warré hive is easy and cheap to make. The management time and effort is relatively very little. The equipment required is minimal: a centrifugal

extractor is not required, although, if you have one, Warré gives precise instructions for extracting comb. The bees winter on their own honey. Sugar is fed only in emergency. Warré found that the bees, left almost entirely in seclusion, as indeed befits them, became so docile that he could work his hives veil-less with his spaniel sitting at his feet. A commercial Warré beekeeper corroborates the observed docility. 7)

Warré and other beekeepers have proved that honey from such hives is cheaper to produce than that from framed hives. The brood nest is constantly moving down onto new comb, therefore healthier. The bees themselves determine worker cell-size and drone cell numbers. It is natural, organic, bee-friendly, sustainable beekeeping.

Most modern experience with the Warré hive resides in France and Belgium with some in Germany, Switzerland and Austria. However, in January 2008 an English web portal for Warré beekeeping was set up.⁸⁾ This points to source material and introduces various modifications that have arisen since Warré's time.

It also links to a newly established English Warré beekeeping e-group and a web forum. Warré experiments are now starting in USA (including Alaska!), Canada, Spain and Sweden. Progress of the experiment described in this article can be followed on the author's web page. 9)

References

1. Thür, J. Bienenzucht: Naturgerecht einfach und erfolgicher. 2nd ed. Friedrich Stock's Nachf. Karl Stropek (Buchhandlung und Antiquariat), Wien, 1946. The essential parts of this are available in German on Bernhard Heuvel's sustainable

beekeeping website:

<http://www.selbstversorgerforum.de/bienen/bienenindex.html> and in English at <http://www.mygarden.me.uk/thur.pdf>.

2. Frères, J-M & Guillaume, J.C. L'Apiculture Ecologique de A à Z (Villemontgise-Dels-Monts, 1997) Ordering details at www.ruche-ecologique.org/. Currently available only as a bound printout, but a publisher is now working on a new edition and it will also appear in English.
3. Warré, E. L' Apiculture pour Tous 12th edition. (Saint-Symphorien, 1948). Downloadable free at lo.gui.free.fr/apiculture/apiculture.php/200-apiculture.html.
4. Warré, E. Beekeeping for All. Trans. Heaf, D. & Cheney, P. (Llanystumdwy, 2007) Downloadable free at www.mygarden.me.uk/beekeeping_for_all.pdf.
5. Gatineau, M. L'apiculture, telle que je l'aime et la pratique (Serres, 2006). Ordering details www.apiculturegatineau.fr.
6. <http://www.biobees.com/warre/delon.htm>
7. Gilles Denis: www.ruche-warre.com
8. <http://www.biobees.com/warre/index.html>
9. David Heaf's Warré page: www.mygarden.me.uk/ModifiedAbbeWarreHive.htm

BEEKEEPERS PROTECTIVE CLOTHING
SHERRIF

ref: S21 vest & veil

ref: S28 smock

ref: S41 jacket size: S to 5X

ref: S36 Apiarist All-in-One size: XS to 5X

The ORIGINAL

Apiarist suit as worn by Honey Queen Carl Collingborn

Manufacturer of Fine Beesuits for Optimum Performance The PROVEN PROTECTION

ALBERTA HONEY PRODUCERS CO-OP Ltd - www.beemaid.com
ALBERTA: ph (780) 962 - 5573 fax (780) 962 - 1653 cmarion@beemaid.com

FLYING DUTCHMAN - flydutch@telus.ca NANAIMO BC: ph (250) 390 - 2313 fax 390 - 5180

COUNTRYFIELDS - info@countryfields.ca NB: ph (506) 387 - 6804 fax (506) 386 - 2599

F W JONES SON Ltd - info@fwjones.com QUEBEC: ph (450) 248-3323 fax (450) 248 - 2592

B J Sherriff - England Ph + 44 1872 863304 Fax + 44 1872 865267

bjsherriff.com beesuits.com beegift.com e-mail: sales@beegifts.com

Sweet SCHIZOPHRENIA

the Sweet and Sour Physiology of Honey

Mike McInnes, MPRS, Edinburgh, Scotland and Ron Fessenden, MD, MPH, Bellevue, Washington

Honey has been known for centuries as a powerful anti-infective and is now being recognised in medical circles as the first choice dressing in post-operative, burns and other types of wounds. It is potentially effective in dressings, both in terms of its pathogenic activity, for bacterial and fungal infections and also for its healing qualities, where it promotes re-epithelialization (formation of new skin), and avoids the type of damage to skin epithelia caused by dressings that pull new skin from the wound on removal.

Recently on January 8th at a Symposium on Honey and Health in Sacramento, California, Dr. Shona Blair, from the University of Sydney, Australia, gave a presentation entitled: "The Grossly Underutilized Anti-microbial". She reported the results of a study that tested the antimicrobial effectiveness of several honey varieties against four categories of "problematic pathogens" including:

- Antibiotic resistant micro-organisms (including methicillin resistant Staphylococcus Aureus or MRSA)
- Anaerobic organisms (60 different species)

- Fungi (Candida and Tinea)
- Biofilms (micro-organisms that produce a protective slimy barrier that isolates them)

The study demonstrated wide variation in potency among different honey varieties, with effective mean concentrations varying from 2 to 16%. Dr. Blair stated that honey should be used as the "first choice dressing" and not as "last resort" which is often the case after months of unnecessary suffering, because it is effective against a wide spectrum of bacteria, fungi and biofilms, which are generally resistant to treatment. In her presentation, she reported that honey acted both as a prophylactic as well as a treatment. Most notably, honey is inexpensive and provides additional healing properties without "side effects". Dr Blair provided graphic examples of infected wounds that failed to respond to conventional antibiotic treatment over many months, but responded within days to treatment with honey.

Recently, another report on the anti-infective properties of Manuka Honey was provided by Professor Thomas Henle, head of the Institute of Food Chemistry

at the Technical University of Dresden. Dr. Henle, writing in Molecular Nutrition and Food Research, refers to the results of a Dresden study which "unambiguously demonstrates for the first time that methylglyoxal is directly responsible for the antibacterial activity of Manuka Honey."

Manuka Health chief executive Kerry Paul said the University of Dresden's discovery was highly significant for the honey industry and for consumers. "We now know the natural compound methylglyoxal is what makes Manuka Honey special." He followed with this, "As a result Manuka Health is proud to be the first company to market Manuka Honey indicating the methylglyoxal level." Mr Paul predicted the MGO Manuka Honey scale would become the standard against which Manuka honey would be measured in future.

Researchers at Dresden University analysed 40 samples of honey from various sources around the world, including six New Zealand Manuka Honeys. They found methylglyoxal levels in the Manuka honeys, including a Manuka Health product, were up to

1000-fold higher than the non-manuka products.

The Technical University of Dresden is one of the oldest and most prestigious German Universities, located in Saxony (<http://tu-dresden.de>). Professor Henle is a world-leading chemist in understanding how carbohydrates in food change in response to certain conditions. He has published more than 80 scientific papers in peer-reviewed journals since 1991. An abstract of Professor Henle's article is available from the Molecular Nutrition and Food Research website – <http://www3.interscience.wiley.com/cgi-bin/abstract/117891459/ABSTRACT>

It is frequently observed that physiological principles beneficial in one sphere of life activity may not be found to be so in another. In medical science, a beneficial principle or mechanism observed in one tissue or organ system may produce opposite or adverse effects in another.

In the journal Diabetes 2006, the authors of a paper published originally in France demonstrate this apparent schizophrenic nature of bioactive principles in certain honeys:

“... Our data suggest that an increase in intracellular methylglyoxal content hampers a key molecule, thereby leading to inhibition of insulin-signaling. By such a mechanism, methylglyoxal may not only induce the debilitating complications of diabetes but may also contribute to the pathophysiology of diabetes in general.”

Thus we must therefore conclude that Manuka Honey, a wonderful natural anti-infective honey, is not suitable for promoting all the metabolic benefits of honey discovered in recent years. Many of these benefits derive from the potent insulin signaling activity of natural raw unprocessed honeys, namely their ability to stabilize and lower blood glucose, lower H_{A1c} – a marker of poor glycaemic control, lower triglycerides, lower pro-inflammatory prostaglandins and thromboxanes, improve immune system markers, improve memory processing during REM sleep, and improve good quality sleep and recovery physiology via the HYMN Cycle – the Honey/Insulin/Melatonin Cycle.

Bee Maid Honey Report

March 2008

Lorne Peters, Peters Honey Farm, Kleefeld, MB

Bee Maid Honey recently announced the recipients of this year's 50th Anniversary Annual

Scholarship Awards. There were a number of excellent applications received, representing students from both the Alberta and Manitoba Honey Cooperatives' members families. After careful consideration, the Scholarship Committee was pleased to announce this years recipients are, Maggie Van den Berg from Spirit River, Alberta and Kristopher Martens from Grunthal, Manitoba. Congratulations!

Bee Maid Honey is proud to continue to support research in beekeeping in Canada. This year, Bee Maid will be providing financial assistance to three projects. Preference was given to the area of honey, and the production of pure quality honey in the Canadian beekeeping industry. Bee Maid is proud to support beekeeping research in Canada. Please see details of these projects in the Press Release - "Bee Maid Supports Bee Research in Canada" in this issue of Hivelights.

We are pleased to welcome Mr. Greg Mohr to the Bee

Maid family. Greg joins Bee Maid as our new Director of Sales and Marketing and brings over 25 years of experience in sales and marketing in the Canadian retail sector. Greg will be based out of the Spruce Grove, Alberta office.

This summer and fall the Mennonite Heritage Village Museum located in Steinbach, Manitoba is planning a Beekeeping Exhibit entitled: "Honey-the Story of Beekeeping on the Canadian Prairies". The exhibit will run from June 26 to November 30, 2008 and will provide a fascinating look at the history of beekeeping in Western Canada over the past 150 years. Canadian Honey Council can trace its roots back to all the honey cooperatives across Canada in the 1930s and Bee Maid is the result of an idea to join the honey cooperatives from Saskatchewan, Alberta and Manitoba in the 1950s. Bee Maid Honey is proud of its heritage and is pleased to be a sponsor of this exhibit and will be offering a special commemorative glass jar of Bee Maid creamed honey, for sale at the museum for the occasion. We urge all beekeepers to visit the museum and to take note of the Grand Opening of the Exhibit on June 27 as part of the Manitoba Beekeepers Assoc summer Field Day.

Call for Photographers and Writers

We are looking for:



Stories
Photos
Cartoons
Fun stuff too

Make Hivelights your magazine.

The Best photo submitted
will be printed on our front cover.

Send entries to editor@honeycouncil.ca

Classifieds

For Sale

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

For Sale

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

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

300-500 Hives on pallets. Nicola Valley Apiaries. 250-378-5208

Wanted to Buy

Buckwheat honey in drum.
Contact Henry Nauta phone 905-640-1564, fax 905-640-7479

For Sale

Beekeeping Operation BC
1500 colonies and equipment
FOR SALE: Beekeeping operation located on the Alaska Hiway, retail sales, 1500 live colonies 5 high. 10 acres of land with house, warehouse with extracting plant, 40X 40 building for over wintering, beehive manufacturing equipment. All or in parts. For more info: VAN HAN APIARIES, Rick at (250)789-3428 or Dale at (250)789-9113

For Sale

AUSTRALIAN and CHILEAN QUEENS
Arrival Dates: through April and May.
Shipping from Toronto to major Canadian centres. Confirmed orders by mid March.
Contact: Peter Mewett, RR 4, Stirling, Ontario, K0K 3E0
Tel: 613-395-3225 Fax: 613-395-1835 Email: pmewett@hotmail.com

Canadian Beeswax Chandlers Guild

Recently a few beeswax chandlers formed a "Canadian Beeswax Chandlers Guild" to establish an industry standard for quality, affordable beeswax candles. Chandlers have been frustrated over the years by the variable quality of beeswax offered by beekeepers. The production of quality beeswax candles requires a consistent supply of quality raw material. To achieve their goals, beeswax chandlers request the co operation of Canadian beekeepers.



For beekeepers who render their cappings they ask that cappings are:

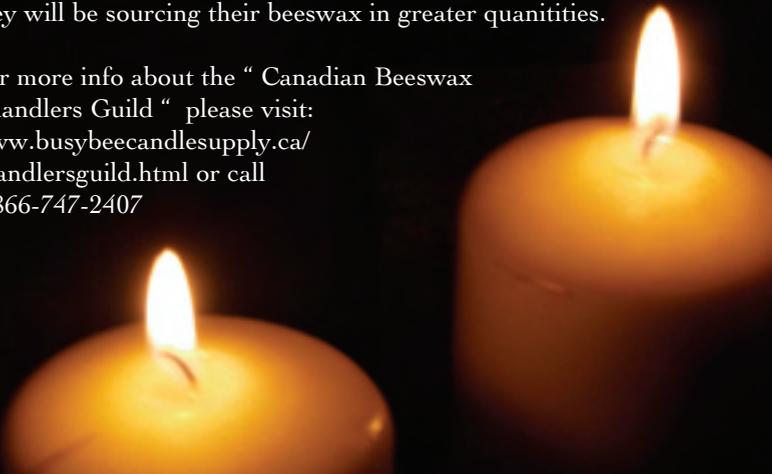
- rinsed with warm water to remove the remaining honey.
- heated not more than 74° C (165° F).
- heated using only stainless steel equipment.
- heated for a short period of time
- protected from contact with heating elements

For beekeepers who sell cappings in barrels they ask that the cappings be rinsed with warm water to remove the remaining honey.

Sometimes less is more. By simplifying the process they hope that the beekeepers' cost will decrease and in turn increase the supply of beeswax suitable for making quality candles. While lower quality beeswax may be suitable for creams, lotions, lip balms, and furniture polish, a higher quality is required for beeswax candles.

Members of the Guild are willing to pay a fair price for a quality product. As the price of honey fluctuates and profitability becomes uncertain, they encourage beekeepers to look to beeswax as a valuable resource. The extra effort in caring for wax will insure higher prices from chandlers for quality beeswax. As the Guild grows they will be sourcing their beeswax in greater quantities.

For more info about the "Canadian Beeswax Chandlers Guild" please visit: www.busybeecandlesupply.ca/chandlersguild.html or call 1-866-747-2407



Honey and Spice:

A natural fit for McCormick & Company

Heather Clay, Chief Executive Officer, CHC

In the changing world of business it is no surprise to see US companies eyeing Canada as a potential for business expansion. McCormick & Company a US based herbs and spice company has announced the acquisition of Billy Bee Honey Products of Toronto, for \$76.2 million Canadian dollars. This is one in a series of McCormick & Company acquisitions in the last five years, including Lawry's and Adolph's seasoning, Thai Kitchen and Simply Asia brands making it the largest spice company in the world. The purchase of Billy

Bee Honey Products is part of the company strategy for growth through the acquisition of well known brands.

Angie Francolini, President McCormick Canada Inc says "McCormick & Company has been selling herbs and spices in Canada for 125 years. We plan to build on the trust developed by the Billy Bee and Doyon brands. Honey is a unique flavor and a healthy way to add sweetness to food. It is a natural fit with our companies' products of herbs and spices. Our marketing team sees merit in building on the history

and heritage of honey and spices."

What will this mean for Canadian beekeepers? Francolini replied "We are growing our business through sales of innovative products. There will be a benefit from the higher demand for honey as we expand our products and increase sales." Francolini is impressed with the quality of Canadian honey and says "It will form a big part of our procurement". The current plan is to stay in the Toronto facility but if business grows then a relocation or expansion may be considered.

Regarding the business of blending imported honey, she replied "It is too early to comment". As Canada's largest packer and a significant stakeholder in the honey industry, the new management recognizes the

issues and is prepared to participate in discussions with the CHC.

McCormick & Co has demonstrated an ability to acquire and maintain smaller Canadian companies. They bought Club House of London Ontario in 1959, renamed it Club House Food Inc and still operate from headquarters in London.

It is business as usual at Billy Bee and Doyon. Although the Grossman family and David Sugarman, long standing identities in the Canadian honey packing industry are leaving the scene, a new team of committed personnel will be running the business.

Beekeepers wanting more information on honey pricing and market conditions can call Dennis Luc at 1-800-789-4391.

Mite Away II™



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

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

*More Brood
More Bees
More Honey**

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

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

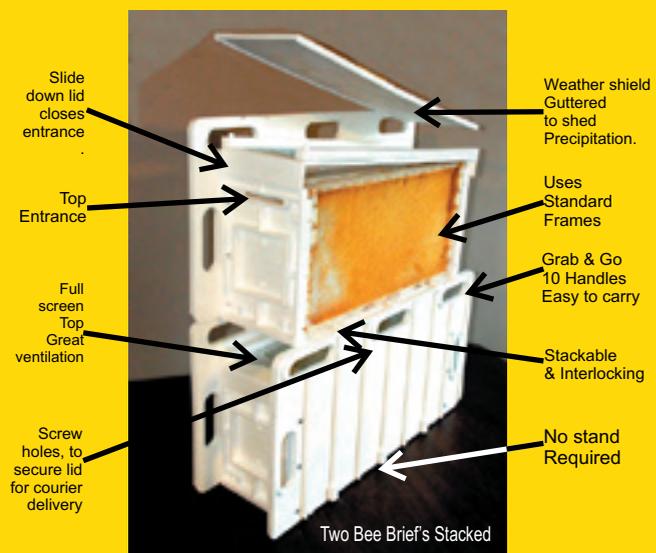
Recommended by the CCD Working Group

"We're in the Bee Protection Business"

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

The Bee Brief™

High Speed - Drop, Grab & Go - All Weather Nuc Box



Become Self Reliant for Queen Production
& Colony Expansion

Royal jelly triggers queen genes

Anna Salleh, ABC, Canberra, Australia

Royal jelly determines which bee larvae turn into queens by boosting the activity of particular genes, say Australian researchers. They say the findings could provide clues on how the environment interacts with genes to produce obesity, longevity, sterility and brain disorders in humans.

Molecular biologist Dr Ryszard Maleszka and colleagues from the Australian National University in Canberra report their findings today in the journal *Science*. "The larvae that develop into workers and queens are genetically identical," says Maleszka.

Yet he says those fattened up on royal jelly become fertile queen bees and are much larger and longer-lived than the rest that turn into sterile workers.

The researchers wanted to test the idea that royal jelly controls queen and worker development via epigenetics.

Epigenetics involves chemical modification of the genome to change gene expression, and provides a way for the environment to affect an organism's genetics.

Some scientists think epigenetic factors explain why psychiatric diseases such as schizophrenia don't always appear in both identical twins.

Experiment

Maleszka says the sequencing of the honey bee genome in 2006 revealed genes that mediate epigenetic effects in mammals. One of these genes codes for the enzyme DNA methyltransferase (Dnmt3) that in mammals suppresses the expression of particular genes by attaching a methyl group to them.

The researchers tested what happened when they silenced the Dnmt3 gene in hundreds of larvae.

When the Dnmt3 gene was silenced,

most of the larvae turned into queens. When the Dnmt3 gene was active, most of the larvae turned into workers.

"It was a beautiful switch," says Maleszka. "The results were so spectacular."

Royal jelly feast

They then compared the pattern of gene expression in larvae fed royal jelly in the hive with that in larvae whose Dnmt gene was silenced. "The same genes were being activated by royal jelly as when the DNA methylation was silenced," he says.

Maleszka says the findings provide strong evidence that silencing the epigenetics mimicks the effect of royal jelly. "This is the clearest demonstration that DNA methylation

is involved in determining a very specific characteristic," says Maleszka.

Maleszka says he doesn't know how royal jelly silences the Dnmt3 gene but speculates the insulin signalling pathway is involved.

Future research

He says the next step is to study whether Dnmt3 is involved in controlling bee brains and the social behaviour of workers and queens.

Maleszka says such research will give clues to scientists who are looking for epigenetic factors in human obesity, infertility, longevity and brain disorders.

A spin-off from the new work is that the team has developed a way of producing queen bees in a test tube, without using royal jelly.

Maleszka says this is of great interest to US beekeepers who want to get "clean" queen bees to help re-establish colonies devastated by Colony Collapse Disorder.

<http://www.abc.net.au/science/articles/2008/03/14/2188603.htm>

Behaviour — The future

Editor, Hivelights

The fascinating world of epigenetics is becoming better understood as researchers delve into the genome and gene expression. Dr Maleszka and his team are enthusiastic about their work and forwarded a response to our questions about the future of modifying bee behaviour.

Editor: Is it possible to identify chemical tags that modify specific forms of behaviour such as hygienic behaviour or grooming?

Dr Maleszka: Yes, I believe that sooner or later we should be able to identify

those genes that are critical for various behaviours and to determine if they are methylated or not under different situations.

Obviously, it is not an easy and straightforward process because complex behaviours are driven by networks of interacting genes. Luckily, the newer genomic technologies make it possible to dissect such interactions.

Q: Are tags for specific forms of behavior heritable, i.e. passed on to the next generation?

A: Yes, the pattern of methyl tags for a given gene is heritable

Q: If tags are found, do the techniques exist to mimic those tags in other bees?

A: No, at this stage there are no techniques to control the methylation pattern for a given gene. We can only modulate this process globally by silencing the enzymes responsible for adding or removing the methyl tags.

Q: Although the article discusses positive aspects- could chemicals such as the new systemic pesticides

add or remove tags that might cause negative effects to navigation or social behaviour?

A: Yes, environmental insults can affect methylation patterns. In fact, evidence in mammals suggests that smoking, toxic compounds, drugs, etc, can lead to changes in methylation and consequently to diseases.

Russian stock

Serious breeding for improved genetics
5 years of selection
Eggs, cells, queens, breeders
Wide gene pool - 14 families
Closed population breeding
We can ship air cargo anywhere in Canada

Pilgrim honey house -
François Petit
Cell : 613-577-6790
Toll-free: 1-877-249-9523
Brfrank@pilgrimventure.org

www.pilgrimventure.org/pilgrim_honey_house.htm



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

Queens From Chile

Canadian Distributors - Our 2nd importing year!

Mated Carniolan Queens From Chile

CFIA Inspected Stock



"In Manitoba, we have experience with using queens from Chile in our commercial operations in the 2007 honey season and are currently overwintering these colonies outside. We look forward to our 2nd importing year for distribution in 2008."

LIMITED SUPPLY - Available April through July

Ensure your order and quantities for 2008!

Inquiries and questions, contact us:

OAKNOOK HONEY PRODUCTS LTD

Dauphin, Manitoba

Phone: (204) 548-4060

Email: info@oaknookhoney.com

KEMNAY APIARIES

Brandon, Manitoba

Phone: (204) 725-1479

Email: mervmalyon@rfnw.com

We've Bee'n There!

Visit: www.oaknookhoney.com/ChileanQueens.html

Toxic tutu honey scare frustrates beekeepers

Laura Basham, The Press, NZ

Commercial beekeepers are concerned consumers will be put off buying honey because of the toxic honey scare.

So far 10 people have become sick after eating comb honey produced by a Whangamata hobbyist beekeeper, with three of them hospitalised.

The toxic honey was produced as a result of bees feeding on honeydew containing poison from native tutu bushes.

The New Zealand Food Safety Authority website identifies Coromandel, Eastern Bay of Plenty and the Marlborough Sounds as areas which regularly produce toxic honey.

Marlborough Beekeepers' Association president Darren Clifford said he was concerned that an unregulated hobbyist selling comb honey could affect the whole industry.

"Most commercial producers knew what they were doing and were stringently audited", he said. "However, there were no regulations and no controlling authority for hobbyists, It's frustrating, I've been saying for last 10 years this will happen. You get green and happy

people producing their own honey and they have a bit extra that they sell, but there's no regulation whatsoever."

Clifford, whose business has 2500 bee hives including in the Marlborough Sounds, said his company did not take comb honey from areas where there was any risk. Instead it took from clover and blue borage areas where there was no risk.

Consumers could be assured about buying safe honey if they bought from supermarkets or other reputable suppliers, he said.

He was concerned at the popularity of consumers buying from roadside stalls and markets without knowing the risks. "People want to buy straight from the producer but there are risks," he said.

He knew of other areas beyond the Marlborough Sounds where tutu bushes grew, such as in the Nelson Lakes area.

The New Zealand Food Safety Authority is investigating the beekeeper, who runs Projen Apiary at Whangamata. He employs no staff and has been in the business about five months.

NZ Beekeepers Manage the Risk of Toxic Honey

A number of people have been killed, incapacitated and hospitalised over the years from eating toxic honey in NZ. The last recorded case from commercial honey was in 1974 involving 13 patients. There have been nine cases since 1974 with the last known poisoning occurring in 1991 in the Eastern Bay of Plenty area.

Symptoms usually develop within three hours of consumption. These honey toxins can be lethal, or make a person very sick. As little as one teaspoon (approximately 10ml) of toxic honey can have a severe effect on the human nervous system.

Beekeepers offering honey for sale in NZ are required to complete a declaration relating to the time their hives were producing honey or bee products, for an area up to 3km from their hives.

Beekeepers in NZ are required to manage the risk of their honey containing tutin by either removing hives and supers containing honey for human consumption before the risk period, or by closely monitoring the tutu, vine hopper and foraging conditions in the areas within a 3km radius around the apiary while honey is being produced.

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 And No Propolis
- Attractive Durable Package

To purchase, contact your dealer.
For more information call
toll-free: 877.901.4989

 **ROSS
ROUNDS**™

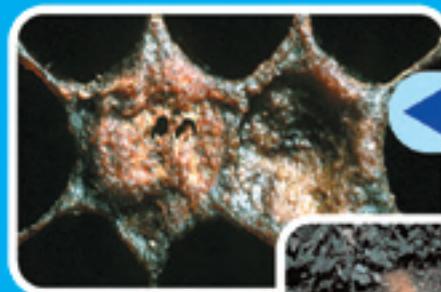
www.rossrounds.com
PO Box 11583, Albany, NY 12211



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

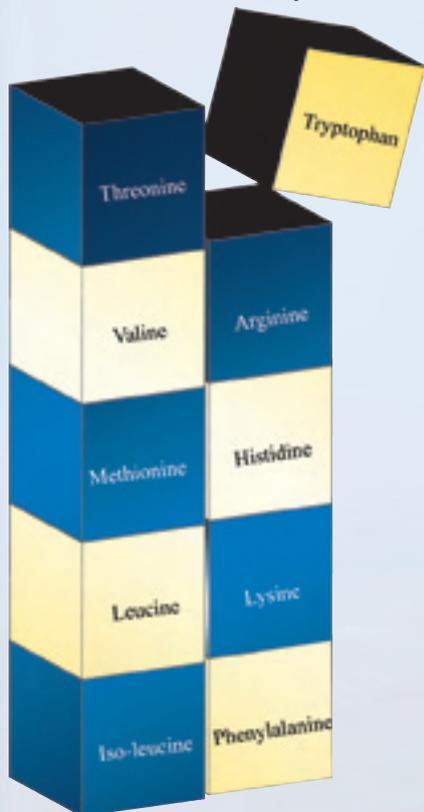
More Convenient Than Ever!

Bees require proper nutrition to produce new bees and to increase longevity. Here at Mann Lake we have been involved in bee nutrition for over 20 years - supplying the best feed products at the most economical pricing available!

**Don't be taken in by hype and high prices.
Nutrition is based on good science.**

Amino acids are the building blocks of protein. Different protein sources contain different amino acid levels; and it's for this reason that a mixture of protein sources should be included in a pollen substitute. A correct amino acid balance is the key to efficient utilization of protein.

Protein quality is determined by its level of essential amino acids. A shortage of any one essential amino acid makes overall protein utilization by the bee less efficient. (Example the bees require 4% Iso-leucine and if the current feed you are using only has 3% Iso-leucine that means the bees can only utilize 75% of the available protein.)



800-880-7694
www.mannlakeltd.com

Pre-Made Patties



Dry Pollen Substitute products are best used in secluded areas and during weather conditions conducive to bee flight. During high humidity or damp conditions, pollen patties are a better option than dry feed.

Mann Lake Ltd.
800-880-7694
www.mannlakeltd.com

Authorized Dealers:

Manitoba Cooperative
(204) 783-2240

Alberta Honey Producers
(780) 962-5573



Wanted

your quality honey call Dick at GloryBee Foods Inc. Eugene OR 1-800-456-7925.

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.



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



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

API Nutrition Ltd.

Quality Bee Pollen from Peace River, Alberta
or Rural Ontario

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

WWW.COUNTRYFIELDS.CA



CAPILANO LABONTÉ Inc.

A New Beginning!

HONEY WANTED

530, rang Nault Victoriaville

PH: (819) 758 3877 FAX: (819) 758 9386



SECURE THEIR FUTURE

Get control of Varroa mites with Apistan.

- Up to 100% Varroa control
- Cost effective and convenient to use – one treatment gives a full year's protection
- 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



THE BEST DEFENSE

*For additional information contact your favourite bee supplies company
or call 1-800-263-2740.*

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

CENTRAL
Garden & Pet

