2008 3

August 2008
Vol 21 # 3

HiveIrghts

www.honeycouncil.ca
Canadian Honey Council

Losses of bee colonies in Germany

Honey Bee Losses in Canada

Improving Honey Quality

Plants for Bees

Sand and Bees' Wax make Carvable Blocks

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 403-398-2914.

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

HiveLights

August 2008 Vol 21 #3

Honey bee on canola flower. In southern Alberta 65,000 colonies of honey bees are used for pollinating hybrid canola.

Table of Contents

Illustrations

Canadian Honey Council

Heather Clay, Chief Executive Officer, CHC

Honey bee losses

The final number for colony losses across the country was 35% with a total of 213,000 dead colonies. Alberta experienced the most number of dead colonies where 110,000 colonies died over winter and spring. These losses follow several bad years of low honey prices and have been devastating for many beekeepers. As a result the CHC has initiated a national request for $50 million assistance from Agriculture Agri-Food Canada (AAFC). The disaster relief funds will be used to help beekeepers:

- stay in business
- negotiate for replacement colonies
- activate alternative sources of bees in Canada.

The executive directors met with the minister's staff in June and plan to return to Ottawa in August. There is no word yet when the relief will be made available.

Research Funding

The CHC has requested a further $10 million from AAFC to assist future research on bee diseases. An announcement on how the proposed new Growing Forward plan will help beekeepers is expected next month.

Education kit

A School kit for teachers K1-6 is under construction. The focus will be on gathering resources for a sequence of topics in the early grades. At the same time we will gather information and material for later grades and topics. Anyone with resource material or educators who would like to have input are requested to contact the CHC office 403-398-2914 by September 1st.

Emergency Registration Amitraz

CHC and provincial apiculturists Medhat Nasr and Rhéal Lafrenière are working together on a submission for Emergency Registration of amitraz. This product is used in Europe and New Zealand for varroa mite treatment but is not registered in Canada. There is only a slim chance that the Pest Management Regulatory Agency will approve the product, despite its good track record in other countries. We are working hard to give beekeepers one more option for fall treatments.

Changes in the Packing Industry

Capilano and Labonte have ended their joint packer venture. Capilano Canada Inc has emerged as an independent company with Canada's second largest market share. At the Canadian Beekeepers Convention in December, General Manager Peter Scott has been invited to present on world markets and the increase of export of Canadian honey to Australia.

Billy Bee Honey was bought by McCormick Canada and Company. The operation is scheduled to move from Toronto to London Ontario in April 2009. Brian Rainey, Vice-President Sales & Marketing McCormick Canada will give a presentation on the future for Billy Bee Brand at the Canadian Beekeepers Convention in Niagara Falls 10-13 Dec.

BeeMaid Canada's largest co-op packer has a new CEO. Guy Chartier takes the place of Gordon Marks who retired in June after 35 years in the honey business. Guy will make a presentation on "Supermarkets- is bigger really better?" at the Canadian Beekeepers Convention in Niagara Falls, 10-13 Dec.

Honey Prices

Beekeepers selling the last of their 2007 crop are happy to report that honey prices are in the $1.35-$1.40 range. This is good news for the industry and there is an expectation that barring any crises, the price will hold for the 2008 crop.

C-BISQT

Funding approval has been received to continue the C-BISQT project. We expect to have the manual reviewed for technical merit by the Canadian Food Inspection Agency. After the internal review it will be subjected to a national Technical Review in a face to face meeting with provincial food safety experts. We expect to complete the process by the end of the year.

Canadian Beekeepers Convention

CHC is teaming with Ontario Beekeepers Association and Canadian Association of Professional Apiculturists to bring you a 3 day symposium with research presentations, workshops and field trip, 10-13 December at Niagara Falls View Hilton Hotel. Early bird registration is October 31st. A registration form is printed in this magazine and more details can be found on www.ontariobee.com or www.honeycouncil.ca.

2008 Directors
Canadian Honey Council
Conseil Canadien de Miel

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

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
podolski_honey@inetlink.ca

Director
Kevin Nixon
Alberta Beekeepers
RR 4
Innisfail AB T4G 1T9
403-227-0092
kenixon@yourlink.ca

Director
Luc Desaulniers
Alberta Beekeepers
Box 613
Falher AB T0H 1M0
780-837-0416
beehive@serbernet.com

CHC OFFICE
Chief Executive Officer
Heather Clay
Suite 236
234-5149 Country Hills Blvd
Calgary AB T3A 5K8
ph 403-208-7141
fax 403-547-4317
chc-ccm@honeycouncil.ca
www.honeycouncil.ca

Regional Reports

Maritimes

Well another busy season is well underway. Favorable weather during the Blueberry blossom has resulted in good pollination in most areas. Colony strength was reported to be good; this coupled with fairly good weather in early summer is giving hope of a good honey crop. Maritime beekeepers are busy splitting hives in order to make up for over wintering losses as well as to meet the increased demand for colonies from the blueberry industry for pollination.


Tom Trueman

As with the rest of Canada over wintering losses still plague the maritime industry although overall numbers were better than last year they are still well above acceptable levels. In an industry already working on razor thin margins continued high losses represent an unsustainable financial situation. It is imperative that new management strategies be developed that address over wintering losses, mite control and other emerging threats to colony survival. One of the cornerstones to long term viability is improved genetics within our resident bee population. To this end a number of maritime beekeepers are working with queen breeders in other provinces to import selected genetic traits into the maritime region. A focused breeding program is essential to the survival of the industry.

Ontario

Overall Ontario wintering losses are being reported at 25% to 35% depending upon whom you speak to. It is looking like 30% is more realistic. Many Ontario beekeepers found some of the hives that made it through the winter were weak and were slow to come ahead. Many of those that were not hit with high losses last year suffered losses this year. Often those that had high losses last year have low losses this year. So the pattern seems to be high losses the first year, lower losses the second year and let us hope the swing is back to normal the third year.

The Ontario Beekeepers'Association's Technology Transfer Program team (TTP) has been out resampling those beeyards identified with nosema last year. Last year, 24 of the 25 beekeeping operations sampled had nosema. Of the 24 samples sent for analysis 11 had nosema ceranae. The TTP team

are looking at the methods that were used to apply Fumigilin - B last fall and how effective they were. To quote the TTP A In most, but not all operations with poor wintering we found a high prevalence of nosema spores and high spore counts.

Ontario Queen and Nuc producers are reporting that their overwintered nucs are sold out once again. These nucs have a great reputation for expanding quickly and producing a strong honey crop. Some are even being shipped to southern Alberta beekeepers who are reported to be looking for more next year. Sales of Ontario queens have been strong as have sales of queen cells. Ontario queens are being shipped to most provinces this year. Some queen cells are being shipped interprovincially using Air Cargo. At least one queen producer is overwintering queens in small nucs and selling the queens at a premium in the spring. Again, sold out. The results of Ontario's bee breeding program and all the hard work of the breeders and the TTP are paying off.

Plans for this December's joint Canadian Honey Council and Ontario Beekeepers= Association meeting in Niagara Falls, Ontario are moving ahead quickly. There are a lot of great speakers coming, vendors from Canada and the US are invited to display their wares and beekeepers from across Canada (probably some from Michigan and New York states too) are coming, and there will be great deals on rooms too. The meeting should be well attended. Hope you can come.

Manitoba

Our spring has been long and cold. May brought cold days and frosty nights; many trees didn't leaf out till the first week of June. The cool weather extended the dandelion flow. The crops are 2 to 3 weeks behind. Some canola blossomed the middle of June giving hives a chance to catch up. Many producers have reported high losses. One tenth of the producers surveyed representing, 49% of the hives had 28% mortality. Personally I think it is much higher, many producers won't admit to having high losses. In my own operation losses were over 40% .

Bruce Podolsky

I often think of the guys with dairy barns & egg producers who know their income/animal ratio at any given time of the year. They know how many eggs or litres of milk that animal will produce on any given year. They can walk into a lending institution with their contract and receive the money needed to build a state of the art facility. I'm not saying I want a contract; I do far better selling my products on the open market. We make plans for the following year 6 to 8 months in advance. We feed and treat our hives with the best products, and hope our neighbouring beekeeper does the same. We go the extra mile, spend extra $$$ to ensure that we have healthy populous hives for the coming season. What do you do when check your hives in the spring and find high losses, this year up to 80% in some areas? Some producers have had high losses for 2 or more years. How are they expected to stay in business? Treatment used in the past may no longer be working and some of them we never should have used. Replacement colonies or package may be too expensive or poor quality. One bee inspector told me this spring he looked at hives that were polluted with mites and AFB. This producer was selling nucs and splits. This should never happen, but producers pay top dollar for them. Why? Because we have no options. If the border was open for packages we could buy all our replacement packages for $50 each. We would have strong hives, produce large crops, be able to upgrade equipment and move forward instead of struggling to hold our own. Our industry needs help and we need it NOW. I encourage each of you to contact your local MP's and tell them what is happening. Government will take action when we make enough noise. If the beef industry had losses like ours this country would be in an up roar.

Corey Bacon

Saskatchewan

Spring was definitely a late arrival in Saskatchewan this year. As such, early indications and expectations of average winter and spring loses were not realized. Winter losses again were substantially higher than the long-term provincial average but were lower than average losses reported in most other provinces. The Northeast region experienced losses up to 55% which was somewhat less than their average 85% in 2007. This year's culprit again appears to mite levels not under control and poor weather throughout winter and into spring. Although spring was late and cold, mid May and June saw a

► pg 7

big turn around with the weather. The bee season began a couple of weeks behind but the crops (of course) were seeded on schedule. Conditions were ideal for spring build-up of surviving colonies as well as for nuc and queen production.

Kevin Nixon

Going into the honey flow, most colonies will have caught up to full strength. Some areas, particularly in the south had poor moisture conditions going into spring but received some timely rains. In the north most areas had adequate moisture going into spring but there are pockets of poor germination of some of the canola and others with crop deterioration. Timely rainfall will be needed in most areas if beekeepers are going to realize a bumper crop this season. Honey prices offered to SK beekeepers continue to hold steady the last few months with beekeepers seeing $1.30 - $1.40/lb. The large inventory of honey in beekeepers hands has virtually disappeared with the better prices and indications and expectation are that prices offered to SK beekeepers will remain steady and increase going into fall.

Alberta

Once again beekeepers in Alberta have had a huge winter loss. The situation is very similar to last year. The average loss in the province is 30%, which ranging from as low as 15% all the way up to 80%. Some people who were hit hard last year are getting hit again and some are not. Some who did not get hit last year are being hit this year. There seems to be neither rhyme nor reason, except that we do know we are having extreme issues trying to control the varroa mite. The mites have become resistant to both of our registered treatments, Apistan® and Checkmite+TM.

Luc Desaulniers

Spring was very hard to deal with. We had some cool temperatures early on and then we had a hot spell, up to 30 celsius in some areas with no pollen or nectar sources except what we were feeding the bees. Then we had about 6 more weeks of winter. Rain and more rain fell in May and early June in the southern half of the province. We have had great moisture in most areas, of course there are still some dry areas as well. The dandelion bloom was fairly short because of all the moisture. Most crops have been set back due to late seeding because of rain and lack of heat units for growth. All the pollination contracts were filled but it is suspected that most contracts will be paid at a lower rate due to the hive strength being low. The move in period for pollination was fairly dry so there were no problems with trucks getting stuck in the middle of the night.

The Peace River area of Alberta suffered very high losses this year- 80% in my case. With most of my hives dead I have taken a job in the oil industry, The job pays 65$ an hour under contract work, more money that I have made in the bees in the last 5 years. Why am I fighting a losing battle? I need replacement bees and if the border is not open in the next 5 years we are all finished in this area. I will be pretty busy working the bees that are left and in the oil industry in the next few months. We support the CHC move to request disaster relief for beekeepers. It is well overdue.

Ed Nowek

British Columbia

The latest numbers coming out of B.C. on winter mortality has the losses estimated at 38% which is over 17,000 colonies dead. Highest losses were recorded in the Peace River district, Vancouver Island and the Fraser Valley.

The BCHPA is working with Government officials to develop a compensation program under Agri Recovery to assist producers in costs to re place dead colonies.

There has been considerable interest among BC beekeepers to look into the establishment of a tech transfer program. This would enable ongoing resources and personnel to work with producers to monitor, test and develop strategic pest treatment protocols to ensure survival of the BC honeybee industry. The shortage of bees this spring for blueberry pollination has raised the awareness and urgency for assistance and development of a strategy to face the challenges posed by this excessive die off.

The BCHPA executive has endorsed our continued support and participation in the CHC and members will be voting at the 2008 AGM on a new set of membership dues to fund the increased costs. The national voice of the beekeeping industry provided by the CHC is an integral part of the current survival and future healthy growth of honeybees. The BCHPA and its members have forwarded letters of support to the Federal Minister of Agriculture, Minister of Health and numerous local MPs for the CHC request for disaster relief and emergency registration of new mite treatments for this fall.

The 2008 AGM of the BCHPA will be held in Prince George Ocotber 23 – 28th, everyone welcome as we have a gangbuster program in the planning with something for everyone including a little more fun and entertainment and spousal activities.

► pg 10

You are Invited to Join Us

Ontario Beekeepers Association **Canadian Honey Council**

Canadian Association of Professional Apiculturists

CANADIAN BEEKEEPING ANNUAL CONVENTION

Hilton Fallsview Hotel, Niagara falls, Ontario, Canada

10th - 13th. December 2008

www.niagarafallshilton.com 1-888-370-0325

Room Rates $89.00 (Monday to Friday) $119.00 (Saturday - includes breakfast on Sunday).

BEE RESEARCH

HONEY PACKING

FOOD SAFETY

BEE HEALTH

POLLINATION

APITHERAPY

QUEEN BREEDING

FIELD TRIP (Saturday)

TRADE SHOW & DISPLAYS

Early bird Registration October 31st. 2008.

Registration Details:

www.ontariobee.com

Ontario Beekeepers Association,
Canadian Association of Professional Apiculturists
and the Canadian Honey Council's

CANADIAN BEEKEEPING ANNUAL CONVENTION

Hilton Fallsview Hotel, Niagara falls, Ontario, Canada, 10th - 13th. December 2008

REGISTRATION FORM

Registration Fees: Early bird Registration October 31st. 2008

Registration Forms post-dated later than October 31st will be charged the Full Registration rate.
Send registration form and payment to:

Ontario Beekeepers' Association, 75232 Bronson Line, Bayfield, ON N0M 1G0
519-565-2622 (phone), 519-565-5452 (fax)

Name of Registrant: ……

Accompanying Spouse: ……

Mailing Address: ……

Telephone:(……)……E-mail:……

Advance Registration (October 31, 2008) *(includes 3 lunches)*	$265	……
Full registration (after October 31, 2008) *(includes 3 lunches)*	$320	……
Single Day Registration *(with lunch)*	$90	……
Banquet (Friday, December 12, 2008)	$55	……
Tour Saturday including lunch	$55	……
Extra Lunch tickets for partners not registered	$25 each day	……
TRADE SHOW		
Dealer and Display Tables (Anyone wishing a table, must be registered)	$100 each	……
Canadian Bee Research Fund Donation (optional) (charitable donation tax receipt will be mailed separately)		……
	Total:	……

Visa Number ……Expiry Date ……

Name of Cardholder ……Signature ……

Tuesday Dec. 9th.
Canadian Honey Council Board of Directors Meeting
Ontario Beekeepers Association Board of Directors Meeting
Canadian Association of Professional Apiculturists Board of Directors Meeting

Wednesday Dec. 10th.
Ontario Beekeepers Association Annual General Meeting
Wednesday Evening MEET & GREET

Thursday Dec. 11th.
SYMPOSIUM
Thursday Evening SOCIAL MEETING

Friday Dec. 12th.
SYMPOSIUM
Friday Evening BANQUET

Saturday Dec. 13th.
WORKSHOP
BUS TOUR

ACCOMMODATION INFORMATION

Hilton Fallsview Hotel
6361 Fallsview Blvd. Niagara Falls,
Ontario, Canada, L2G 3V9
www.niagarafallshilton.com

Main Line: 1-905-354-7887
Toll Free Line: 1-888-370-0325
Email: info@niagarafallshilton.com

Room Rates:

$89.00 Monday to Friday
$119.00 Saturday (Rate includes breakfast on Sunday)

BeeMaid


Lorne Peters

For the past six months, I have been involved with a Honey Exhibit Committee including the following Manitobans; Jim Campbell, Earl Dueck, Ron Rudiak, Rheal Lafreniere, Don Dixon, Cam Jay, and Mennonite Heritage Village Museum curator Dr. Roland Sawatsky. I would also like to recognize Dr.Rob Currie, Roman Pankiw, David Dawson and Melvin Dueck for their valued input. The Exhibit called "Honey - The Story of Beekeeping on the Canadian Prairies" is shown in the gallery of the Mennonite Heritage Village Museum in Steinbach, Manitoba, and runs from June 26 to November 30, 2008.

In support of this occasion, Bee Maid has developed a special commemorative jar honouring the Museum and Canadian Prairie Honey and Beekeeping. The Label was unveiled at our Exhibit Celebrations June 27 in conjunction with the Manitoba Beekeepers Association summer Field Day held at the Museum. Bee Maid is proud to help sponsor this exhibit. The Exhibit covers the history of honey bees on the Canadian Prairies (Alberta, Saskatchewan, Manitoba). I hope if any of you travel through Manitoba, you are most welcome to see the Exhibit.

Bee Maid also held it's Manitoba June Information Meeting at the Museum, the morning of the Field Day. This was retiring Bee Maid CEO Gordon Marks' last day of work. Thank-you Gordon for 35 years with Bee Maid and I want to wish you all the best!

The new Bee Maid CEO Guy Chartier, informed MBA Field Day participants of the latest in Bee Maid activities and current Honey Markets.

Hanta virus

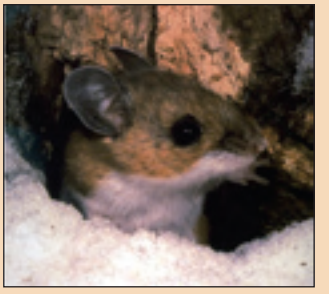
Geoff Todd, Canadian Honey Council, Calgary

Hantavirus is a virus that is found in the urine, saliva or droppings of infected deer mice and some other wild rodents. It causes a rare but serious lung disease called Hantavirus pulmonary syndrome (HPS). It is contracted by inhalation of respirable droplets of saliva or urine, or through the dust of feces from infected wild rodents especially the deer mouse. Person to person transmission is not a concern. Hantavirus is an extremely serious disease with a high mortality rate. The most prevalent time of the year for this disease is in the spring when outbuildings and sheds are being cleaned. Reports of HPS have been associated with

- Sweeping out a barn and other ranch buildings
- Trapping and studying mice
- Using compressed air and dry sweeping to clean up wood waste in a sawmill
- Handling grain contaminated with mouse droppings and urine
- Entering a barn infested with mice
- Planting or harvesting field crops
- Occupying previously vacant dwellings
- Disturbing rodent-infested areas while hiking or camping
- Living in dwellings with a sizable indoor rodent population

The disease begins as a flu-like illness. One may experience fever, chills, muscle aches, headaches, nausea, vomiting and shortness of breath progressing rapidly with an abnormal fall in blood pressure and fluid in the lungs.

The best way to prevent a deer mice infestation and contact with deer mice is to remove the food sources, water, and items that provide shelter for these rodents. Seal up any holes in sheds, grain bins and other out buildings, place traps around buildings in order to keep down the population of deer mice.



Hantavirus (HPS) pulmonary syndrome is an aggressive virus that has 60% fatality rate. It is largely a disease of rural areas. Beekeepers are at higher risk than the city dwelling public. Total infectious cases in Canada are 54 (as reported by Public Health Agency of Canada May 1st. 2005) with 31 occurring in Alberta and 9 deaths. Fortunately no deaths have been reported in the Canadian beekeeping industry. The following are some guidelines to assist beekeepers from contracting this deadly disease.

The most important part is the cleaning up of deer mice urine and droppings. It is important to:

- Ventilate enclosed areas before cleaning by opening doors and windows for at least 30 minutes before working in the space.
- Wear a mask while working and disturb as little of the mouse droppings and nesting material as possible.
- Wear rubber gloves. Rinse gloves in disinfectant (bleach solution, soap and water) before taking them off.
- Soak droppings with a disinfectant (1.5 cups bleach to one gallon water) before you mop them up or pick them up with a paper towel. Place them in a sealed bag and bury it or put it in a garbage can with a sealed lid.

Do not sweep or use a vacuum cleaner to remove droppings in an enclosed space

There are numerous repellents, many which are organic and not harmful to larger pets and children which can be spread around buildings to deter deer mice.

Information is available from the Canadian Center for Occupational Health and Safety, Alberta Health and wellness, BC Workers Compensation Board and US Center for Disease Control.

Examination of extraordinary losses of bee colonies in Germany

Dr. Wolfgang Ritter, President of the Apimondia Standing Commission for Bee Health. International (OIE) and German National Reference Laboratory for Bee Diseases, CVUA, Germany

From annual report on research activities, presented to Apimondia Standing Commission for Bee Health, Rome, June 2008.

In early summer of 2007, the German bee institutes warned against possible danger and asked the beekeepers to treat their bee colonies in time against Varroa infestation. Because of the relatively warm winter in 2006/2007, Varroa mite populations had started to grow earlier than usual. Actual data confirmed these concerns. According to conservative estimates by the Working Group of the Bee Research Institutions, around 30% of the colonies in Germany could have died. Things don't look better in Italy and Switzerland. Five years ago, some beekeepers lost everything; however, others lost nothing. Similar to prior losses, southern regions seem to be mainly affected.

The results of nationwide monitoring to investigate the initial causes of colony losses and the analysis of case histories of some affected colonies are not yet available. However, actual evaluations and examinations give a first impression. The National Reference Laboratory (NRL) at CVUA Institute of Animal Health in Freiburg examined bees of collapsed colonies of nearly 80 apiaries and 350 colonies from all over Germany. In more than 90% of empty hives, masses of Varroa mites (>100% infestation) could be found on the remaining bees and brood. To a similar large extent, Deformed Wing Virus infected the bees. Quite surprising was the presence of Acute Paralysis Virus in half of the affected apiaries. Twenty years ago, this virus was first associated to colony collapses in Germany. However, such a massive presence of this virus has not been observed for a long time. The Israeli type of this virus found with some cases of the Colony Collapse Disorder (CCD) in the USA seems to be not involved. Until now less than 25% of the cases with diarrhoea was associated with Nosema microsporidia. Therefore, Nosema ceranae, the recently imported and already spread type of this pathogen, can be excluded as a causal agent. Even if it cannot be definitely concluded whether the pathogenic agents found are the initial cause or the result of the collapse, they are closely connected to the sequence of events leading to colony death.

According to conservative estimates by the Working Group of the Bee Research Institutions, around 30% of the colonies in Germany could have died.

The affected beekeepers gave us a description of their Varroa control methods. Many of them kept to the recommendations of the experts, but very often treatments were applied too late. Late treatments, which in earlier years did not cause any problems, were fatal for many colonies this year. In many cases by mid-August, mite infestations reached a level that damaged the bees' health. Furthermore, viruses transferred by the mites were spread throughout the colony. Therefore killing mites late in the season showed only a minimal success for colony survivorship. Apart from the important factor of colony management, the timing of colony deaths depended on location. Here the environmental conditions like climate, food availability and last but not least bee density played an important role. The distance from bee colonies to others in the neighbourhood can be an essential factor for the spreading of the Varroa populations. Damaged bees fly to neighbouring colonies bringing along mites and viruses. Furthermore bees from healthy colonies are robbing dying colonies and can quickly acquire a large population of immigrant Varroa mites. In this way, a healthy colony can quickly turn into an ill one. In areas where many colonies are collapsing within a small area, the problem can initiate a kind of domino effect because of the ease of mite transfer between colonies. In addition, the more colonies and apiaries that are affected, the faster the problem develops.

On the phenomenon called "Colony Collapse Disorder" (CCD) in the USA, empty beehives, or those left with only a handful of bees and in most cases large amount of brood and stored food, surprised beekeepers. Even strong colonies can apparently collapse within a few weeks. The collapse seems to be mysterious and provokes ambiguous attempts of explanations that can even reach the public. Without any doubt, stressors like the persisting environmental pollution and reduced food diversity, in addition to management and breeding problems, have important influences on the susceptibility of an organism. The more the stressors increase the more disastrous are the effects of infestations by mites, viruses and bacteria.

Improving Honey Quality

Alexandre Faramazian, Alexandre Beekeeping Consulting, Montreal QC

The ingenious way of solving the problem as proposed by Pierre Faure in "Saving & Making Money by Drying Honey Faster" Hivelights 21(1):18-20, article has only one weak point: hot air drying might somehow reduce the aroma of dried honey. As to the rest, the method is perfect. The article made me wish to share my experience in the field.

For the last 4 years I have had close co-operation with Russian beekeepers and honey processing companies. I have provided them with a number of consulting services helping them to introduce current Canadian beekeeping techniques and honey processing technologies. I think it might be interesting for the Canadian beekeeping community to learn the often ingenious ways in which the Russians solve some problems of beekeeping in Russia.

To begin with, a few words about the Russian beekeeping industry. According to various sources Russia produces from 50 to 52 thousand tons of marketed honey per year. Unfortunately, nobody can provide more exact figures since there is no appropriate statistical monitoring of the number of bee colonies in Russia.

Beekeeping is a tax exempt business for an amateur who is not a professional legal entity. That makes amateur beekeeping a profitable enough activity. Amazingly, Russian beekeeping is mainly aimed at the production of honey. Pollination services have never been reimbursed to a beekeeper. Even more amazing is that a beekeeper is often the one who has to pay to be allowed to place hives on fields or gardens in bloom.

Organoleptic (sensory) characteristics of Russian honey itself far exceed those of honeys from many other regions of the world. The variety of honey in Russia is also very impressive.

Honey in Russia is subject to two Government Standards. One covers general requirements for natural honey and another covers specific requirements for three monofloral varieties: linden, buckwheat and sunflower honeys.

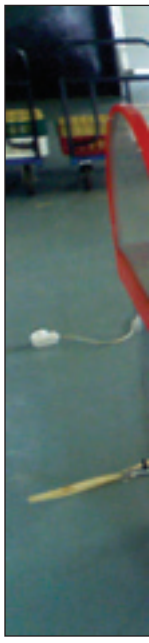
Linden honey is the most popular and expensive in Russia. Consumers like the unique aroma and very pleasant taste of linden. Sunflower honey is the cheapest honey. The price difference between the two honeys is two- or even three-fold.

Most of the linden honey comes from the Russian Far East (south of Pacific Coast). Here the honey has a higher water content and a lower diastase activity. The Monofloral Standard sets a maximum moisture limit of 20% and minimum diastase limit of 11 Gothe for linden honey. Minimum pollen content limit is 30%.

Due to local climate characteristics, linden honey may have 100% pollen content but often 21-23% water content and a diastase value of 4-5 Gothe. Despite its excellent taste and aroma, such a honey does not

Fig 2 heating chambers set at 50 degrees for drying honey

Fig 1 Lega s.r.l. equipment to thicken honey



meet the Mor
it is offered a

I would like t
company, Me
a way of reco
that does not

They began b
a "thickener"
equipment by
they faced on
aroma was re
although dias
same.

They tried an
stage a low co
with high dia
in a thickener
16% moisture
was not herm
order to make
aroma. The lo
from this pro
with high mo
1:1 ratio. The
linden honey
of >30% whic
Standard whi
taste and a st
So the compa
"non standard
increase its p
time it double
of production
product could

t the Monofloral Standard and offered at much lower price.

uld like to tell how a Russian pany, Medovaya Dolina, found y of recovering linden honey does not meet standard.

y began by drying honey with ickener" process, using Italian pment by Lega s.r.l (fig 1). But faced one problem: the honey's na was reduced dramatically, ough diastase remained the e.

y tried another way. At the first e a low cost multi-floral honey high diastase level was dried thickener until it reached a 15- moisture level. The thickener not hermetically sealed in r to make the honey lose na. The lower moisture honey this process was blended high moisture linden honey at atio. The processing yielded en honey with pollen content 30% which met the Monofloral dard while having an excellent and a strong linden aroma. he company could recover standard" linden honey and ease its price. At the same it doubled overall quantity roduction of that honey. The luct could be marketed as monofloral honey that was actually sold at a higher price.

In the first stage high moisture honey is exposed to 50° C in a heating chamber equipped with automated heating control (fig. 2) until it can flow into an agitator. Then, it is immediately poured into a heated agitator where it is continuously stirred until the de-crystallization process is completed with no glucose crystals left (fig 3). A heating temperature of < 50 °C is maintained automatically during the whole stage.

Stirring for 2 hours at the above temperature is enough to provide complete dissolution of glucose crystals. After crystal dissolution is complete the honey is filtered and cooled to 35° C.

Multi-floral honey selected for blending must be the same color as linden honey measured on the Pfund scale. Selected multi-floral honey is poured into a thickener (by Lega s.r.l.) and dried at 35° C until its moisture level reaches 15-16%. The drying process may take up to 1.5 days depending on initial moisture rate of honey selected for blending. ► pg 17

A swarm in July

"A swarm in May is worth a bale of hay,
A swarm in June is worth a silver spoon,
A swarm in July isn't worth a fly!

The old poem may be right about a swarm in July but no beekeeper will turn down an opportunity to add a colony or extra bees to the apiary at any time of year. On the prairies a swarm is at a disadvantage—there often are no trees or bushes to land on. This swarm in southern Alberta landed on a potentilla shrub about one foot off the ground. The weight of bees flattened the little plant.

An empty hive was placed beside the swarm with the expectation they would walk right in and set up a new home.

Hours later despite cutting off branches from the shrub and shaking part of the swarm into the hive they remained firmly attached to the tangled grass. Obviously the queen was not in the hive

Nightfall came and an inner cover was placed over the remaining swarm to protect it from the heavy dew.

Morning light and the swarm had clustered on the underside of the inner cover. One easy shake into the hive and the queen and her bee team were rehoused. It may not produce honey this year but we are rebuilding losses, one hive at a time. .

Tony Lalonde Sales Prt.

Buy
Honey
Wax
Propolis

Sell
Beekeeping Supplies
Extracting Equipment
Used Equipment

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

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 Coop 204-783-2240

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

The principle of the thickener system is simple. Its heart is a refrigeration compressor and a drying chamber equipped with round-shape disc as its lungs. Hot air created by an electrical motor and compressor blows through the drying chamber between the round-shape discs. The air absorbs water from a thin film of honey on the discs and comes into a condenser of the cooling unit, where water is condensed and flows into a water collecting tank. Dried air is heated by the electrical motor and compressor and blown into the drying chamber again.

The process of drying is completed when honey reaches a given moisture level. Moisture is continuously monitored during the process using a refractometer.

In the case of monofloral sunflower honey or a multi-floral honey having a large quantity of pollen grains or very strong aroma, the process is modified. After de-crystallization is complete honey is diluted with water (up to 50%) and filtered twice. The first filtering is carried out using the common technique. The second one – using 10 micron sieve filter which allows the extraction of up to 80% of pollen grains. Honey must be diluted with water because otherwise it is impossible to carry out such a filtration of honey using common filters.

Figure 3, agitators for final decrystallization of honey

This is drying and blending technique is an ingenious method that helps to protect some Russian beekeepers from financial loss that might occur from high moisture honey. The climate in the far east of Russia is extremely humid, and nectar flow is incredibly rich. A bee colony may harvest up to 250kg honey from linden trees. Bees have no time to bring the moisture level down to a normal value and to seal all the honeycomb. High moisture honey is doomed to fermentation unless there is intervention by the beekeeper.

The above method allows Russian honey producers to use relatively low-cost multi-floral honeys for producing high value linden honey blend that meets the national monofloral Standard. Benefit from this technology is evident for the honey-packer and beekeeper.

Plants for Bees: The Borage Family

Douglas Clay, Research Scientist, Calgary, AB

Common Name: Borage family

Related species: borage (*Borago officinalis* L.), hounds-tongue (*Cynoglossum officinale* L.), blueweed or viper's bugloss (*Echium vulgare* L.), common comfrey (*Symphytum officinale* L.), Paterson's curse or Salvation Jane (*Echium plantagineum* L.)

Scientific Name: Boraginaceae

Native Range and Canadian Distribution:

The Boraginaceae, borage family, comprise some 100 genera and 2000 species worldwide. They are mainly herbs and shrubs, many commercial species were cultivated for medicinal crops. Borage (*Borago officinalis* L.), often called starflower, originated in Syria but has become endemic is most of the world through cultivation. Many of the better known borage genus are also pests: Comfrey (*Symphytum officinale* L.), hounds-tongue (*Cynoglossum officinale* L.), viper's bugloss (*Echium vulgare* L.) widely distributed in Canada and the US originated in Europe. Paterson's curse (*Echium plantagineum* L.) from the Mediterranean region is now distributed throughout much of Australia and in 5 US states. *B. officinalis,* often referred to as the "bee-plant", is a hardy annual with a history of cultivation in Canada, particularly the Prairies. It is grown as a nutraceutical oil seed valued for the fatty acid content. It is one of nature's richest source of gamma-linoleic acid.

Description:

Most of the borage family has a characteristically rough hairy (bristly) stem, a trait that reduces the palatability of many genus among grazers. The alternate leaves have no stipules. The bell shaped flowers are in cymes (cluster of flowers at the end of each stem) and the clusters are often coiled in early development. They begin blooming from the main stem downwards or outwards, this provides an extended nectar flow, often from July until the first frost. The flowers last about a day, are bright bluish to purple but some genus can be yellow.

The borage family is highly adaptable and can be annual or biennial depending on the climate. Although most of the borage (eg *B. officinalis*) appear as annuals some are are mostly biennial (eg *Echium spp.*). Biennials form a flat-lying rosette in the first year, then growing to a 30 to 90 cm high plant in the second year. There can be one or many stems from the base.

Ecology

Many of the Boraginaceae are known as adaptable drought tolerant invasive weeds, however, most also do well in damp regions with good soil; *B. officinalis* is recommended for cool moist regions. They are often found in sandy or gravelly soils on disturbed

sites. They tend to have long taproots which provide the drought tolerance.

Methods of Reproduction and Spread:

Most of the borage family is self-incompatible and thus pollination is required when cultivated. The seeds are generally quite large, up to 3 mm long and able to remain viable for 5 + years. The plant produces large quantities of seed over an extended period. Many of the borage genuses produce seeds with valuable medicinal oils. Bees are necessary to ensure high yields.

Some species (eg. *Echium spp.*) have been sown in the EU along railway embankments and roadways to prevent erosion and provide bee forage.

Honey/Pollen Potential:

The nectar and pollen are attractive to bees. The nectar has a low to medium sucrose-dominated sugar concentration (19-52%) and is often so plentiful that the bees do not gather pollen.

B. officinalis honey is light with a tangy flavor. In the past some beekeepers in Canada have specialized in a niche market for this honey but the acreage of borage planting has declined in recent years. The honey potential is estimated to be 100 – 200 kg/ha; the sugar content of the nectar is high at 52%. This species continues to produce in cold weather. Hounds-tongue is considered a good source of nectar but of little value for pollen. Echium spp. is a good source of both nectar and pollen providing over 500 kg/ha. In Australia Salvation Jane is said to produce up to 100 kg/colony. Most of the borage family produce a light to amber honey.

Other: Health Concerns

Borage contains low amounts of pyrrolizidine alkaloids (PAs) which which in a single source of honey, over extended periods can be harmful. In most situations honey is blended from several floral sources by the bees, by the beekeeper (from several apiaries), and finally by the packer (from several beekeepers). Many of the 'American' honeys from PA containing plants are bitter and need to be blended for marketing but many are not. The EU committee on food toxicology considers that in a normal beekeeping operation the trace amounts of PAs that are collected by honey bees are blended with non-PA honey resulting in little if any health risk. (see sidebar for additional information)

Reference:

Australia New Zealand Food Authority (ANZFA). 2001. Pyrrolizidine Alkaloids in Food (A Toxicological Review and Risk Assessment). Technical Report Series No. 2. ANZFA Australia. Canberra, Australia. 16pp. Available online at: http: // www.foodstandards.gov.au / newsroom / technicalreportserie1338.cfm

Obituaries

JAY, Cameron passed away April 25, 2008. Cam was born in Lauder, Manitoba and later moved to Hamilton, Ontario. Cam joined the Entomology Department at the University of Manitoba in 1961 where he taught undergraduate and graduate courses, and undertook extensive research using honey bees and leaf-cutting bees with beekeepers and seed growers. His research and teaching involved extended time in England, USA, Kenya, Jamaica, New Zealand, Tasmania and mainland Australia. A long time member of the CHC, he was awarded the CHC Fred Rathje award in 1990. Doreen and Cam owned a hobby tree farm at Starbuck for many years which family and friends enjoyed visiting. A memorial service was held Thursday, May 1, 2008 at Green Acres Funeral Home, Manitoba

ROBINSON, John "Jack" passed away at Humber River Regional Hospital, Weston on April 20, 2008. A Veteran of World War 2 and retired accountant with Trans Canada Pipelines. "Jack" was an active member of the Toronto District Beekeepers Association . He was awarded the CHC Fred Rathje award in 1996. His funeral was held in Etobicoke, Wednesday, April 23rd, 2008.

SMITH, Maurice Vernon passed away on Tuesday, June 17, 2008 at the age of 88 years. Maurice was a veteran of WWII serving as a radar technician with 436 Squadron of the R.C.A.F.; speaker for the Dominion Institute Memory Project; retired professor of Apiculture, University of Guelph. His profession led him and his wife of 55 years to France, Kenya, Colombia and Peru. Complete funeral service were held at Harcourt Memorial United Church, Guelph on Friday, June 20, 2008.

FUHR Ernie passed away May 27th, 2008 at the age of 71 years. He was the owner-operator of North Peace Apiaries and was a member of both British Columbia and Alberta Beekeepers Associations. Ernie was a very colourful character, passionate about beekeeping and flying. In 2001, he piloted his plane from Florida to Moncton to attend the CHC AGM. He donated his fur lined leather aviator gloves for auction to raise money for bee research. When the bids were peaking at $50 he bought them back for $900. He was a pioneer in beekeeping in the Peace and a personality that we cannot replace.

CAREY Jack, passed away June 3 rd, 2008 in Dundas Ontario, at the age of 95. One of Canada's leading nature cinematographers and film makers, his day job was a metallurgist at Stelco Steel in Hamilton. His spare time and retirement years were occupied by his love of insects and cinematography. He will be remembered for the award winning film "The Miracle of the Bees" which documented the life cycle of the honey bee long before there was environmental concern about honey bees. The movie won the highest science award in Rome in 1957. He produced over 30 award winning films and was a fellow of the British Royal Photographic Society. The funeral service was held in Burlington where he had lived for 60 years.

Cheeke, P.R. 1989. Toxicants of Plant Origin: Alkaloids, Vol. I. CRC Press, London, UK. 352pp

Edgar, J.A., E. Roeder, and R.J. Molyneux. 2002. Honey from plants containing pyrrolizidine alkaloids: a potential threat to health. J. Agric. Food Chem. 50(10):2719-30.

El Hafid, R., S.F. Blade, and Y. Hoyano. 2002. Borage culture on the black soil zone of Alberta, Canada. p. 497–500. In: J. Janick and A. Whipkey (eds.), Trends in new crops and new uses. ASHS Press, Alexandria, VA.

Harrison, B. 2005. Curse or salvation. American Bee Journal.145(11):899-90l.

Lovell, H.B. 1977. Honey plants. Gleanings in Bee Culture. Medina, USA. 96pp.

Mulligan, G.A. 2008. Common weeds of the northern United States and Canada. Available online at: http: // www.cwss-scm.ca / Weeds / index.html.

Munro, D.B. 2008. Canadian Poisonous Plants Information System. In: Canadian Biodiversity Information Facility. Available online at: http: // www.scib.gc.ca / pls / pp / poison.

Raloff, J. 2002. Honey of a Threat. Science News Online. 161(17, April27, 2002). Available online at: http: // www.sciencenews.org /20020427 / food.asp.

Ramsay, J. 1987. Plants for Beekeeping in Canada and the northern USA. IBRA, Cardiff, UK. 198pp.

Osborne, J.L. 1999. Borage. Bee World (IBRA) 80(1):33-36.

Pyrrolizidine Alkaloids (PAs)

About 3% of all flowering plants make PAs as a form of defense. Of the many PAs only a few are hepatotoxic, causing damage to the liver. Death has been reported on rare occasions from longterm ingestion of herbal medicines, often in the form of "tea" that contained PAs. The EU has set limits on the PAs acceptable in herbal medicines and set up a committee to review the situation further. The tentative estimate of no-observed-effect level (NOEL) for humans is 10 µg/kg/day.

PAs are found in many different organs of a plant, root, stem, and leaves. Some are found in the nectar and can remain in the extracted honey.

The highest concentration of PAs reported in a honey was from ragwort (Senecio spp.) in the USA - not a member of the borage family. These extreme values reached 3900 ppm (3.9 mg/g) in 'pure' single source honey. More common levels found in honeys of the borage family are a thousand times less —2 ppm (2mg/kg). For such levels to be harmful an adult would need to consume over a 100g of PA laden honey daily for extended periods. This is considered highly unlikely.

CAPA Statement on Honey Bee Losses in Canada (Spring 2008)

Stephen Pernal, President Canadian Association Professional Apiculturists, Beaverlodge, AB

On average, losses in Canadian commercial beekeeping operations this spring exceed one-third of the number of colonies that were wintered, or more than twice the normal rate of mortality. More colonies were lost compared with the same period in 2007, and some provinces and localized regions have suffered extreme rates of colony loss.

Based on producer surveys, gross Provincial losses have been reported as per table on this page

In Alberta, spring dwindling component defined as number of weak colonies having three frames of bees or less. Total losses for Alberta included 30% wintered dead and 14% spring dwindling.

In the years subsequent to the introduction of Varroa destructor into Canada, normal long-term overwintering mortality is regarded as being 15%. This year, mortality due to wintering losses and spring dwindling is 35.0%, or 2.3 x the normal rate. These losses also exceed the 2007 mortality figure of 29% and remain a grave concern. Successive annual losses at levels exceeding the long-term average are unsustainable by Canadian beekeepers and are likely to lead to decreased honey production and shortages of colonies available for pollination. Indeed, more demand than supply was evident for pollination in British Columbia during the spring of 2008, where some blueberry pollination contracts were not entirely fulfilled.

Province	# Colonies Wintered	# Colonies Dead[1]	Wintering Losses (% of Provincial Total)
British Columbia	45,648	17,346	38
Alberta	250,000	110,000*	44
Saskatchewan	95,000	25,080	26
Manitoba	81,000	22,860	28
Ontario	75,000	24,563	33
Quebec	30,000	5,676	19
Nova Scotia	18,600	3,422	18
New Brunswick	9,434	2,765	29
PEI	3,641	1,328	36
CANADA	608,323	213,040	35% (of National Total)

[1] *Overwintering losses and spring dwindling as of 30 May 2008.*

Though high losses for individual producers may occur in any given year, high regional losses are of potentially greater concern. Areas suffering high regional losses during the spring of 2008 included Vancouver Island (43%), the Peace River District of British Columbia (70%), the Peace River District of Alberta (56%) and a cluster of producers in Northeastern Saskatchewan (50%).

Across the country any unusually high losses have been investigated by provincial apicultural specialists. Initial indications suggest that these losses may be attributed to the three principal causes, listed in descending order of importance:

1. Ineffective control and mismanagement for the parasitic mite, *Varroa destructor*. In many regions, mite populations have developed resistance to the chemical compounds fluvalinate and coumaphos. Many producers did not detect mite control failures before winter, leading to very high levels of mites and high losses by spring. The stress caused by high densities of varroa mite feeding also has the potential to activate or spread the distribution of several honey bee viruses, which exacerbate losses. Apart from the previous two active ingredients used against varroa mites, the efficacy of remaining registered control options available to beekeepers are highly temperature dependent and require more intensive management. Late nectar flows and inclement weather in some areas also resulted in delays for treating colonies during the fall. This lead to corresponding reductions in the realized efficacy for these and other types of mite control products.
2. Inadequate Nosema Control. Many beekeepers do not have the ability or the extension support necessary to sample or diagnose the two species of internal Nosema parasites, *Nosema apis*, and the newly-introduced *Nosema ceranae*. These organisms, if not controlled before winter months, will significantly increase rates of mortality. Moreover, little is know about effective management of *Nosema ceranae*, which was only discovered in Canada in 2007 and for which control strategies are still being developed.
3. Starvation. Inadequate nectar flows and fall feeding in areas such as Vancouver Island and the Maritimes prevented colonies from storing sufficient nectar or sugar syrup to survive the duration of the winter.

Overwintering Losses in the U.S. (Spring 2008)[2]

The information for U.S. losses is derived from surveys commissioned by

the Apiary Inspectors of America (AIA) and the USDA-ARS Beltsville Honey Bee Lab in 2007-08.

A total loss of 36% for managed honey bee colonies in the U.S. was recorded, representing a 4.1 point or a 13.5% increase in total losses compared with figures for 2007. Clearly producers in the U.S. continue to experience very high levels of loss this year, similar to those of Canadian producers.

The survey commissioned by the AIA was not able to differentiate between true cases of Colony Collapse Disorder (CCD) and colonies lost due to causes that share the "absence of dead bees" symptom, typically associated with CCD. At least 71% of all operations had no CCD-like symptoms in any of their colonies that perished, underlying the need for research, not only into CCD, but into pollinator health in general.

Is CCD in Canada?

The symptoms by which CCD is being characterized in the U.S. have not been diagnosed by professional apiculturists in Canada. Though Canadian bees do not seem to be experiencing CCD-like symptoms, it is important to realize that higher levels of wintering and spring mortality in Canada may be related to the same casual factors as CCD losses in the U.S. Because longer winter conditions preclude the active brooding and flying of colonies found in early-season pollination areas of the U.S., colonies in Canada may not exhibit similar colony-level symptoms. Instead, it is conceivable that Canadian producers may simply see these effects as higher numbers of dead colonies coming out of winter or those described as dwindling during the early spring.

Most scientists in the U.S. and Canada would agree that what is being described as CCD in the U.S. and the high winter losses seen in Canada are likely being caused by several common interacting stress factors acting on honey bee colonies. Researchers in both countries are examining similar root causes of these stresses and their effects on bees.

What is being done in Canada?

Researchers in Canada remain in close contact with principal scientists assigned to the U.S. Working Group on CCD. Members of CAPA have also been actively monitoring the status of bee health across the country and are sharing scientific information.

Samples of adult honey bee samples from across the country have been collected for the detection of the parasite, *Nosema ceranae*. Based on these efforts in 2007, it was determined that the parasite was present in all Canadian provinces, with *N. ceranae* and *N. apis* found in approximately similar proportions. This is in contrast to the U.S. where *N. apis* is now seldom found in samples. In addition, infections of *N. ceranae* and *N. apis* can also be found in the same colony. The impact of *N. ceranae* on honey bees is not well understood and it is likely a factor in the survival of colonies already under multiple stresses. Currently, CAPA members employed by federal and provincial governments, as well those in Canadian universities, are undertaking research projects to better understand this parasite. Aims include determining the seasonal occurrence of *N. ceranae* in Canada, developing strategies for effectively managing this parasite as well as evaluating the use of novel therapeutic agents. Early indications suggest that *N. ceranae* is susceptible to fumagillin, the only registered therapeutic agent against *N. apis*. Nevertheless, much work is needed to determine best management practices to control this organism. Researchers within CAPA are also evaluating alternative control options for varroa mites, methods of integrated pest management for honey bee colonies and the breeding of honey bee queen stock more tolerant of diseases and mites. Members of CAPA, in cooperation with the Canadian Honey Council, are also pursuing the registration of alternative products for varroa control in Canada.

For more information contact members of the CAPA executive: Stephen Pernal, President pernals@agr.gc.ca Tel: (780) 354-5135 Rhéal Lafrenière, Vice President Rheal.Lafreniere@gov.mb.ca Tel: (204) 945-4825 Rob Currie, Past President currier@cc.umanitoba.ca Tel: (204) 474-6022 Joanne Moran, Secretary / Treasurer jmoran@gov.ns.ca Tel: (902) 679-6044 Initially compiled 4 June 2008; Final revision 8 July 2008.

2) Information obtained from: van Engelsdorp, D., Hayes, J. and J. Pettis. 2008. Preliminary results concerning the loss of honey bee colonies over the winter 2007-2008. A survey conducted by the Apiary Inspectors of America and the USDA-ARS Beltsville Honey Bee Lab. (Personally Communicated to Author).

Sand and Bees' Wax make Carvable Blocks for Fun, Education, and Handicrafts.

Peter G. Kevan, Andrew Z. Serafin Guelph, On

Dust-free fine sand can be combined with bees'wax to make safe, environmentally friendly, carvable, machineable, and recyclable blocks.

Silicon-dust free sand itself can be used safely for educational and recreational projects. It can be bought as 'play sand' in various retail stores. However, sand is sand, and although it can be molded when it is wet, it has limited scope for use. By amalgamating sand with a binder, it can be made into blocks that can be worked (carvings, sculpture, or machined). Further, making the material re-usable is important, especially for making non-permanent models. For educational and recreational purposes, the bonding material must also be safe, and better still "environmentally friendly".

We have found that bees' wax is useful for making sand-based blocks that can be used for carving, sculpture, and even gentle machining. Bees' wax itself is used extensively in educational and recreational activities, is a major component of high quality cosmetic products such as creams and lipsticks, and is used by the pharmaceutical industry for making medicinal salves. Thus, it is safe and "environmentally friendly".

Particularly important to making workable blocks with sand and bees' wax, is bees' wax low melting point, at 64.5° C. After some initial trials, we made tested two formulations (Table 1), and found that the first mentioned worked well. It took to machining with a spade-bit and twist bit on a drill press. The holes are crisp and smooth walled. It is also carvable with a sharp knife and by chisel. A block of material was given to skilled carvers for assessment, and shown to two individuals with degrees in fine arts. One carver noted that the material carved well, but blunted his tools rapidly. The second carver produced the ape's head shown in Figure 1. The texture seems to prevent the carving of very fine details. The fine artists and carvers noted that the material was interesting and had great potential for sculpture and making molds. It has a slightly sticky feel, and pleasant, characteristic honey-like scent.

We describe how to make re-usable sand-and-bees'-wax blocks for use by creative people of all ages. After various trials at mixing, it was found that the sand and wax can be mixed easily in a kitchen crock-pot, the internal temperature of which reached 110 C when set on high, and about 80 C when set on low. At 80 C the process of mixing is very slow.

Blocks of the first formulation (Table 1) were broken down, and reconstituted. Small changes in the scent, colour, and hardness were noted. Thus, the material can be reused after being melted in the same way as the original blocks were made..

We made our blocks in waxed cartons (500 mL and cut-down 1000 mL) such as are used in the food industry (e.g. milk cartons). We also made a press to fit the cartons and compress the formulation into blocks, but that operation can be done with a wooden spoon or spatula.

It is anticipated that dust-free sand and bees' wax could be used for making molds, even by the lost-wax method, for castings. Also, carvings made from the mixed materials could be protected with epoxy paint or varnish for permanent display.

Ape's head carved by Dylan

We note that bees' wax itself is a mixture of chemicals and varies somewhat. We advocate that the bees' wax used should be clean and residue free. We stress that only clean sand should be used to avoid problems of dust, e.g. health hazards and binding with the wax.

We used only Sandtastic® brand uncolored fine play sand. The idea we present could be used with other sands or different grain sizes (coarseness) and colors (natural or dyed). Thus, readers interested in trying out sand-and-bees' wax blocks may wish to experiment to obtain the right consistency and hardness for their needs. Even so, we expect that the proportions of sand to wax would be similar to what we have found useful.

Sandtastic®-sand	Bees'-wax	New or Used	Hardness
550 g (19.4 oz)	88 g (3.1 oz)	New	92 - 94 points
		Used	94 - 98 points
550 g	66 g (2.33 oz)	New	70 points

Hardness measured by Pacific Transducer Corp. Model 306 Durometer Type A (ASTM D 2240 - 64T)

Table 1: Sand and bees' wax mixtures and their hardness

Honey industry stung by traces of antibiotics, lead

Sukhdeep Kaur

Doraha, Posted online Monday, June 16, 2008

India's flourishing honey industry, based primarily in Punjab, has pressed the panic button after over 90 per cent of export samples were found contaminated with residues of antibiotics and lead. With the possibility of a ban on Indian honey in Europe, UK, Canada and Australia looming large, Doraha-based International Institute of Beekeepers and Agro-Enterprises (IBA), a non-profit autonomous body undertaking research and training on beekeeping, has now written to the Union ministries of agriculture and commerce for help.

While the source of antibiotic contamination is the indiscriminate use of medicines by beekeepers due to a bacterial disease caused to the bees by a small mite, the lead traces are from beekeepers reusing ghee and oil tins for storage and transportation. "Honey is acidic and reacts with the tin leading to high lead traces," says Prof L R Verma, who heads the IBA. With per capita honey consumption at a high 40 gm in most of the countries importing from India, a ban on Indian honey will cripple the industry here, says Jagjit Singh Kapoor of Kashmir Apiaries, which was recently awarded the quality honey export award by the Union Ministry of Commerce and Industry for the eighth consecutive year.

Through its training programmes the IBA is now trying to create awareness among beekeepers on non-chemical methods of beekeeping.

"The beekeepers need to maintain proper hygiene in the bee colonies for keeping the bees clean and healthy," says Prof Verma, adding that the problem of high lead residue can be checked by supplying epoxy-coated food containers at subsidised rates to the beekeepers."

Announcing the arrival of twin Pierres. Bouncing bears promoting Pure Honey 100% Canadian are ready for delivery to proud owners Saskatchewan Beekeepers and Ontario Beekeepers' Association. Kids love Pierre and the seven foot tall mascot always draws attention in a crowd. The bears will be kept busy promoting honey at provincial fairs,exhibitions and mall displays. Pierre the Bear is also featured in the CHC Pure Honey 100% Canadian promotion pamphlet. For more details, or to order a Pierre for your province, contact the CHC office.

Exports of Honey to the European Union

MEMORANDUM TO: Registered establishments and Exporters of Honey

Please be advised that the European Union (EU) has implemented new certification requirements for the export of honey to the Member States of the European Union effective May 01, 2007.

Effective immediately, all shipments of honey destined to a Member State of the European Union must be accompanied by the attached Health Certificate for Imports of Honey and Other Apicultural Products Intended for Human Consumption (Health Certificate) signed and stamped by a Canadian Food Inspection Agency (CFIA) inspector. Only honey that is produced or processed in a CFIA registered honey establishment is eligible for export from Canada.

The following countries are member states of the EU: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France (including Guyana, Martinique, Guadeloupe and Réunion), Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain (including Andorra and Canary Islands), Sweden, and the United Kingdom.

Despite the implementation of Health Canada's and CFIA's policy on Working Residue Levels (WRL) for Honey, exporters must be aware that veterinary drug residues within these levels do not meet the requirements of EU legislation. Detectable levels of veterinary drug residues could result in the removal of honey from the European marketplace.

Exporters requiring a Health Certificate must send the following documents to their local CFIA Inspection office at least 7 working days prior to container loading:

1. Request to Export Honey to the European Union
   Make sure to provide the name and address of the person who will receive the completed signed certificate. An original signed certificate will be sent by courier (at your expense) to yourself or an agent that you designate.

2. Exporter's Declaration for the Export of Honey to the European Union
   This is the exporter's guarantee that the honey is produced according to the Honey Regulations and meets the EU requirements with respect to veterinary drug residues

3. Health Certificate for Imports of Honey and Other Apiculture Products Intended for Human Consumption

Please complete the indicated boxes of Part I: Details of Dispatched Consignment according to the attached instructions.

CFIA will generate only one original signed certificate.

If required, the shipment must be available for verification by a CFIA inspector.

Export verifications for monitoring purposes will be conducted by CFIA inspectors, at no cost to the exporter, to ensure that the documentation submitted correctly identifies the intended shipment. If the information on the Exporters Declaration and the Health Certificate does not match the documentation of the intended shipment, the shipment is considered Non-Satisfactory.

The exporter's subsequent export requests will trigger an export follow-up inspection and the applicable inspection fee will apply until three (3) consecutive export shipments by the same exporter are satisfactory.

Exporters must note that:

·The Honey Regulations require the CFIA establishment registration number to appear on all containers of the shipment.

The CFIA will not issue export documents if the shipment is not available for verification or has already left Canada at the time the request for export documents is made.

The documents mentioned above are available electronically from the CFIA. Completed documents may be submitted to the CFIA inspection office by e-mail.

Classifieds

Wanted to Buy

Borage honey and buckwheat honey-100% pure honey. We are just north of Toronto. Call Henry Nauta, Penauta Products Inc, 905-640-1564 or fax 905-640-7479.

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

The Best" Cut Comb Honey Trays (340g) Tight Snap-On Clear Plastic Lid – Cream Coloured Base. Sold Coast to Coast by Mail.*
*2008 Prices: $55.00/100 - $262.50/500 Contact NOD Apiary Products Tel: 877 483 2929 Email: Info@NODApiaryProducts.com

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

See Our Canadian Dealers!

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

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

APISTAN®

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