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HiveIights

www.honeycouncil.ca
Canadian Honey Council

Urban Beekeeping
CHC Convention Report
Fred Rathje Award
Plants for Bees

Canadian Honey Council

The Canadian Honey Council (CHC) is the national organization of the Canadian beekeeping industry and Hivelights is the industry's magazine. Our association is an "organization of organizations". One of the benefits of belonging to our member organizations is that all members receive a copy of Hivelights magazine. In order to receive Hivelights you must be a current member of your provincial association. International subscribers can receive our high quality magazine for a fee of $50 Canadian per year.

Schools, libraries, non beekeepers, university or government personnel can receive Hivelights magazine through special membership as "Friends of Canadian Apiculture".

Please contact the CHC office for more information.

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HiveLights

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Canadian Honey Council`s trade display at the joint ABF and CHC Convention in Orlando, Florida
Photo: Geoff Todd

The colour of the spine of Hivelights has changed to blue for 2010 to match the international code for marking queens. A quick way to remember the code:

		Year ending in:
When	White	1/6
You	Yellow	2/7
Requeen	Red	3/8
Get the	Green	4/9
Best	Blue	5/0

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www.saveourbees.ca

Canadian Honey Council

Heather Clay, Chief Executive Officer, CHC

Sponsorship

We are pleased to announce that Odem International has agreed to renew their sponsorship for a second year. This is a positive indication that we are on the right track. Membership fees account for half our funding and in order to continue doing the important activities needed for our industry we are seeking more sponsors support for the coming year.

Save our Bees has been slowly gaining momentum. Donations are being sought through our website www.saveourbees.ca and we have a growing group of fans on our Facebook page.

Membership

Under the new structure of CHC we are an organization of organizations. National organizations with a vested interest in honey bees, in addition to the existing provincial beekeeper organizations, are eligible for membership in the Canadian Honey Council. Applications are subject to review by the CHC Membership Committee. Those associations that meet established criteria are then considered for approval by the Board of Directors.

Promotion

CHC is currently finishing one project on marketing "pure honey 100% Canadian" at the North American Beekeeping trade show and developing a Long Term International Strategy (LTIS). This project which was partially funded by Agriculture Agri-Food Canada allowed CHC to have a presence at the Orlando convention where producer, packers, importers and exporters were able to see and taste our quality product.

The trade show booth featured five types of honey- clover, buckwheat, blueberry, creamed canola and creamed organic clover honey. The bottles were shrink wrapped with our logo pure honey 100% Canadian on the front. Rick Belt of Golden Acres Honey did the packing and shipping and we thank him for his assistance. The honey samples were given out in return for a completed questionnaire on US honey market preferences.

The CHC also prepared a new pamphlet with funding assistance from the Agricultural Marketing Program, that gives information on honey for health. It has been translated into Spanish for international markets. We handed out hundreds of the pamphlets at the trade show in Orlando . A sample is included in this magazine and you can order more from the CHC office.

We also have a new colourful exhibit (featured on the front cover) explaining what CHC does and the importance of the honey bee industry. Pierre the Bear is our mascot and he has made appearances at several shows this year in SK, ON and AB. He was unable to attend the North American Beekeepers Conference because of new TSA restrictions for travelers to the USA.

Projects

All the projects undertaken by CHC have now ended. In the past we have received assistance from Agriculture Agri-Food Canada to plan and implement a restructure of our organization, to determine the strategies for hive health, queen bee importation protocols, to get consensus on honey labeling, to develop a long term international strategy and to develop a C-BISQT manual for on farm food safety. The board has decided to limit projects in the future so that the CHC can focus on resolving resolutions brought to our AGM by member organizations.

Small Hive Beetle

The Quebec provincial apiarist has reported that the province has set up sentinel hives and is monitoring the SHB issue. The beetle continues to exist in the border area but seems to have limited reproduction. A research project has been initiated to examine the problem. The CHC is concerned that lack of treatment and no plan for extensive inspections may affect our national position on importation of honey bees.

Annual General Meeting

The CHC participated with the American Beekeepers Federation at a joint North American Beekeepers convention in Orlando Florida. It was well attended by beekeepers from Canada and the USA and included visitors from Mexico, Chile, Australia, New Zealand, Bermuda, England, Italy, France, Ghana and the Virgin Islands. The general symposium research presentations were excellent with many top name speakers. 'Sideliner' beekeepers were able to attend concurrent events for special interest groups. It was sometimes difficult to choose which session to attend as there were so many interesting topics.

The ABF and the AHPA have agreed to meet concurrently in Galveston Texas, 4-8 January 2011 and the CHC has been invited. Given that the Mexican National Beekeepers Organization has committed to attend, the CHC board is giving the idea of an even bigger North American meeting to be held every 3 years some serious consideration.

Executive members of the National Organisation of Mexican Beekeepers Delegation at the North American Beekeeping Convention

Photo: Geoff Todd

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Membership in CHC
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CAPA Outstanding Service Award: Doug McRory

The Canadian Association of Professional Apiculturists awarded Doug McRory the Oustanding Service Award at their joint annual banquet. Later in the evening Paul Kozak, incoming Ontario Provincial Apiculturist, congratulated Doug for his 26 years of service. Paul began work for OMAFRA immediately after this meeting.

OAC Alumni Distinguished Extension Award: Professor Ernesto Guzman

Five years ago, Professor Ernesto Guzman took up his post in the Department of Environmental Biology at the University of Guelph. In that short time Ernesto has made literally hundreds of presentations to Ontario beekeepers. He has run short courses on beekeeping for the public. He has spearheaded the province's research on colony collapse disorder and other forms of colony loss. He has established the first molecular laboratory in the province dedicated to diagnosing, treating and preventing colony loss. He has developed an outstanding relationship with the Ontario Beekeeper's Association, and with the OMAFRA extension specialists. His service to this industry has been truly remarkable and selfless. Ernesto has the special ability to convey information in a way that makes it understood by any audience he addresses, and he is a valued resource of the Department, the College and the University of Guelph.

George Robinson, President OAC Alumni Association

Regional Reports

Maritimes

Well as 2009 comes to a close and our bees are put away for the winter it is time to reflect on yet another year come and gone. It proved to be one of many challenging years for the beekeeping industry in the Maritimes. All three provinces reported high losses last winter which kept beekeepers busy restocking this summer. Reasonably favorable weather this summer and fall seems to have helped splits reach wintering strength and even provided a modest honey crop for some. Many maritime beekeepers took advantage of the EUR extension for Amitraz with good results being reported. With mite levels under control and a mild fall, wintering bees looked to be in good condition. Hopefully this is reflected with lower mortality numbers next spring.


Tom Trueman

The Maritime Beekeepers Association held their annual meeting in Moncton N.B. on November 26 2009. PMRA made a presentation with information on the proper handling of pesticides. I was also appointed for another year as the Maritime delegate to CHC. Many maritime beekeepers are planning to attend the ABF meeting in Orlando in January. Local honey sales were reported to be strong with both wholesale and retail prices trending upwards.

I would like to thank everyone for their support over the past year and to wish everyone a healthy and prosperous new year.

Ontario

The input costs of trying to keep our hives alive are ever increasing with more treatments and an incredibly high price for feeding bees for winter. The weather was excellent for feeding and packing this fall. Nothing like last year when it began snowing the first of November and it stayed that way for most of the winter. The bees looked good going into the winter, but we have to wait and see in the spring. Beekeepers from across the province have reported seeing an increase in sales of honey as more of the public hear of our plight and offer their support by buying local. The media has been very interested and supportive of beekeepers and continues to inquire about our status. Much of the honey in Ontario has been sold between beekeepers, to ensure they have a good supply of honey going into the spring.


Dan Walker

2009 brought a significant change to our industry with the retirement of our Provincial Apiarist Doug McRory. Doug has long been a beekeepers' beekeeper and represented us well in his position. The Ontario Beekeepers' Association is very grateful to Doug for his service to our industry and our association. The wisdom and continuity Doug brought as OMAFRA's Technical Advisor to the OBA board has been invaluable. During the Banquet at the 2009 AGM Doug was honoured by many of his friends and peers. It was great to see his colleagues from the west there, Medhat Nasr and Rhéal Lafrenière. As always he graciously and humbly accepted the gifts and accolades given to him from an industry he loves. We are waiting for an announcement in the new year as to who will be the new provincial apiarist. We have been kept well informed during the process of hiring a new Provincial Apiarist.

A great number of the media inquiries to the OBA have come as a result of the Promotions and Media Coordinator position created last year. We are in our second year with this position.

The Royal Winter Fair is a huge gathering of the farming community brought to the city of Toronto. There are 4 H youth shows in dairy, beef, swine, sheep etc. from small communities from coast to coast. The honey competition was really something to see. There were competitors from outside the province. It is good to see individuals, that are proud of their product , go to the extreme to present it to the public.

It has been a very pleasurable year, talking and visiting with beekeepers from different parts of the country. I would like to wish everyone a healthy and profitable New Year.

Manitoba

The MBA held its AGM November with over 40 attendees. We elected 4 directors for a 3 year term; Welcome Allan Campbell, Calvin Grysiuk, Murray Lewis, and returning Marc Nichol. All 3 of the outgoing directors; Steve Olnick, Lorne Peters, and Paul Gregory have served on the board in various positions for many years. Lorne told me when he started his wife was pregnant with their first child, now he has grandchildren. Manitoba's new Executive: Chair Todd Yakimishen, VP Murray Lewis, CHC Bruce Podolsky, KAP Allan Campbell, Ex Member Chris Rempel.

MB's Food Safety committee met to discuss our issues. The programs aim to put resources toward establishing and implementing food safety, biosecurity and traceability systems in key areas of the food chain; also to increase the food safety

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knowledge capacity of all industry stakeholders. The committee looked at 2 areas; replacing old brood comb with new foundation and Cash for Clunkers - replacement of non compliant extracting equipment with stainless steel or acceptable equipment. This program will run for the next four years. In the first year producers can apply for $1000. The amount will double next year if the producer has a HACCP Based program in place, like the proposed CBISQT program. We are encouraging all producers to become CFIA registered.


Bruce Podolsky

This year (2009) 245 operations and 4445 hives in the province were inspected for AFB. It was found in 16 operations. This is an improvement on last year (2008), when AFB was found in 23 operations and the year before (2007) when it was found in 34 operations. This fall most producers used Apivar or formic acid for treatment of mites. The late honey flow in September delayed treatments. Some producers only had 1 week of effective weather for varroa treatments. We'll have to wait till spring to see if the colonies survive the winter. After Varroa, Nosema is a big concern. Nosema is a stress disease. If you have a problem you may want to look at the shelter in your winter and spring locations, as well as the source of your bees.

Manitoba's colony numbers have dropped drastically in the last few years, this year (2009) was the lowest ever. Before the US border was closed and varroa mites arrived there were 110,000 colonies, today the count is just above 70,000. Where do we go from here? Many producers are hoping to retire in the next few years. What are their options? I'm sure every province has the same issue. Have a look around the room during your meeting, there are very few young beekeepers. We need a healthy and sustainable industry to attract the next generation of beekeepers.

Saskatchewan

Good news and progress abounds in Saskatchewan going into winter. It is wonderful to have a provincial government in this province that finally recognizes the value of the bee industry and backs up those words with the development of meaningful programs.


Corey Bacon

Saskatchewan's application to Agriculture Council of Saskatchewan's Canadian Agriculture Adaptation Program for a proposed Technical Adaptation Team was recently approved. The project is a three-year program budgeted at above a ½ million dollars. The project will be a combination of research with extension to deliver the results directly to beekeepers. The projects proactive approach will focus on varroa mite treatments, efficacy, techniques and timing windows of products (namely soft chemical treatments) under Saskatchewan's climate and beekeeping management methods. Winter mortality and improved wintering techniques will also be studied as well as other important areas (ie. colony nutrition) under the guidance of the Technical Adaptation Team Steering Committee in consultation with the Specialist hired to run the program. The steering committee has begun its search for a Technology Adaptation Specialist to lead the team, which is scheduled to begin operation April 1st of this year.

Following the launch of the government funded wildlife damage coverage program for Saskatchewan beekeepers (which covers bear damage compensation for equipment, honey, bees and lost production), the SBA has been continuing to work with the government of Saskatchewan on a death loss insurance program. The SBA board has had several consultations with the government to develop a program that is effective, affordable and sustainable. It is expected that this program will be launched in 2010 and available for Saskatchewan beekeepers for fall of 2010. The SBA board has also had consultations with the Saskatchewan government on a honey crop insurance program. Development will continue on this program as well following the completion of the death loss insurance program.

The SBA hosted another well attended, informative and educational AGM and Convention in Saskatoon. During the convention banquet the SBA board, special guests, CAPA members (current and former) and beekeepers from across the prairies had the opportunity to "roast" outgoing Provincial Apiarist John Gruszka. John has retired after 32 years of service to the Government of Saskatchewan and the beekeeping industry in Saskatchewan. We would like to again congratulate John and wish him the best in his well-deserved retirement.

On another positive note, Saskatchewan beekeepers that have witnessed the success of many breeders/ beekeepers in the province in regards to self-reliance are starting to successfully duplicate this success. This is evident by the significant increase in the amount of nuc colonies going into winter and the overall increase in total colonies going into winter as reported in government surveys. While some beekeepers may not have the ability or desire to be self reliance, if enough others do, the province as a whole may see the real possibility of self-reliance.

Alberta

Greetings from an extremely cold Alberta! Nothing like a few days of -35 to -46 to remind us what winter really is, but the fact that it's supposed to be +2 here in a

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Lee Townsend

few days is bizarre at best. I do take comfort in knowing that my hives, along with a good number of other beekeeper's hives in Alberta, went into winter in extremely good shape. It's been another busy year in Alberta. Between drought, fluctuating honey prices and a number of new projects coming out of the Alberta Beekeepers Commission office, it has kept us all busy. One of these programs was the Overwintering Insurance Program from AFSC. There are still some issues to iron out with the program over the next few years (biggest being Alberta Beekeepers that move their colonies to BC do not qualify for the program), and it's the Commission's hope that this can all be worked out for the winter of 2010-2011. The premium rates vary across the province depending on the average wintering loss numbers, but at a $120/hive payout on this winter's losses, it should reduce the burden of any higher than average losses this winter. I'd also like to thank Dave Tharle and Todd Eastman from the Commission's Labour Committee. They put in a substantial amount of work regarding the POLO office and Filipino workers coming to Alberta this past year. I know everyone in the province that uses foreign workers appreciates the committee's hard work. It has been a pleasure to serve on the Alberta Beekeepers board this past year as we've accomplished a lot, and I look forward to working hard on behalf of Albertan and Canadian beekeepers on the CHC board in the next year.

Alberta had a cold start to winter with a lot of records being set in December. The majority of the honey bees going into winter have been in good condition, with both the varroa and nosema levels being lower than they were the past two years. The bee health program in Alberta has really helped our producers in its first year. This program is part of Dr. Nasr's research project that helps beekeepers monitor their colony disease levels. At the same time the Alberta Agriculture department gets a good understanding of the overall honey bee health status in our province.


Jerry Poelman

Honey prices have remained firm going into winter. Although sales have been slowing down, honey is being sold for $1.40 to $1.80 per pound. The price varies depending on the quality of honey and what containers were used to transport the honey. A premium is paid for clover honey in new barrels that is then exported out of Canada. Alberta beekeepers are hosting their annual Integrated Pest Management (IPM) meeting on February 9 and 10 in Edmonton. The focus is on the diagnosis and control of nosema. There will also be an emphasis on using miticides, as well as the management of single brood chamber hives. We hope to see you in Edmonton.

British Columbia

Beekeepers in British Columbia enjoyed a mild late fall but are now feeling the brunt of a cold winter. Although our autumn temperatures were mild, many parts of the province remained very dry. This made for a drab fall as tree leaves did not develop their usual colours. Beekeepers had ample time to prepare their bees for winter so hopefully the colonies will survive the harsh weather we are experiencing now. December has been colder than normal in this El Nino cycle.

Strong lobbying by British Columbia Honey Producers Association (BCHPA) second vice-president Allen Garr has convinced our provincial government to follow other municipalities proclaim May 29 2010 The Day of the Honeybee. Our association plans to celebrate the day with events around the province to bring attention to the importance and value of honey bees.


Ted Hancock

The BCHPA is planning to hold an Integrated Pest Management seminar in conjunction with their semi-annual meeting in Kamloops next March. We are also planning to sponsor a number of queen rearing workshops around the province next summer.

B.C. queen breeders Terry and Elizabeth Huxter have completed a queen rearing project sponsored by the BCHPA, BC Bee Breeders Association and Investment Agriculture Foundation of B.C. In this project they selected and bred from queens that demonstrated resistance to varroa mites and made the queens available to B.C. beekeepers. Elizabeth Huxter is now hoping to launch a second project in which she will select for Varroa Sensitive Hygiene stock.

B.C. is also very fortunate to have Dr. Leonard Foster performing research on honey bees at the University of British Columbia. I am not sure I can accurately tell you what Dr. Foster is researching because it is advanced beyond my understanding. I believe he is trying to find pieces of protein (protein markers) that are associated with specific genetic traits in honey bees. If, for example, he can find a protein that is part of the gene(s?) needed by bees to exhibit resistance to foulbrood, then he can tell which bees carry the resistant gene by looking for the related protein marker. By analyzing a honey bee's antenna it can be determined which proteins are present in individual bees. Dr. Foster's lab at UBC is receiving research assistance from Liz Huxter in Grand Forks and Dr. Stephen Pernal at the federal research lab in Beaverlodge Alberta.

CO-OP Honey Packer

At the recently held Annual General Meeting of Bee Maid Honey Limited, Neil Specht from, Eatonia SK was elected Chairman and Ron Bacon of Kinistino, SK was elected as Vice-Chair. Joining the Executive this coming year are Elmer Zumwalt of Beaverlodge, AB and Lorne Peters from Kleefeld, MB. Mr. Bill Bygarski, Jr. stepped down as Chairman of the Board. Bill was a Director for the last nine years and Chairman of the Bee Maid Board for the last six years. Thank you to Bill for all the years of dedication and service to Bee Maid Honey.


Gordon Marks

This past fall Bee Maid teamed up with Brandon Boone, Editor of Flavours magazine and CBC radio personality, for our Bee Maid brand campaign – "Are You Up for the Challenge?" Brandon is a real honey fan and appreciates the magic of using honey in recipes. Bee Maid Honey lovers were invited to submit their favorite honey recipe. The promotion concluded on November 30th, 2009 with Brandon now having the difficult task of selecting the winner.

Bee Maid regularly produces a consumer newsletter that is sent via e-mail to all who subscribe. The newsletter contains valuable information about honey and bees and offers a wide range of new ideas for the use of honey from recipes to shampoos. If you would like to subscribe to this free newsletter please visit our website at www.beemaid.com. Bee Maid is now featuring Members and their families in this newsletter, another affordable approach to conveying the message that Bee Maid is truly 100% Canadian.

When visiting the web site, please remember to visit Bee Maid's Bee Store that can be accessed under the Beekeeping tab. Your Bee Supplies are only a click away, delivered right to your door.

Bee Maid is proud to announce the continuation of apicultural research funding and has just recently called for this year's submissions. Bee Maid will consider project proposals in any area of apiculture or pollination research. Preference will be given to the area of honey, and the production of pure quality honey in the Canadian beekeeping industry. In recent years, Bee Maid has contributed in excess of $40,000 to apiculture research in Canada. For more information please contact Guy Chartier at (204) 786-8977 ext 234 or by email at guychartier@beemaid.com

Fred Rathje Award

Heather Clay, CEO Canadian Honey Council, Calgary AB

The Canadian Honey Council has a prestigious award for a person who has made a significant, positive contribution for the betterment of the honey bee industry of Canada. At the CHC annual general meeting in Orlando Florida, the Board of Directors selected Dr. Medhat Nasr to receive the award this year.


Dr Medhat Nasr with the Rathje Award
Photo: Heather Clay

Dr. Nasr is a PhD graduate of University of California, Davis where he gained experience in commercial beekeeping, queen bee breeding and instrumental insemination. He has worked with great enthusiasm for the honey bee industry for over twenty years. His first position after arriving in Canada in 1990 was as a research assistant at the University of Guelph. Three years later he accepted a position as Tech Transfer Apiculturist for the Ontario Beekeeper's Association. In 2000 he joined the team at Rutgers University New Jersey as an Assistant Professor in Entomology and began an integrated pest management approach for beekeepers in the Mid Atlantic States. An opportunity for a return to Canada arose in 2002 when he accepted the position of Provincial Apiculturist for Alberta.

His passion for apiculture and dedicated research has resulted in approval of formic acid for our industry, recommendations for oxalic acid in the Canadian climate and the establishment of a successful tech transfer program in Ontario that has become the envy of other provinces. Medhat won the Award of Excellence for Research and Technology Development from Ontario Ministry of the Environment in 1998 for the development of the IPM Program. He believes in a sustainable industry and has spent many hours promoting queen bee breeding and integrated pest management, including giving classes to those who are anxious to learn from the best. Each year he uses his network in the research world to bring top speakers to Canada for an Integrated Pest Management Program conference in Edmonton, Alberta.

In addition to his work with Alberta Agriculture, Medhat is Vice President of the Canadian Association of Professional Apiculturists and a member of the Canadian Honey Council Hive Health committee and he works closely with other apiculture research institutes, commercial and hobby beekeepers in Canada and the USA. He was recently awarded the Distinguished Achievement Award by Alberta Beekeepers.

In his gracious acceptance of the Rathje Award, at the North American Beekeepers Conference in Orlando, Medhat mentioned that he has not been back to Egypt since he left for California and that we have become his family. It is with great pleasure that CHC acknowledges the work of this dedicated professional and our special family member.

Research Related to the Canadian Pollination Initiative (CANPOLIN)

Ernesto Guzman, Professor, University of Guelph, Guelph, Ontario

Research Related to the Canadian Pollination Initiative (CANPOLIN) Conducted at Ernesto Guzman's lab

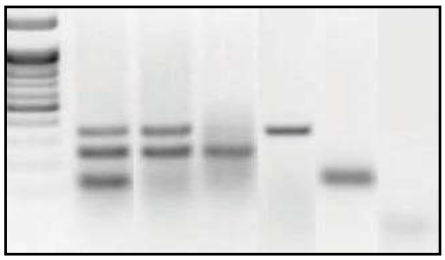
The activities associated with our contribution to CANPOLIN started during May, 2009 and the following is a report of what has been accomplished.

Establishment of a honey bee diagnostics laboratory.
This laboratory will be part of the National Bee Diagnostics Network. Funds to establish this infrastructure were obtained from the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) and from the Ontario Beekeepers Association (OBA). The laboratory is fully equipped for molecular and parasitological studies. The infrastructure will be invaluable for studies and diagnostics of bee diseases, parasites and pests. Besides the study and diagnosis of bee diseases this lab will have techniques in place by 2010 to detect Africanized bees in the event they ever make it into Canada.

Incorporation of high quality personnel.
A postdoctoral position was created and Dr. Mollah Md. Hamiduzzaman was hired to establish diagnostics techniques and studies of bee diseases in the lab. This position is partially funded by CANPOLIN and partially funded by OMAFRA.

Establishment of diagnostics techniques.
Techniques to diagnose Nosema disease, including a molecular technique to differentiate between *Nosema apis* and *Nosema ceranae* were established. This molecular technique will be further improved to use it in Nosema disease studies. It is important to develop reliable techniques, capable of detecting low levels of infection and useful at quantifying infection levels, so that no tedious microscopic counts are necessary.

Study on causes of bee mortality.
A study was completed to determine the effect of bee population size and food reserves, as well as that of parasitic mites and Nosema infections on the survivorship of over-wintered honey bee colonies. Varroa mite infestations were the leading cause of colony mortality (associated to > 85% of colony deaths), followed by fall bee populations and food reserves. The complete study will be published in the first issue of Apidologie in 2010.



Bands of *Nosema apis* and *Nosema ceranae* with the technique mounted in the lab

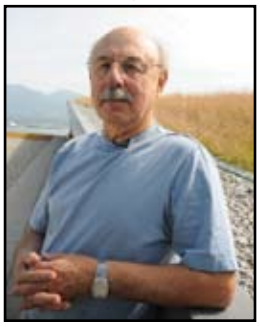
Pathogenic effects of Nosema species and varroa mites and natural resistance in honey bees against these parasites.
These studies are in the planning stage and are intended to further investigate the pathogenic effects (capacity to cause disease) of *Nosema apis* and *N. ceranae*, as well as those of varroa mites on bees. The recently established bee molecular and pathology laboratory at the University of Guelph will be a key infrastructure for the studies proposed. We have also developed new techniques to extract DNA from these parasites as well as methods to reliably identify Nosema species even from single infected bees, which is something that was not possible with previous techniques. Dr. Hamiduzzaman as well as two graduate students, Pegah Valizadeh and Gün Koleoglu, will be fully involved in these studies that will be conducted within the next three years. Additionally, we have the collaboration of Dr. Paul Goodwin, an expert on gene expression studies.

Varroa mite control in honey bee colonies using organic pesticides applied with different delivery methods.
In addition to the above, although not part of the CANPOLIN initiative, we have been working for more than five years on this project, with the objective of using essential oils and other natural compounds for the control of varroa mites. Several natural products, especially organic acids (formic and oxalic acids) and essential oils, have shown promising miticidal effects. We have tested more than 20 natural products for mite control in the laboratory and in field settings. The two products that provided the best results in terms of low toxicity to bees but high toxicity to mites were thymol and oregano oil. Several materials and solvents were also tested as candidate carriers for their ability to release a natural, volatile acaricide at a uniform rate, for different periods of time. Absorbent pads, gelatin, and powdered sugar were selected as acaricide carriers. Then, new formulations of thymol were developed and tested in Ontario in 2007, 2008 and 2009 (and in Alberta by an independent group lead by Adony Melathopoulos and Steve Pernal during the spring of 2009) with good results. We have finished the fall 2009 study and we are now in the process of counting mites. We expect to have the results by the spring of 2010. We want to confirm the repeatability of previous results with the new formulations tested.

Urban Beekeeping

Allen Garr, VP British Columbia
Honey Producers Association, Vancouver BC

I still remember my first swarm. I was terrified. But not because of the bees; it was the neighbours' reaction. It was a hazard of urban beekeeping. Fifteen years ago keeping hives in Vancouver was illegal. I considered it a bit like running a grow-op.



Allen Garr keeps bees on the roof of the Vancouver Convention Center

I came home one afternoon to discover my bees had headed down the back alley and settled two doors away in a huge cluster on a pear tree three feet above my neighbour's car port. That evening I quietly crept down the alley with a hive body, frames, a lid and a bottom board. Then I climbed up on the car port roof. I was about to shake the cluster into the hive when I heard a noise behind me. The cops, I thought. My career as an urban beekeeper was over.

As I slowly turned I saw my neighbours: kids, adults, some with video cameras, some in their parents' arms all fascinated by the magic of swarm gathering. And all fans of my keeping bees, many with stories of their relatives, often uncles or grandparents who once kept bees.

Since then interest in beekeeping in cities throughout the Lower Mainland has been booming. Ironically this is taking place against a backdrop of severe colony losses due to diseases. Actually I think news of that devastation has peaked peoples' interest more than anything.

But it is also happening at a time when people are more concerned about the environment and local governments are more involved than ever in promoting a green agenda.

I've found that it is that green agenda that is opening the door to many municipal council when I've lobbied as a regional rep for the B.C. Honey Producers often with other beekeepers, to change bylaws and allow beekeeping in urban areas across our region.

But the current wave of change actually started about 5 years ago in Vancouver where the mayor and council were developing a sustainable food policy only to discover the dearth of pollinators that existed and the fact that beekeeping was illegal in their city.

The work done by staff there continues to be used as a template by municipalities we have lobbied to amend their bylaws. That was the case in Burnaby, Richmond, North Vancouver City and Delta which have all agreed to change in the past two years.

What hasn't changed is the attention a swarm can bring. City swarms set of a series of calls to the police, the fire department, local exterminators or city hall. And because we agree to set up swarm lists of available beekeepers as part of our deal to legalize beekeeping in municipalities, in Vancouver frequently those calls come to me.

And just as frequently swarm gathering turns into a kind of performance art done in the presence of an audience.

I gathered a swarm in East Vancouver while a woman a few feet away was being debriefed on her cell phone by a CBC radio reporter asking her to describe my actions step by step. A swarm that settled on the trunk of a car across the road from a school yard was cordoned off with "danger" tape as three cops stood guard in two cop cars and students looked on.

One swarm I gathered this year landed on the hatch cover Chinese freighter arriving from California and coming in to dock at the Port of Vancouver. When the longshoremen discovered the bees they walked off the job at a cost of $15,000 an hour while that portion of the port went idle.

I got that call late in the evening from the provincial emergency response centre in Victoria oddly enough. And before all was said and done, those who got involved included the longshoremen's supervisor, the Port Authority, the captain of the Chinese ship, the provincial apiarist, the local bee inspector and the Canadian Food Inspection Agency who were concerned that the bees may have been Africanized.

The next morning another ship was held for a time out in Burrard Inlet while the hived swarm was moved.

In spite of all that, interest in urban beekeeping continues to grow. Last spring and in the middle of a provincial election campaign, I place 4 hives on the biggest living roof in the country, on the new Vancouver Convention Centre. While I was giving a talk to folks inside the building about this new exhibit who should turn up but a campaigning Premier Gordon Campbell who started pumping my hand and telling the crowd these bees would produce the finest honey in the province. Those hives can be seen, by the way, on YouTube.com

Vancouver Civic Centre West has a six acre green roof planted with more than 400,000 indigenous plants and grasses. The garden roof also supports four hives of honey bees whose honey is used by the Centre's kitchen.

My bees at Vancouver's VanDusen Botanical Gardens had their own brush with celebrity. Two jars of the honey they produced and I provided to the garden's shop was bought by Camilla, the Duchess of Cornwall when HRH and Chuck were out here recently.

That was urban honey being poured over royal porridge. What better publicity could you imagine to promote increasing the number of pollinators that populate our cities and enrich our environment?

NORTH AMERICAN BEEKEEPING ANNUAL CONVENTION REPORT

Corey Bacon, Chair of CHC Board of Directors, Kinistino SK

AMERICAN BEEKEEPING FEDERATION

CANADIAN HONEY COUNCIL

Canadian Association of Professional Apiculturists

The joint CHC/ABF North American Convention was a success. In spite of economic recession, areas of poor honey crops and high losses in Canada we estimate that close to 200 Canadians attended this year's convention. In discussions with the ABF management and executive, it could not have gone much better from their perspective - though they realize there are always ways to improve. Being coupled with the CHC allowed them to attract more beekeepers and displayers than they anticipated as well as, for the first time ever, sell out their entire raffle tickets and oversell the banquet, which many Canadians were in attendance.

Many of the Canadian beekeepers I talked with in Orlando were already anxious to proceed with joint conferences on a regular basis, including the planned joint AHPA and ABF meeting in 2011 in Galveston Texas. The only complaints I received or were made aware of were regarding structure and time limits for presentations and the lack of initiatives in Orlando to support the CHC and our work. In my discussion with Zac Browning outgoing Presdent of ABF it was recognized that opportunities for CHC convention events and fund raising by the CHC/CBRF (raffle tickets, trade show, sponsorship, auction, banquet, etc) that happen in Canada and other logistics need be addressed going forward to ensure CHC receives full benefits of joint conventions. They have committed to address these needs to help bring the CHC on board for joint North American meetings. Should a successful joint convention in 2011 of all organizations (including CHC) occur, the plan would be to join together every 3 -4 years. Consideration of conference locations in Canada and Mexico in the future would also be discussed.

Samples of Pure Honey 100% Canadian

Photo: Geoff Todd

Dan Walker (left) from Ontario and Tom Trueman (right) from New Brunswick man the Canadian Honey Council Booth.

Photo: Geoff Todd

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Canadian Honey Council Board with team ball caps. Photo: Garry McCue

Not only did we (CHC) have a productive board meeting with clear directives going forward on most fronts through association resolutions, strategic priorities, committee work and director input, we also had the opportunity to meet with other organizations to establish beneficial relationships.

A meeting of the CHC executive following the AGM to ensure office resources and direction are clear, progress/action plans is undertaken within developed time frames on issues/resolutions and further committee/board meetings time schedules are established.

Gordon Marks (right) from Manitoba socialising at the CHC booth with David Hackenberg (left), Ron Althouse and Stephen Page.

Photo: Geoff Todd

We met with and addressed CAPA on CHC and our activities as well as continue to develop our close working relationship with their organization.

We also had the opportunity to meet with the National Beekeepers Organization of Mexico delegation to discuss issues pertaining to labour and training, information exchange, technology/research sharing and formal relationships between our organizations; with the main focus on labour and training. We will be looking at the potential for a memorandum of understanding and action plan between our associations going forward on training/labour issues.

Corey Bacon with the National Beekeepers Organization of Mexico's president Porfiro Galindo.

Photo: Geoff Todd

New ABF President David Mendes (Sporting a Canadian Honey Council Cap) enjoying the presentations.

Photo: Geoff Todd

Corey Bacon (Chair) with Heather Clay (CEO)

Photo: Garry McCue

Members of the CHC executive also met for a joint supper meeting with members of the ABF board and the Mexican National Organization delegation. The Mexican organization provided information on their industry and ideas pertaining to a closer semi formal/ formal working relationship amongst all three groups. A formal invitation was also offered by outgoing ABF President Zac Browning for all N American groups to join in discussions/negotiation to host another joint convention between our three national organization coupled with the AHPA in Galveston, Texas (Jan 4-8) 2011. The Mexican organization committed to a formal discussion and indicated they would participate in the 2011 conference. CHC will give it strong consideration.

Heather Clay and Corey Bacon (centre) with the Mexican delegation, extreem right is Sasha Wasylenchuk from Saskatchewan.

Photo: Geoff Todd

Beekeeping Project in Armenia

Peter Keating, Apilac, St Prime, QC

In the fall of 2009 I had the chance to work on a beekeeping project in Armenia. This project was CESO-SACO funded to assist in technical transfer to beekeepers in a developing country. Armenia, a small country of 30,000 sq.kms, (Quebec has 1,365,128 km2) is nestled in between Iran, Turkey, Georgia and Azerbaijan. It is an ancient country settled since the Neolithic period and the first nation to adopt Christianity. Its strategic location has caused it to be fought over many times, a fact that has endowed the country and its people with a long and often sad history. Noah's mountain, Mount Ararat, was at one time in the country of Armenia until the land was taken by Turkey. Armenia has been independent from the USSR since 1991. Many wars and conflicts coupled with a genocide has created a small population of 3 million Armenians living in the country and a much greater number living outside of it (a Diaspora of 8 million).

Hives at Geghard Monastery. Photo: Peter Keating

A land locked country with arid mountains and bountiful valleys, it possesses a variety of natural resources such as gold, copper and zinc. Armenia has a continental climate with summer temperatures ranging between 25o and 35o, and winter temperatures as low as minus 15o Celsius. The climate allows for a variety of agricultural crops from the staple potato to the grapes used for making some high quality wines.

There are supposedly 3,000 beekeepers throughout Armenia with a total number of 150,000 bee colonies. The majority of beekeepers own from 30 to 50 hives. There appears to be no active apicultural branch in the government so this data is hard to verify. There are no extension services for education of beekeepers and no diagnostic services for disease. Most beekeepers suspect they have some diseases and often treat prophylactically.

The beekeeping assignment was based in Meghradzor village (alt. 1,800 m.) close to the town of Hrazdan which is some 40km from the capital city of Yeravan. In the village of Meghradzor (population 3,000) there are approximately 20 beekeepers. The beekeeping family with whom I stayed were Artyom Mikaelyan and his father Pavel. They jointly run a small business called Bee City. They own and operate a store in Hrazdan that provides beekeeping supplies and they also manage 100 colonies for the production of honey and royal jelly. They have plans for increasing the number of colonies to supply the market for honey and also royal jelly. Bee City has also contracted a company to produce plastic cell cups which they use, and also sell to other beekeepers. During my visit in October there were no stocks of honey and very little royal jelly available, due

BeeCity owners Pavel and Sirarpy Mikaelyan. Photo: Peter Keating

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Artyom and Pavel Mikaelyan in spring bee yard. Mount Ararat in background.

to a poor season.

Beekeeping is similar to most beekeeping in Europe and cannot be compared to North American beekeeping. The most common hive style is a Dadant which is large and deep, and difficult to move. The bees are not what one would expect for the area and I suspect that a lot were imported from Russia. The bees are dark and resemble what we Canadians purchase as "Russian". As it was late when I was in the country I was unable to open many hives but did notice that the colonies were small and the beekeepers had removed the frames that the bees were not covering. All the beekeepers visited had put blankets in the empty spaces in the hive and also on top. In most areas it appears that the beekeepers place the hives in the cellar of the house in November for the winter.

Once winter is over, in February or March and the temperatures are around 10o, the beekeepers move their hives out of the cellars to spring locations at lower elevations further south. These locations may be 200 km from the village. The locations are often communal and may contain up to 400 hives. When I mentioned that in Canada our yards were between 16 and 34 hives, they said that we must have very few flowers for our bees! The spring locations help the colonies develop for the honey crops. As in Canada the dandelion is abundant at this time and it also flowers a second time in the autumn.

Later the colonies are moved to summer locations which may also be communal and would contain a few hundred hives. The main flowers according to local beekeepers are alfalfa, strawberry, raspberry, linden (basswood) and thyme. Judging by the number of fruit trees that I saw there must be a good amount of nectar available from them also.

The beekeeper stays with the colonies during this period for security reasons and also to extract the honey. Queen rearing and royal jelly production start in the month of May. The collected royal jelly is stored in small refrigerators that are brought to the yards along with tents and generators.

After the summer flow is over and the crop is extracted (in the field) the colonies are moved closer to home for an autumn honey crop. The autumn crop is most likely to be extracted at home as the colonies are closer to the extracting and packing facilities.

All the honey is sold retail and as 2009 was a poor year all the crop had been sold. Most customers purchase sufficient for the family needs for the coming year.

Meghradzor village nestled in the mountains. Photo: Peter Keating

It should be noted that at present there is no demand for pollination services.

I thank the Mikaelyan family and other beekeepers for their hospitality during my visit.

Plants For Bees: subUrban Apiaries

Douglas Clay, Research Scientist, Calgary, AB

Common Name: vegetables and fruit (squash, berries, etc.), flowering trees (apple, caragana, etc.), and ornamental flowers

Range and Distribution:
Many Canadian 'gardens' are seasonal in design and thus the plants that are used to populate them can come from almost any climatic zone. Annual plants do not need to be resilient enough to survive our winters. Urban and suburban gardens are generally composed of decorative flowering plants and trees. More recently the phenomenon of the downtown urban vegetable garden is growing in popularity.

This wide diversity of plants provides forage for honey bees, from the first flush of dandelions and crab apples to the last gasp of petunias and asters. In addition, an enormous volunteer labour force waters and fertilizes the gardens, controls the weeds to reduce competition and removes spent flowers to extend the growing and honey harvest season.

Ecology
Every garden needs pollinators and honey bees are among the best. However ants, wasps, native bees, bumblebees, butterflies, moths and even bats all do their part. Without them there would be limited production of seed, fruit, and vegetables. It is often better to use 'natural' plants as many popular flower varieties have been hybridized for attributes that are valued by the gardener consumer, e.g. disease resistance, flower size or color, and bigger, longer blooms. Unfortunately such hybridization can reduce the production of nectar and pollen and sometimes leaves the resulting plant morphologically altered to such an extent that the pollen and nectar, even if produced, become unavailable to the bees.

Urban beekeeper Jean Paucton removing frames from the hive atop the Paris Opera. Photo: Franco Zecchin.

Urban farming
Urban farming can be taken up as a business, a source of family food, or a community cooperative project for nutritional, social and environmental benefits. The trend to industrial agriculture has triggered a movement towards urban gardens for local, safe, nutritious food.

Honey bees are an important component of urban farming but the activity of beekeeping is not welcomed everywhere. Many urban beekeepers face a number of obstacles in starting up their enterprise including in some municipalities bylaws and policies that may ban beekeeping[1] altogether.

In 2003 the City of Vancouver established a 'just and sustainable food policy', this led to several high profile urban agriculture projects e.g. Maple Community Garden operated under the 'City Farmer'. By 2005, pressure from local beekeepers and community gardeners encouraged the City to reverse its bylaw that prohibited operating an apiary. The rationale was:

> "Urban hobby beekeeping provides increased biodiversity and pollination for horticultural plants in backyard, community and public gardens. Hobby beekeeping is considered to be part of a broader Urban Agriculture strategy currently being developed under the umbrella of the City's food policy mandate."

1. Ontario has a regulation under the Ontario Bees Act that effectively bans urban beekeeping – 'No person shall place hives or leave hives containing bees within 30 metres of a property line'.

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These beekeepers then helped Janice Bobic, a beekeeper in Burnaby BC to successfully fight a bylaw against beekeeping in her area. Many cities in the USA have taken steps to encourage urban farming by assisting to find usable land.

Bees on the Roof of the Royal York in Toronto.
Photo: Nicole Feenstra

Bees are being kept in many cosmopolitan cities in a wide range of locations from the roof of the new Vancouver Convention Center to the Paris Opera house to balcony gardens in Melbourne. Recently the Royal York Hotel in downtown Toronto has added 3 hives to their roof top herb garden.

Attracting bees to your urban garden

To attract bees to the urban garden you need to create 'bee friendly' habitat:

1. **Use no or little insecticides** – To avoid insecticides and still control pests try using cultural techniques or organic treatments.

2. **Plant flowers or vegetables in clumps** – Bees are more attracted to groupings of flowers of a species compared to a mix of species spread over the garden. Plant your flowers in patches at least a meter wide.

3. **Plant where bees will visit** – Bees prefer areas that are sunny with some shelter from the wind. The sunny side of a wall or fence would be best for the garden.

4. **Arrange for a succession of flowering** – Bees and other pollinators require food throughout the summer months, to do this your garden patches will need to create a mosaic of habitats flowering sequentially through the growing season.

Although there is currently great interest in native plant gardens, one should keep in mind that *Apis mellifera* is the European honey bee and it evolved over millions of years with European plants. Generally honey bees can harvest European plants more efficiently than native North American plants and the pollen is more suitable for developing larvae. Thus beekeepers should always confirm the suitability of native plants before planting for a honey crop. Bees are looking for 2 key nutrients:

- **Nectar** - composed of sugars, the bee's main source of carbohydrate which is used for energy, and

- **Pollen** – which contains fats and proteins that are used for growth, particularly of the brood.

In addition bees will need a source of clean water, if water is not provided they will find it – either in the neighbour's swimming pool or in the old oil drum next to the local garage.

Plants that attract bees

The internet has many regional lists of plants that are attractive to honey bees. The types of plants that are attractive to honey bees include flowers, vegetables, herbs, trees and shrubs, etc. Some of the more popular[2] include:

- **Herbs:** Basil, Coriander, Fennel, Lavender, Marjoram, Mint, Oregano, Rosemary, Sage

- **Flowers:** Aster, Black-eyed Susan (*Rudbeckia*), Coreopsis, Cosmos, Daisy, Dandelions, Giant hyssop (*Agastache*), Globe thistle (*Echinops*), Goldenrod, Penstemon, Rose, Sunflower (*Helianthus*), Wallflower (*Erysimum*), Zinnia. (Some commercial crops have very attractive, long lived blooms that are not out of place in a garden, e.g. canola, phacelia, sainfoin, etc.)

- **Fruit and vegetables:** Blueberry (*Vaccinium*), Currant (*Ribes*), Melons (*Cucumis*), Raspberries

- **Trees and Shrubs:** Apple, Caragana, Cotoneaster, Crab apple, Elder, Linden (*Tilia*), Maple, Snowberry (*Symphoricarpos*), Willow (*Salix*)

- **Weeds:** generally provided gratis in disturbed areas, empty lots, alleys, and roadsides.

It may be possible to speak with your city garden department, university/ business campus, local cemetery, or industrial park about planting honey bee friendly gardens.

Honey/Pollen Potential:

Honey bees are the number one managed pollinator in North America. With the increasing loss of native pollinators honey bees are becoming more vital to the success of the urban vegetable garden. The wide diversity of nectar sources in the urban environment makes it difficult to estimate how much honey a colony might gather, or what the major nectar contributors might be or what flavour and colour will result. These factors that reduce beekeeper control coupled with the great diversity also means the yields are generally relatively stable and protected from the wild swings often found in the rural environment.

Generally most hives, in areas not over populated with honey bees, will produce between 25 – 45 kg (60 - 100 lbs) per year. Some individual plant species will make significant contributions due to the availability and abundance despite the relatively lower amount of nectar produced

2. The underlined plant names have been featured in past years in the Hivelights series 'Plants for Bees'.

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Allen Garr's rooftop hives on Vancouver's Convention Centre

per m^2. These include: apple/crab apple, blackberry/raspberry, cherry, cucumber/melon, dandelion, peach and plum. These plants generally produce less than 50 kg/ha of honey. Other plants that can produce significantly more honey per m^2 (over 50 kg/ha) often contribute less to the crop because they are less abundant. These include: beans, currants, chives, leeks, onion, squash, and turnip. After a heavy spring nectar flow the urban beekeeper can consider taking two harvests: one in early summer (light coloured spring honey) and another in late fall (darker summer-autumn honey); thus collecting two types of honey for the table.

John Gibeau (left) president of Honeybee Centre, and Graeme Evans, Fairmont Waterfront's beekeeper (and director of housekeeping), harvest honey from hives on the hotel's terrace while Evans wears the beginning of a bee beard. Photo: Glenn Baglo, Vancouver Sun

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Integrated Management of Nosema & Detection of Antibiotic Residues

Stephen F. Pernal, Abdullhah Ibrahim and Andony P. Melathopoulos
Agriculture & Agri-Food Canada, Beaverlodge Research Farm, P.O. Box 29, Beaverlodge, AB, T0H 0C0

Nosema ceranae is a highly adapted pathogenic fungus that has been associated with the depopulation and death of honey bee colonies in Europe and North America. In 2009, our team evaluated methods for disinfecting *N. ceranae* spores on comb and also performed experiments to evaluate the efficacy of spring- and fall-applied fumagillin-based therapies. We also continued to examine patterns of *N. ceranae* abundance from selected commercial beekeeping operations.

Comb Disinfection. The reuse of contaminated comb is a significant avenue for spreading *Nosema apis*, a parasite very closely related to *N. ceranae*. While the mode of transmitting *N. ceranae* remains poorly understood, we hypothesized that methods previously demonstrated to kill *N. apis* on comb would also be effective at decontaminating *N. ceranae*.

Our comb disinfection experiment involved artificially infecting frames of comb with *N. ceranae* spores, placing these frames in brood chambers, disinfecting them using acetic acid fumigation, heat or irradiation (Fig. 1) and comparing the subsequent infection after establishing bees on the comb.

Thirteen days after hiving package bees on the comb (15 May 09), spore levels within inoculated, untreated colonies rapidly proliferated to 2.4 million spores per bee while all other treatments remained below a maximum of 167,000 spores per bee. By 21 May, however, spore levels in the acetic acid fumigated and the heat treated colonies were similar to inoculated, untreated colonies whereas irradiated colonies still remained at levels similar to noninoculated, untreated colonies. On 4 June, the inoculated, untreated colonies peaked at 4.7 million spores, while heat treated colonies remained intermediate to reduced levels observed in all remaining treatments. Over successive weeks, separation among treatments diminished until 16 July when spore levels in all colonies, including those inoculated and untreated, were at or below an average of 100,000 spores per bee. These spore levels will continue to be monitored among treatments during the late fall, winter and spring of 2009/10.

In general, the acetic acid fumigation, heat and irradiation treatments all suppressed spore development in bees for specific intervals of time, however only spore levels in the irradiated treatment were maintained at levels similar to non-inoculated colonies for the duration of the summer.

Fumagillin Treatments. Sixty colonies from a commercial beekeeping operation in northern Alberta were used to test four fumagillin-containing treatments formulated either in bulk syrup, low volume syrup drenches, pollen patties or icing sugar dustings, against untreated colonies. Treatments were applied twice during the spring so that each colony received a total cumulative dose of 100 mg a.i. fumagillin, equivalent to the spring label rate.

At the commencement of experiment on 22 April 2009, colonies had natural *N. ceranae* infections that averaged 4.3 million spores per bee. Only one week after treatment application, suppressive effects were evident and by 6 May all formulations of fumagillin were observed to equally suppress *N. ceranae* spore levels far below untreated controls. By 27 May levels in the untreated colonies naturally declined to below 600,000 spores per bee and were similar to those in the patty and syrup treatments. From 3 June onward, spore levels in untreated colonies remained low and indistinguishable from those in other treatments. Additional treatment effects will be examined following processing of remaining sample dates from the fall of 2009.

A further observation from this study was that the seasonal decrease in untreated spore levels during mid-summer was similar to that typically seen for *N. apis* in temperate climates and does not mimic the absence of seasonal trends reported from *N. ceranae*- infected colonies in southern Europe.

Samples from our fall-applied fumagillin treatment experiment are currently being analyzed and will be discussed at a later date. Fumagillin residues in honey from previous efficacy experiments are also being analyzed.

Nosema Phenology: In this component of the project we surveyed the seasonal occurrence of *N. ceranae* and *N. apis* spores in bees across different regions of Canada. A more complete understanding of the seasonal occurrence of these two species will help formulate a more effective strategy for managing both Nosema species.

The phenology study began in 2008 and we continued to receive samples from 11 participating producers in 2009. Beekeepers were selected on the basis of having *N. ceranae* identified within their operations by provincial apiculturists. These beekeepers sampled apiaries on a biweekly basis from April until October in 2009.

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Analysis of our 2009 samples is ongoing. Based on a final overview of *Nosema spp*. infections from 2008, it is evident that no one distinct pattern is present among beekeepers. Some samples indicate that *N. ceranae* may be present during the summer by virtue of the fact that unusually high levels of infection were detected between mid-June and August. High mid-summer spore counts are not typical with *N. apis* and suggest *N. ceranae*. This will be confirmed with PCR analysis.

The possibility of high *N. ceranae* infections during mid-summer also emphasizes the need for active management of this disease during the spring. Based on these findings we encourage beekeepers to take samples from colonies that fail to build-up and produce honey by mid-summer and have them inspected for the presence of *N. ceranae*.

General Conclusions:

1. Irradiation is the most effective method of disinfecting comb contaminated with *N. ceranae* spores.

2. Applications of 100 mg a.i. fumagillin, irrespective of the formulations evaluated, are effective at suppressing active infections of *N. ceranae* over spring and summer months.

3. In northern Alberta, *N. ceranae* spore levels appear to naturally decline during mid-summer, similar to patterns historically seen for *N. apis*. Nevertheless, isolated survey results suggest that some beekeepers may experience persistent summer infections.

Figure 1. Treatments used in *N. ceranae* comb disinfection study: A. Acetic acid fumigation (Top, acetic acid in tray (120 mL of 80% acetic acid per box). Bottom, stacked boxes in fumigation chamber); B. Heat treatment in constant temperature oven (49° C for 24 h) ; C. Electron beam irradiation (10 kGy).

The Saskatchewan Beekeeper's Association Receives Multi-year Funding for their Technology Adaptation Team

News Release – December 16, 2009

The Saskatchewan Beekeeper's Association has obtained approval for a $½ million, three year project through the Agriculture Council of Saskatchewan's (ACS) Canadian Agriculture Adaptation Program (CAAP). This project is a proactive approach to addressing resistant Varroa mites, high winter mortality, and the questionable efficacy of alternative disease control treatments and techniques in Saskatchewan's climate.

The project is a combination of applied research and extension. The applied research will assist in determining the best application methods, timings and combinations of treatment methods to manage Varroa mites in Saskatchewan's short treatment windows. In addition another component will work on assessing better wintering techniques. Recommendations will be developed from the results and delivered to beekeepers through the large extension component of the project.

The project will start April 1 2010 and the SBA is currently looking for a qualified person to run the project.

Wanted: Technology Adaptation Specialist

Project funded by: CAAP – ACS
Employment Type – 3 year contract to commence April 1, 2010
Location – Prince Albert SK
Salary – Negotiable and commensurate with experience and qualifications

The Saskatchewan Beekeepers Association is seeking a motivated individual to lead its new Technology Adaptation Team. You will be responsible for running research and extension program within the mandate of the granted funding with a team of up to 2 summer staff.

Duties of the Technology Adaptation Specialist will include, but not be limited to:
- Efficacy testing of various mite treatments
- Writing and presenting extension materials
- Report writing
- Cooperate and communicate with other research programs
- Be responsible to a Steering committee as determined by the SBA
- Must possess a valid Canadian drivers license

The ideal candidate will have very good communication skills, a post graduate degree involving honey bee health, (a B.Sc. with work equivalence will be considered) strong knowledge of honey bees, and beekeeping, and knowledge of efficacy testing for mite control agents. Knowledge of beekeeping in the Prairie Provinces, and ability to adapt new information to improve the project would be beneficial.

Application Deadline – all applications to be received by Feb 12 / 2010
Send applications to: Saskatchewan Beekeepers Association
Box 55 RR3, Yorkton SK S3N 2X5 Email: whowland@accesscomm.ca

There is hope for the bees after all

David Vanderdussen, NOD Apiary Products, Frankford, ON

Varroa mites have and continue to be the biggest problem for bees around the world. The Varroa mite has been identified as a major contributing factor to the massive bee losses.
Hard chemical pesticides have been tried and used for many years BUT there usefulness has run its course. Varroa have developed resistance to virtually all of the traditional hard chemical pesticides available to control them - one of the reasons identified for sudden colony losses.

BUT there is hope on the horizon. A small Canadian company has developed, tested and trial run a new generation of Varroa mite control product.

NOD Apiary Products introduced MAQS™ - The "Mite Away Quick Strip™" to the world on September 16th in Montpellier France at the 41st Congress of Apimondia.

MAQS™ is the first truly new Varroa treatment in many years. Many beekeepers have been forced by this lack of available and innovative treatments to rely on using chemical treatments that have not only been hurting their bees but contaminating wax and honey.

MAQS™ moves a giant step forward by allowing beekeepers to not only treat DURING the honey flow BUT to target the Varroa directly were they live and breed. The MAQS™ is a single application treatment. The treatment period is only seven days, and upon completion the spent strip can either be left in the hive for disposal by the bees or can simply be thrown into the compost. It is 100% compostable.

MAQS™ has been shown to be exceptionally effective in killing Varroa under worker brood cap - while they are either being born or mating BUT doing all this without causing any significant damage to the pupating larva.
Trials have been conducted in Canada, Hawaii, Florida, Texas and three sites in Europe.

MAQS™ is a new formulation of Formic Acid and is "Patent Pending". Each MAQS™ strip is less than 6mm/ 1/4" thick so that it fits easily into the bee space. Each treatment consists of two strips placed either between brood chambers or on top between brood and honey supers. No additional equipment is required and excellent efficacy has been obtained in temperatures up to 33C/92F.

NOD is working to have MAQS™ available in Hawaii in October 2009 then available in January/February 2010 for general distribution as registrations are obtained.

www.miteaway.com

Classifieds:

Help Wanted

Help Wanted - Experienced Beekeepers: Prince(SK)
4 experienced beekeepers wanted from April to October 2010
Wages $13.25 per hour
Send resume to Happy Bee Honey Inc. Fax: 306-445-6555
Email: laprer@sasktel.net

Help Wanted - 9 Beekeepers wanted: Aylsham (SK)
Full time beekeeping help wanted April to October. Beekeeping experience would be preferred. Starting wage $12.75 per hour.
Contact Dan Valleau valleau.apiaries@sasktel.net

Help Wanted - Two experienced Apiarists : St Andrews (MB)
Two experienced Apiarists for April - November, and July - September, 2010. Wages, $12.15+, depending on experience. Health Insurance and Workers' Compensation. Driver's Licence required. Contact "Marg's Honey" c/o Margaret Smith, 1051 Porcher Road, St. Andrews, MB R1A 3N4, Phone / Fax Resume and cover letter 204-254-4509 or via e-mail rmsmith2@mts.net.

Help Wanted - Seasonal Beekeepers: Rocanville (SK)
Seasonal Beekeepers Wanted for Saskatchewan operation.
March - Oct. Experience Preferred. Wage $12.75/hr based on experience.
Contact: B.Strong Apiaries Ltd. email bdstrong@sasktel.net fax: (306) 645-4591

Help Wanted - 3 Experienced Beekeepers: Honeyland (BC)
For March-November 2010. Preference will be given to candidates with queen rearing and royal jelly production experience. Monthly salary range $2,300 - $2,800, depending on experience. Send resumes to Manager, Honeyland Canada Inc.
email: manager@HoneylandCanada.com or Fax 604-460-8887.

Help Wanted - Full time, seasonal, Beekeeper: Carlisle (ON)
March through October. Beeyard and honey house work. Heavy lifting, No bee sting allergies please. Send resume to John Van Alten, Dutchman's Gold Inc., 300 Carlisle Rd., Carlisle ON L0R 1H2 or email info@dutchmansgold.com

Help Wanted - 9 Seasonal Workers: Langenburg (SK)
Full time beekeeper required
Beekeeping experience an asset. Apr 15 till Oct 31, $12.75 per hour.
Glory bee Honey, phone 306-743-5469 or email DennisGlennie@sasktel.net for more information

Help Wanted - Seasonal Beekeepers:Nipawin (SK)
Wanted: Experienced Beekeepers wanted for seasonal position in Nipawin area of Saskatchewan. Pay based on experience, housing and transportation. Contact Yves Garez ph: 306-862-5979 fax 306-862-5974 or email y.garez@sasktel.net

Help Wanted - 12 Beekeepers : Shellbrook (SK).
Need 12 willing beekeeping workers for Apr.-Nov. 2010.
Pay starts at $12.75 with bonuses based on performance.
Training is on the job. Accommodations provided on rental basis.
Contact Murray: 306-747-3299 or
email: hanniganhoney@sasktel.net

Help Wanted - Two Seasonal and Four Summer - Kinistino (SK)
Help wanted (7-8 months from April to November).
Two seasonal and four summer workers (2-3 months from July to

Sept) are required in Northeastern Saskatchewan for two commercial honey operations.
Experience and knowledge of bee colonies and honey production would be required.
A valid drivers license is necessary and English speaking skills would be an asset but must be physical fit. Available to work evenings, weekends and some holidays is a must.
The hours range from 36-60 hours per week and rate of pay between $8.50 to $12.75 depending on experience.
Bacon Apiaries FAX resume with cover letter to 306-864-2451
Baconian Bee Farm FAX resume with cover letter to 306-864-3680

Help Wanted - Seasonal Beekeepers & Unskilled labourers: Roblin (MB)
Full-time seasonal experienced Apiarists for April-October 2010
10 Positions available at Wendell Honey in 2010. Duties include helping with spring check, hive management, and pulling honey, fall feeding and wrapping. Wages $12.50 to $17.00 depending on experience with Wendell Honey.
Also: 6 Unskilled labourers for the honey house and the bee yards (assistant apiarist) from April 20 to mid October 2010. Work is physically demanding. No experienced required. $10.00 per hour.
Phone Tim or Isabel at 204 564 2315, email isy@wendell.ca or fax 204 564 2568 or fax resume to 204 564 2568 or mail Wendell Honey, Box 1439, Roblin, MB. R0L 1P0

Help Wanted - Experienced Beekeepers Wanted: Porcupine Plain(SK)
Full time beekeeping help wanted for active beekeeping season. Experienced beekeeper wanted for April to October 2010. Wages based on experience $12-15 per hour. Contact Brad Lechler 306-278-2198, Porcupine Plain SK.

Help Wanted - 4 Beekeepers: Shellbrook (SK)
Wanted 4 beekeepers for May to October 2009. Wages depending on experience.Contact Jason Rinas, Email: jasonrinas@hotmail.com or Phone: 306-747-2654

Help Wanted -15 Beekeepers Wanted: Nipawin (SK)
Full time beekeeping help, April to October.
Beekeeping experience would be preferred. Wages start at $12.00 per hour. Contact Mark Knox, knoxapiaries@sasktel.net , 306-862-5657, Box 179 Nipawin,Sask. S0E 1E0.

Help Wanted - 6 Beekeepers: Mission (BC)
6 experienced beekeepers wanted from March-November. Preference will be given to candidates with queen rearing experience. Must be able to operate truck and fork lift. Wages based on experience. Golden Ears Apiaries BC. Contact Jean Marc LeDorze, jmcshipley@shaw.ca or phone 604-820-6924.

Help Wanted - Skilled Beekeeper : Vanderhoof (BC)
Beekeeper wanted aproximately April to October 2010 . Prefer experience in pollen traps, queen rearing ; class and field training important. Independent yet team player. Valid driver's licence required. Some heavy lifting. Room included. Wage $12 to $15 per hr depends on ability. Email only . sweet02@telus.net

Help Wanted - 2 Experienced Beekeepers : Carrot River (SK)
WANTED: 2 Experienced Beekeepers for 2010 Honey Season, April 15 to October 15. Must be experienced in Beekeeping. Wages starting at $12.75 per hour. Phone Wade at 306-768-3886 or email janzen.honey@sasktel.net

Wanted to Buy

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

Wanted - Used Round Comb Honey Equipment. Supers, Frames, etc. Cobana/Ross Round Size.
Best Price. We pick up. 403-599-3953. Summit Gardens Honey, Milo, Alberta. www.summitgardenshoney.com

For Sale

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

For Sale - Queen Bees, Equipment, Wax spinner (Cowan), Dadant honey dryer (Will remove 1-2% moisture from barrel/hour), honey dryer (will remove 1% moisture from 8 barrels in 24 hours) gang drill, bottom boards, queens, cells.
(306)398-3633, (306)398-2795, karen.pedersen@sasktel.net.

Give Your Bees The Best Nutrition!

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 prices available!

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

- **Bee-Pro®** gives your bees the best nutrients available for the production of larval food.
- **Bee-Pro®** is a high protein pollen substitute which supplies the lipids, minerals, and B-complex vitamins honeybees need to produce larval food.
- **Bee-Pro®** is specially formulated for the commercial beekeeper feeding syrup as the source of carbohydrates in the bee's diet.
- **Bee-Pro®** can be fed in dry form in a feeder box placed in the yard or made into patties by mixing with high fructose corn syrup or sugar syrup and placed in the hive.
- **Bee-Pro®** is free of all contaminants. Natural pollens may contain pesticide residue and disease carrying bacteria (foulbrood.)
- **Bee-Pro®** can be used for building colonies in late winter or early spring, to prepare for pollination and to maintain or increase brood production prior to and after honey flow.

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