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Join the CHC and support beekeeping in Canada

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

Editor: Heather Clay

Design and Production: Rudy Gelderblom

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

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Queens from Chile

The Canadian Food Inspection Agency has consulted with the Canadian Honey Council and the Canadian Association of Professional Apiculturists concerning the issue of importation of queen bees from Chile. Chile appears to be free of diseases of concern to the Canadian honeybee industry (Africanized honeybees, Small Hive Beetle, and oxytetracycline-resistant American Foulbrood). The CFIA requested and received documentation from the Chile Agriculture and Livestock Service (SAG) to confirm that Chile does not import honeybees from any country where Africanized honeybees are known to exist. They also confirmed that they have strict border controls to prevent the smuggling of bees from neighboring countries and that their apiary inspectors are trained to look for signs of africanization (aggressive behaviour, swarming) during their inspection visits. The CHC has no objections to permitting importation of queen bees from Chile under CFIA protocols.

Dr. Maria A. Perrone, Senior Staff Veterinarian – Imports, CFIA, has advised that shipments of honeybee queens from Chile are now permitted and will be subject to CFIA inspection at the port of landing. They must be accompanied by an official zoosanitary export certificate from the Chilean authorities containing all the required animal health attestations, as negotiated between the Chile Agriculture and Livestock Service (SAG) and the CFIA.

Colony Collapse Disorder

The issue of CCD has grabbed media attention since spring and there is a great deal of interest in what is happening to the bees. Although CCD has not been confirmed in Canada, the CHC held a meeting of stakeholders in June to develop a short term response and long term strategies in the event of future high losses. The 25 action items that emerged from the meeting can be found on page 6. The CHC is urging more research dollars are spent on federal positions to assist in assessing colony health and we are seeking government support for a national diagnostic centre. We are also preparing a brochure for beekeepers with integrated pest management recommendations for the bee year. The brochure will be distributed by the CHC, provincial associations and supply companies.

Promotion

Pierre, the “Spokesbear” for Canadian honey, has made several appearances at honey shows and fairs this year. He appeared at Aggie Days in Calgary and at Spruce Meadows International Show early summer. He is heading to Manitoba for fall activities followed by an appearance at Agribition in Regina. As a followup to the awareness campaign the CHC will continue the promotion of 100% Canadian honey, providing tamper proof labels for the retail market. These are expected to be ready in time for fall marketing.

Forging a New Direction

The current major initiative, Forging a New Direction (funded in part by the Advancing Canadian Agriculture and Agri-food Program – ACAAF) began in October 2006. Working Committees developed a number of options for “re-inventing” the CHC to better meet current and future challenges to the Canadian honey bee industry. Input from individuals and organizations has been received through meetings, round-tables and the CHC website. Consultation with provincial associations/commissions regarding the future direction of the CHC as the “national voice of the Canadian honey bee industry” will continue through the year.

In October the provincial association presidents and CHC directors will come together for a face to face meeting in Winnipeg. The final recommendations will be presented at that meeting and preparations will begin to implement the preferred options. The Forging a New Direction Project will continue until the spring of 2009, when the restructured and revitalized CHC will emerge.

Organic Honey Standards

The Canadian Honey Council has been invited to be a voting member and assist in developing national standards for organic agriculture for the Canadian General Standards Board. The standards for organic honey production that are currently in use were developed without consultation of our industry. We had no vote and our recommendations in the past were largely ignored. This is an opportunity to develop meaningful standards that do not exclude us from the world marketplace and do not make higher standards than we impose on imported product.

If you have any comments on the standards or would like to participate on the CHC organic committee, please contact the CHC office.

Oxalic Acid Registration

In October 2005 the Minister of Agriculture approved the use of oxalic acid for the treatment of varroa mites in bee hives.
The chemical was not officially registered as a pest control product by the Pest Management Regulatory Agency but was given ministerial approval for use. Because we had an approval for use the PMRA withdrew our application for registration. The CHC believes it is important for trade reasons to register the chemical on behalf of beekeepers. We have been informed the only way is to commence the process again but have been assured that this time the process will be shorter and the normally high fees for registration will be reassessed for our not for profit association.

Canadian Bee Industry Safety Quality Traceability (C-BISQT)

The Canadian honey industry has embarked on an On Farm Food Safety plan for beekeepers. In cooperation with the Canadian Federation of Agriculture and Agriculture Agri-Food Canada, the CHC has accessed funding to help develop standards for honey production. A C-BISQT committee has been set up and the group is working on preparing a manual of good production practices for the bee industry. After the GPP manual has been reviewed by the government it will be made available to beekeepers to implement in their beekeeping enterprise.

10 Reasons to Join the CHC

1. Promoting 100% Canadian honey
2. Lobbying for fair labelling of honey
3. Developing national standards for natural honey and organic honey production
4. Promoting research through the Canadian Bee Research Fund
5. Recommending national protocols for imported honey and bees
6. Registering Oxalic acid for varroa mite treatment
7. Communicating the latest industry news through four issues of Hivelights
8. Encouraging honeybee and native bee protection
9. Supporting registration of low risk pesticides
10. Distributing hive health information

Support your national association by joining the Canadian Honey Council today.

Current memberships expire October 31. New memberships will start immediately and be extended to October 2008. Remember that membership in the CHC and travel to the AGM are eligible business expenses for tax purposes.
Colony Losses in Canada

Heather Clay, National Coordinator, Canadian Honey Council, Calgary, AB

The spring of 2007 was one of the worst in many years for many Canadian beekeepers. The hardest hit province was New Brunswick where beekeepers lost an average 59% of their colonies. Most of the commercial beekeepers wintering outdoors lost up to 80% of their colonies. The only successful commercial overwintering was among colonies that were maintained in indoor facilities. Southern Ontario had extremely high losses up to 90% in the southern zone. Overall the province lost 37% (28,000) of their colonies. Alberta, with the highest colony count in Canada lost 31% of colonies during winter (77,500 colonies) and poor spring conditions slowed recovery of a further 15%. It is estimated that 46% of last years colonies are out of production in Alberta this year. Overall an average 29% of Canadian colonies died (186,510 colonies) which is twice the normal loss.

Some colony deaths could be explained by poor mite management, many were weather related and a percentage were unexplained because the colony died before examination. With reports of Colony Collapse Disorder (CCD) emerging from the USA, it was clear that Canadian beekeepers need a plan in place should bee losses continue and reach catastrophic levels.

The CHC took the initiative to be pro active and with the help of Dr Steven Pernal, AAFC Research Scientist, Dr Rob Currie, Chair CAPA research committee and Rhéal Lafrenière, Manitoba provincial apiculturist, a meeting of representative stakeholders was organized to develop a national response strategy. The CHC invited representatives of the bee industry, suppliers, allied industries, provincial apiarists and federal government representatives. There was so much interest and the need so urgent that the numbers quickly expanded to 40 representatives and three observers. Agriculture Agri-Food Canada provided funding for travel for our guest speaker and meeting space. The Canadian Honey Council hosted the meeting and provided professional facilitators GreenIsle Consulting to run the workshop and produce a summary document.

The aim of this important meeting was to develop both short term response and long term strategic plans for our industry in the event of further high colony losses.

Our guest speaker, Dr Jeff Pettis, USDA –ARS lab Beltsville Maryland presented information about the US situation. He is co-chair of the CCD Response Team that is investigating the possible causes of the high losses. They are considering all factors from parasites, pests, diseases, chemical or environmental causes that may have triggered colony collapse. US beekeepers lost almost one third of their total 2.5 million colonies over winter. Not all losses were CCD, it is estimated that 25% were attributed to this problem. The other factors were ineffective mite management, nutritional deficiencies in drought areas, and a variety of unknown causes. Secondary invaders such as nosema, fungi and viruses were prevalent in weak colonies but they are not thought to be the primary cause. No single agent has been identified for the majority of the colony deaths. Although the USDA lab has a suspect under investigation, it is too early to tell if there is a new contagion responsible for the high losses.

Dr Steve Pernal, AAFC Research Station Beaverlodge, Canada’s only federal bee researcher, reported the Canadian situation. Overall our losses were very similar to the USA. There are no confirmed cases of CCD in Canada but we are seeing losses that are twice the normal value. It is important to know what may be happening in the colonies and Steve’s lab has undertaken an analysis of bee samples. It has long been thought that Nosema apis was the only strain of this microsporidian in North American. Recent analysis of samples from current and archived samples show that the more virulent Nosema ceranae has been in the bee population of Alberta since at least 1994 and PEI and Nova Scotia since 2002. Both forms of Nosema are killed by fumagillin so it is important that beekeepers monitor the level of nosema and treat as required in fall.

Rhéal Lafrenière led the working group on registrations and replacement bees at the CHC stakeholder meeting in Winnipeg.
mites and nosema). The more stressors the higher the colony losses. It is vital for beekeepers to keep the number of parasites to a low level and to monitor the levels of nosema.

A direct outcome of this meeting is that the CHC will work with CAPA to produce an information pamphlet for beekeepers describing the techniques for monitoring and treatment of mites and diseases. It will be distributed to all beekeepers through Hivelights, provincial apiarists and bee supply companies in time for fall management.

The 23 recommendations for action that arose from this meeting and workshop (see Future Strategies to Mitigate Colony Losses, page 6) further underline the need for a strong national association. At a meeting of Provincial Apiculturists on October 26, 2006, regarding the future direction of the Canadian Honey Council, the number one emerging issue was identified as hive health. As the Canadian Honey Council continues to forge a new direction, it is clear that the organization must maintain an active role in lobbying for research, education, training and communication.

Future Strategies to Mitigate Colony Losses

23 Action Items from Canadian Honey Council Stakeholder meeting

A meeting of representatives of the national bee industry was organized by the Canadian Honey Council in Winnipeg, June 18th and 19th, 2007. The goal was to identify short term response and long term strategies in the event of future high colony losses. Participants were divided into six groups: monitoring, research, existing practices, new management practices, replacement bees, and communication. Following is a summary of the 23 action items for the Canadian industry that emerged from the workshop discussions.

1. Monitoring

This means knowing what is happening in the hives, from a bee health perspective, at all times. Monitoring needs to be done in a partnership of beekeepers, provincial apiarists, and Federal Government.

Action Items

1. Create an information sheet (a “1 pager”) for wide distribution, to inform beekeepers about honey bee health.
2. Create a standard set of questions to enable gathering comparative disease and other related data from beekeepers in all provinces.
3. Identify/establish a national bee lab for testing and research.
4. Systematically collect and analyze comprehensive data on the status of the industry, nation-wide.

2. Research

Research should focus on both known and unknown threats to hive health. At the present time there is a lack of trained staff and infrastructure/resources to undertake such research. More expertise is required as well as facilities and funding. Some strategic options are:

- Develop a diagnostic lab network
- Undertake research studies

Action Items

5. Lobby the federal government for at least one additional national apiculture research position (e.g. with a focus on pollination) with full technical support, employing a co-ordinated approach created by CAPA and CHC and involving the industry, suppliers and allied industries to demonstrate mutual support for this request.
6. Develop a national diagnostic lab network, starting with a survey of existing facilities, capacities and deficiencies.

7. Address CAPA’s research priorities, as documented in the Association’s research plan (and including improving honey bee genetics for local conditions).

8. Initiate further research on nosema.

3. **Existing Hive Management Practices to Prevent and Mitigate Loss**

There is a general lack of awareness, and education/extension for hive health. Comprehensive diagnostic services are not available. There is concern about queen supply for “high-loss” years. There are regional differences both in terms of effective practice and major concerns, and we can expect on-going hive health problems in the future.

**Action Items**

9. (also see Actions 1 and 19)
   - Get the word out on monitoring: develop national sampling protocols, add sampling procedures to the new CAPA manual, and distribute the sampling information widely.

10. Expand provincial inspection programs to include both fall and spring.

4. **New Management Practices to Prevent/Mitigate Loss**

New approaches should include earlier identification of bee health problems, development of effective tools for dealing with them and better communication at all levels. This would prepare the industry for migratory beekeeping. Some strategic options are:

- Creation of an “apiculture surveillance network” including a national database and baseline study
- Better coordination involving more specialists
- Increased cooperation with US agencies
- Appointment of pollination ecologist
- Better coordination amongst federal agencies to expedite the approval of new tools, etc.
- An integrated apiculture system to reduce stressors for hive health i.e. not just pest control
- Acknowledgement of international trade regulations, etc., to ensure that what is happening in Canada is compatible with trading partners
- More effective national/provincial communication (and consumers), regarding pesticide use
- Adoption of sustainable mite-control products currently available

5. **Registration and Replacement**

Registration procedures for new products should be more efficient.

Short term strategic options are:

- Provincial and federal financial support programs e.g. CAIS, crop insurance for both production and colony losses
- Reducing inter-provincial barriers to the movement of bees to be compatible with international sources
- Expanding availability of queens and packages from off-shore

Long term strategic options are:

- Improving Canadian bee stock
- Developing a Canadian supply of replacement bees
- Develop a “Made in Canada” sustainable industry
- Creating a national conservation program for bees and native pollinators.

**Action Items**

11. Make representation to PMRA to expedite the planned review of aspects of the registration process (low risk pesticides ) with the intent of making registration more affordable for small commodity groups like the bee industry).

12. Trigger assistance/disaster relief programs for beekeepers i.e.:

   - At provincial level, define “disaster”, establish deductibles, implement process for verifying losses
   - At national level, ensure information about available programs is widely distributed to provincial associations
   - Lobby both levels of government to address gaps in programs
   - Lobby for creation of an income stability program for beekeepers e.g. an adaptation of CAIS.

13. Create a bee buy/sell list and make it available on the CHC website.

14. Investigate off-shore availability of packaged bees and queens. (CFIA, which conducts the risk assessment, requires an applicant to request to import bees from a specific country.)

15. Increase and improve coordination and communication of information regarding inter-provincial movement of bees.

16. Develop better ways to manage higher winter losses and educate beekeepers accordingly.

17. Create a national or international bee breeding program.
6. Communication

Communication is the key to the adoption of new technology and management practice but there are many impediments to information transfer: complexity, beekeeper lack of trust and reluctance to change, and industry focus on the short term. Some strategic options are:

- Voluntary licensing/accreditation so that there is certification of entry-level beekeepers
- Strong extension services (through an industry/government partnership)
- Industry ownership of issues and speaking with a national voice (CHC)
- A single national communication network/publication including provincial information and supported by the honey bee industry
- Structured professional development, delivered by the industry, for experienced beekeepers
- Authoritative common messages to the media
- Better and more extensive use of alternative means of communication i.e. multi-media
- Strong extension services in every Province staffed by knowledgeable people and having continuity - including structured professional development
- Build future communication on present strengths e.g. the CHC website and "Hivelights"

Action Items

19. (see also Actions 1 and 9)
   Send the same urgent and powerful national message (in both official languages), via provincial associations to all registered beekeepers, and to others via the CHC and provincial association websites, through supplier handouts, etc. including the topics of sampling and monitoring for hive health, fall management, etc.

20. Maintain a communication focus on hive health:
   Keep the message on hive health going through regular updating.
   Conduct a spring email/telephone survey (beginning in 2008), share the information gathered, and make provision for feedback and email alerts, etc.
   Start an annual production and health survey in the fall of 2007.

21. Establish a comprehensive professional development program for beekeepers e.g. courses in business and livestock management, accreditation, and good practices recognition.

22. Encourage participation in, and support for, developing commercial apiculture courses

23. Prepare, deliver, and maintain a message to media on pollination.

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Artist wins Governor General’s Award

By Geoff Nixon, Canadian Press

A Winnipeg artist who uses honeybees to sculpt three-dimensional objects - including handbags, dresses and hockey helmets - is one of eight recipients of this year’s Governor General’s Awards for Visual and Media Arts.

Aganetha Dyck creates her artwork by selecting various objects, placing them inside a beehive and watching what transpires.

“It’s a collaboration,” Dyck, 69, said from Winnipeg, describing her artistic pairing with the winged insects. “Sometimes I carve into it or add to it … and sometimes I just let the bees go.”

Despite the changes she makes, the Mennonite artist admits she’s reluctant to edit the artistic decisions of the bees.

“When they make better decisions than I do,” she said.

When she is creating, Dyck makes a pre-dawn drive to a beekeeper’s house in the country. She likes to arrive by 5 a.m. so that she can move her sculptures without disturbing any of her thousands of tiny collaborators.

Before starting her bee-assisted artwork in 1991, Dyck worked with other mediums including cigarettes and shrunken wool sweaters. Her interest in bees stems from her passion for the environment.

Dyck said she “feels absolutely wonderful” and “honoured,” to be a Governor General’s award winner.

http://cnews.canoe.ca/CNEWS/MediaNews/2007/03/20/3790743-cp.html

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Provincial Reports

Maritimes

Spring in NS and PEI seemed to be colder than average, delaying the build up of bee colonies. Many colonies were light on feed after a warm fall and short cold winter. These problems seemed trivial when compared to the disaster that NB beekeepers were facing. New Brunswick beekeepers faced an average 60% of their bee colonies. This is not the first major loss for NB beekeepers and many are considering not restocking their equipment. The provincial Government has offered them some assistance, but it falls short of their needs and expectations. Fortunately for NB blueberry growers Ontario beekeepers were able to supply the colonies necessary for the blueberry pollination.

It appears that NS and PEI were able to satisfy the demand for blueberry pollination from within their permitted borders.

Beekeepers in NS are being encouraged to treat their hives for nosema. Preliminary results from a research project conducted by a graduate student from Acadia University has indicated that hives treated for nosema have much lower levels of infection than untreated hives. The making of summer nucs and overwintering them is being promoted to beekeepers as a way to help off set their winter losses. With the lack of extension services in NS these ideas will be promoted through a series of summer information sessions throughout the province with the assistance of our bee health advisor.

Wishing all of you all the best for the summer.

Ontario

After an unusually cool and nasty April, spring finally arrived in Ontario in May. The bees that managed to survive the winter have been thriving with the favourable conditions we have experienced since then.

Certain areas of Ontario suffered unusually high winter losses. Some as high as 90%. The provincial average, which in the last few years has been fairly consistent at 12-15%, soared up to around 30% winter mortality this spring. The Ontario Beekeepers Association Board of Directors took our case to the Ontario Ministry of Agriculture in May, and June 25 we received the news that there will be a 3 million dollar aid package for those beekeepers who suffered more than 15% losses. This is a welcome injection of money into those operations that were struggling financially to recover. Part of the package includes $600,000 for research, tech transfer and honey promotion. I hope that the action taken by our provincial government will serve as a model for other provinces to help the beekeepers in their jurisdiction and possibly to inspire our federal government to take our industry seriously, and provide some additional assistance.

The OBA summer meeting, which was held in the Kortright Centre just north of Toronto, was a success. We had a special speaker from Baton Rouge, Dr. Lilia De Gusman, spoke to us about the Russian Bee Project and her small hive beetle research. Every thing she said about the small hive beetle re-enforced the resolve to try to prevent this pest from coming within our borders.

Our annual AGM will be held in Cornwall in Nov. Everyone is welcome to join us for what promises to be a very informative session. Please check out the OBA website for further information about this meeting.

Once again there has been a migration of bees to blueberries in Quebec and New Brunswick. More and more, we are coming to rely on the income generated from pollination for our livelihood. The unobstructed importation of cheap honey from other parts of the globe has undercut the value of the honey crop that we produce, to a point where it is no longer viable to keep bees in Ontario, simply for honey production. We have to become innovative to supplement our income with other opportunities such as pollination, queen and nuc sales and value added products. I hope the recent media attention on the disappearing pollinators will inspire our honey packing industry and the Canadian consumer to support Canadian honey production over the importation of offshore honey. We can always hope!
Manitoba

This year many honey producers in Manitoba found it difficult to make up all of their winter losses. Many dead-outs could be explained by a variety of causes but for other colony losses there was no satisfactory explanation. An upsurge in demand for replacement bees was met by shortages and many brood chambers are still without bees at this time. When losses are severe making up large numbers of hives by splitting wintered colonies will often limit total honey production.

In June, a wintered hive survey was mailed out to all honey producers in the province by Manitoba Agriculture Food and Rural Initiatives (MAFRI). The results will be compiled and used to make improvements in hive management and identify areas that could benefit from further research as well.

The annual MBA Field Day and Picnic was hosted by the Podolski family in Ethelbert. The weather was beautiful and a large number of guests turned out for a tour of their efficient indoor wintering facility and honey extracting plant. Recently, building additions and renovations have taken place at Podolski Honey Farms making the series of connected buildings into a well organized and worker friendly facility. Following the tours everyone made their way to an array of picnic tables set up for a delicious buffet dinner.

After the dessert was served, David Ostermann (MAFRI) provided an overview of the provincial disease inspection program and honey bee sampling which will soon conclude for this spring. Rhéal Lafrenière (MAFRI) gave details about the facilitated CCD meeting in Winnipeg and answered several questions from beekeepers. Dr. Rob Currie talked about several ongoing honey bee research projects that are taking place and some future projects that will be done at the University of Manitoba.

Much of the seeding of agricultural crops was done early this year. Flowering fields of canola are now being seen throughout the province and by early July later seeded canola acreage and some other field crops should also begin to flower. Heavy rains have been occurring regularly and many bee keepers are reporting that access to some bee yards has become difficult.

Saskatchewan

Winter losses came in slightly higher than first anticipated in
Saskatchewan, especially in the Northeast region of the province. Winter death losses (and poor colonies unlikely to produce this season) for the province came in at an average of around 25%. Cool and wet spring weather has seen surviving colonies slower building up and some weaker colonies suffer spring dwindle. The southern part of the province started of a little on the drier side while the North continues to receive excess rain and cool weather. This poor weather has somewhat hampered queen and nuc production to rebuild lost colonies and expand operations. The colonies that over-wintered successfully experienced a good willow flow and extended dandelion flow when weather conditions permitted flight. The caragana flow was slow compared to past years and may have been hampered by the negative temperatures experienced across the province in mid-May. This excess rain has continued and spread throughout the province throughout the month of June. As such, spring seeding has been delayed in many areas. This may be a blessing for Saskatchewan beekeepers as the canola seeding was delayed several times due to wet conditions bringing the seeding period span for canola up to 6 weeks in some areas. The conditions are favourable for a bumper crop if the cool and wet weather turns and Mother Nature does not surprise us in August with a frost. Honey prices slowly climbed during the month of May and topped out at $1.05 before falling back to $0.95/lb range. The fallback was expected as packers awaited word on the Chinese crop and are aware that the deadline for the Advance Payment Loan Program is approaching. Beekeepers are optimistic and anticipate prices in late summer to reach the $1.20/lb range. This optimism was seen at two retirement auctions this spring that saw decent prices paid for the colonies and top dollar paid for the honey supers. The Saskatchewan Beekeepers Association held its annual field day and Bar-B-Q in Nipawin this past weekend. There was a large turnout and beekeepers enjoyed the presentations on mite testing techniques and soft chemical treatment method displays. The first elected board of the Saskatchewan Beekeepers Development Commission was also held this past weekend with election results being released and the election of a President and Vice-President. Thos elected based on colony count votes were Corey Bacon (3 year term), Gerry Moyen (2 year term) and John Gruszka (1 year term). Thos elected on a one member one vote were Tim Wendell (3 year term), Calvin Parsons (2 year term) and Len Proctor (1 year term). Tim Wendell was elected President and Calvin Parsons was elected Vice-President.

Alberta

The Alberta Blues

Wintering success in Alberta this spring has been all over the map. Reported winter losses have ranged from as low as 10% to as high as 80%. The Peace river region has seen an average of 40% winter loss; The central region (Edmonton, Barrhead, St. Paul) has experienced a winter loss average of 30-35% winter loss; the southern portion of the province is reporting the lowest losses of 20-25% winter loss. The median loss is 31.5%. The reported losses are across the board regardless of whether bees were wintered indoors or outdoors. The reasons for these losses are wide and varied. They range from failed indoor wintering systems to mysterious spring dwindle.

Some of the more heartbreaking tales include the beekeeper who lost almost all of his hives after his wintering building collapsed from an unusually heavy snow load. Another tear-jerker was the beekeeper, after diligently feeding, medicating and treating discovered early this spring that he has a varroa resistance problem, evidenced by the thick layer of dead varroa found on 50% of his bottom boards.

The difficult lesson that we as beekeepers across Canada can learn from this spring is that disaster lurks in the dark recesses of the future, ready to pounce as soon as we lower our guard. Diligence and being alert can help ward off or mitigate the severity of a crisis, yet we remain susceptible, walking a narrow ridge, should our foot slip-down we fall into a perilous chasm. Perhaps next spring you will be faced with hard decisions...

I am writing my report at the end of an industry stakeholders meeting in Winnipeg to discuss what has emerged as a North America wide phenomenon. The headline news, “Why the Bees are Disappearing” is familiar to each of us. CCD can be whispered in an ominous fashion and gets a lot of attention. Because it is a novelty, CCD has gotten a lot of press lately. So far Alberta has not had a single incident of CCD. It seems that the only common thread to many of the hive losses in Alberta and the rest of Canada is the weather. Alberta experienced a cool and wet fall and winter came in rapidly packing a punch, this all on the heals of a crop that was of epic proportions.

Many beekeepers where unable to effectively (save the southern portion) prepare their hives for winter. Inadequate quantities of young bees...
emerged into stressed colonies in the face of an oncoming winter. Mite levels where not adequately ‘knocked down’, bees didn’t/couldn’t consume the sugar syrup fed later in the fall. It was too cold for formic acid. The list of reasons that beekeepers conjure up explaining away the winter loss are plentiful.

In the face of the extreme losses across the province, the Alberta Beekeepers Commission has approached the provincial government and request financial assistance for those most severely impacted by the winter losses and has also requested a complete revamping of the Apiculture program in Alberta. The financial aid requested is still pending as the government endeavours to define ‘Disaster’. A survey was sent out to all beekeepers 400 hives and more requesting specific information concerning the degree of loss, management practices and prospect for the future. Once the data obtained from the survey has been analyzed, an economic impact assessment will take place and hopefully, assistance will be forthcoming for those that need it most.

The other apparent area of neglect that this crisis has revealed in our province is that of the gross negligence in Alberta’s Apiculture program. How is one man supposed to enforce the Alberta Bee Act for an industry that boasts 240 000 hives? Medhat Nasr is a competent provincial apiculturalist and we are fortunate to have him. The expertise he brings to our province is invaluable. However, the difficulties that we have faced this spring have highlighted the fact that we need more bodies and funding in our provincial Apiculture program to effect adequate extension and surveillance.

To this end the Alberta Beekeepers have been petitioning the Provincial government for increased funding to hire additional staff and to fund a surveillance program to monitor hive health. The different industries across the Province that benefit from pollination services that our bees provide have lent considerable support to the commission’s endeavors. The results of our efforts are still forthcoming.

Not all news is bleak and dismal though. Some positives are that most beekeepers who have suffered substantial winter loss are reporting that they have been able to re-establish their numbers. Furthermore, many beekeepers have started clearing out honey inventories left over from the previous years. There is not much honey left in the province. The price of honey has also risen in the past 3 months from reported lows of 69 cents per pound to approximately $1.00 per pound.

Additionally, on the cusp of several announcements that new plants will be constructed in the province geared towards producing Bio-diesel from canola, the seed canola companies (Monsanto, Bayer Crop Science, Pioneer, etc.) have found their seed inventories at zero. This has lead to an increase in contracted hives for pollination services in the production of hybrid seed canola. At present, these seed companies are cautiously optimistic that the bio-diesel initiative is going to propel the canola oil market from its somewhat bearish position to aggressively bullish. This is good news for all involved - seed company, grower, beekeeper, David Suzuki and hopefully the consumer.

Well it has been about three weeks since I started writing this update, I now have all my hives moved into pollination, my hives are supered and looking full. I am going to start pulling the first honey on Friday July 13, and hopefully start extracting on July 16. May you pull more pounds than the times you get stung. May your barrels have no leaks and may your boxes be full. May you sleep well at night and sweat off all the pounds you put on last winter during the day. May your employees not cause you any anxiety and may we sit down and regale each other with outlandish tales at next Novembers convention. Its your turn to buy and I’m drink’in cocoa cola

In the face of the extreme losses across the province, the Alberta Beekeepers Commission has requested financial support to the commission’s endeavors. The results of our efforts are still forthcoming.

Required pollination units were delivered to the Fraser Valley blueberry growers from additional sources in Manitoba and Alberta. Adequate numbers for cranberry pollination are anticipated from local conventional sources, despite the challenges of colony build up from a cooler & wetter than normal spring. Nice June rains in the Okanagan are again causing optimism for the July honey flow.

In attempt to divert some of the serious losses of the past winter, the BCHPA working under the leadership of President John Gibeau are creating a series of hive management and critical check lists for beekeepers to use in preparing healthy colonies for winter. To assist in identifying quality B.C. honey, the BCHPA is releasing a “Made in B.C.” brand label for controlled distribution amongst its membership.

B.C. beekeepers are rebuilding winter losses & attempting to meet pollination requirements. Initial reports were of a 24% overall winter mortality but subsequent reports are revealing a later crash of hives earlier considered healthy and vigorous. There were pockets within the Okanagan and Fraser valleys where catastrophic losses have been reported and requests have been received for disaster relief. Our provincial association is approaching the B.C. Ministry of Agriculture and providing all of the available information.

Reports from pg 11
The Bee Maid Board of Directors and management most recently met June 4th and 5th at the Nisku Inn south of Edmonton. Bee Maid continues to develop sales programs based on high quality Canadian honey and we have been successful marketing much of last year’s large crop, with some improvements in markets in the third and fourth quarters. Some of this increase is coming from the reduced availability of honey from Argentina. It is also being driven by concerns over the size of the new crop coming from North America in light of the CCD affects in the United States and overall larger than normal losses in Canada this past winter as well.

We have worked with CHC over the past number of years on the CFIA honey labelling review. Bee Maid CEO Gordon Marks attended meetings in Ottawa this past April with a CHC delegation to add his expertise to discussions and further updates on the coming regulation changes and the process to gazette these. Currently the Agriculture Minister has approved moving forward on this file, so we will continue to work with industry and CFIA to improve the labelling of domestic and foreign honeys in the Canadian market to benefit the consumer with clearer information to help make purchasing choices.

Derrick Johnston and his excellent staff had another successful and, as usual, very challenging year meeting industry requirements for queens while juggling orders to match beekeeper requirements that fluxed with the difficult weather in April, especially in Alberta. Overall sales of queens have exceeded last year’s totals by 6% as of early June with more volume yet to be shipped. Beekeepers have struggled with higher losses and we are pleased to have strong relationships with some key suppliers that have been very reliable for our industry. Our Bee Supplies department will continue to work with the various protocols to help the beekeepers get quality healthy queens from all available sources.

Bee Maid is also a participant in the process to establish AMPA levels of advance crop payments for the upcoming year, working with other agencies across Canada. We provide our assessment of market forces to help the federal government determine the rate that is set annually for AMPA payments. Perhaps this year’s rate will be known by the time of publication.

We were also happy to send Gordon Marks and Barrie Termeer to attend the recent Honey Industry meetings in Winnipeg that successfully brought together over 45 attendees from all sectors of our industry, crop growers, bee supply companies, makers of Checkmite, Apistan and Miteaway ll and also government personnel in a number of key departments, to take a hard look at the recent wintering losses in Canada and the United States. This working session was productive and gave industry direction on what we will have to be doing in the short and long term to keep our industry strong and growing.

This year at the upcoming field day in Beaverlodge, Guy Chartier, Director of Bee Maid Marketing, and Derrick Johnston, AHPC Bee Supplies will be in attendance and Gordon Marks will attend field days in Manitoba and
Iotron’s treatment program offers beekeepers a cost effective, environmentally friendly solution for managing bacterial and fungal disease. Iotron’s proven technology has been recognized as a useful defense against antibiotic-resistant strains of AFB. Iotron has successfully treated more than 50,000 supers and thousands of kilograms of pollen.

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After a period of inactivity, the CBISQT program is underway once more. The Canadian Honey Council’s CBISQT committee has almost completed the producer’s good production practices manual, one of the two manuals it must develop for the industry in order for the program to receive government recognition. The second manual details the management system for the CBISQT program. Details of this second manual will make, shall we say, less than riveting reading material for beekeepers and we will spare you the details of this document. For the intrepid, all the information will be available on the website www.cbisqt.ca.

The producer’s manual is currently undergoing the last set of revisions. All the members of the CBISQT steering committee have received a copy and the editors are awaiting the feedback from the steering committee. Once those changes have been incorporated, a final version of the manual will be prepared and a face to face meeting of the committee will take place in Winnipeg in October to these last changes. Following confirmation of the GPP manual, a meeting with the Canadian Food Inspection Agency will be scheduled to review the manual and complete that portion of the requirements for the recognition of the program.

The core of the manual is the flowchart of the production process. It lists all the inputs for a producer, from construction materials to feed and chemicals, and it shows where those inputs enter the production process and what Best Practices cover the management of those inputs. The chart could be a table of contents for users; see what particular item has interest for you and from the chart you will be able to find what items in the manual pertain to it. (see example below)

Record keeping is a key component for traceability. The record keeping system developed for this program has been altered to be more in keeping with common practices in the industry. We found that most beekeepers use some form of journal or diary. The CBISQT committee has developed two diaries for record keeping; one for the field and one for the honey house. The diaries are flexible enough to be used by small producers with one or two beeyards, or multiple diaries can be used by larger producers. An electronic version of the diaries will be developed so producers can transfer data from multiple diaries into a central database on an office computer. Records can then easily be searched for information that covers all the yards in use.

The process of transferring the GPP manual to the CBISQT website is underway. The search engine on the site will aid in locating specific information. It is expected that the manual will be available on line in its entirety towards the end of the year.
A report on wild bee field studies in canola by Lora Morandin and Mark Winston, Department of Biological Sciences, Simon Fraser University, Burnaby, BC shows compelling evidence favoring preservation over development. Their research of wild bee abundance and diversity and seed yield in canola crops reveals significant results.

Many Canadian crops depend on bees for pollination, yet we know little about the effects of agricultural chemicals and agronomic practices on these important beneficial insects. Morandin and Winston compared the diversity and abundance and pollination efficacy of wild bees in conventional, genetically modified and organic cropping systems. Following is a summary of their findings.

Extensive field studies in northern and southern Alberta revealed a number of novel and significant results.

Herbicide-tolerant genetically modified canola agroecosystems had fewer wild bees than organic fields and there were an intermediate number of bees in conventional fields. Low bee abundance in GM fields and to a lesser extent conventional fields was associated with low seed set and reduced yields. Weed cover in fields and amount of uncultivated land around fields were positively related to bee abundance in fields. We also determined that crop landscapes with uncultivated areas could have greater yield than homogenously tilled landscapes.

Two particularly interesting findings emerged with conservation implications. First, and most surprisingly, reducing crop areas by up to 30%, and leaving those acreages to natural vegetation, can increase canola yields significantly, close to doubling profit for growers due to improved pollination. Second, even mixed managed systems can improve pollination through increased diversity and abundance of wild bees. In southern Alberta the amount of pastureland adjacent to the canola fields was highly correlated to pollinator efficacy.

Our studies provide information useful to enhance our ability to conserve agriculturally important bee species, protect and sustain the diversity and abundance of these ecologically critical insects and assess environmental impact using wild bees as indicator species.

Reference:
Exports of Honey to the European Union

Heather Clay, National Coordinator, Canadian Honey Council, Calgary, AB

The federal inspection system for honey has evolved with the changing needs of the honey industry. Agriculture Canada has required an export certificate for honey leaving the country since the 1980’s. The certificate was provided free of charge to registered honey establishments. Inspectors also sampled honey during inspections and provided laboratory reports of the results. The situation changed when the Canadian Food Inspection Agency (CFIA) was formed in 1997. User fees for registration were implemented and laboratory results were not reported back to producers. The CFIA enforced the regulation that called for an export certificate but the majority of international honey buyers were not requesting this documentation. Producers were paying for mandatory certificates for countries that did not require them or paying for a certificate that was not recognised because the honey was not certified by the federal government. In either case the certificates were not useful to producers. The Canadian Honey Council lobbied to have the mandatory export certificate requirement dropped. The CFIA agreed and for the past few years export certificates have been voluntary, issued on a request basis, for a fee.

On May 1 2007 the European Union (EU) announced a mandatory requirement for a Health Certificate for honey imported into any member state. Member states of the EU are Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, United Kingdom. The Health Certificate must be signed and stamped by a CFIA inspector.

The Canadian Honey Council has worked with the CFIA to address conformance with the new requirement. After consultation, the CFIA has agreed to provide the necessary documents for export to the EU. Exporters will complete the documentation and CFIA inspectors will verify that the establishment is federally registered and that the documentation identifies the correct shipment. We are very pleased that the CFIA has agreed to provide this export monitoring service for no fee.

In order to comply with the new requirement, exporters must acquire the correct documents from the CFIA (available electronically) and complete the three forms, 1. Request for Export of Honey to the EU, 2. Exporter’s Declaration for the Export of Honey to the EU and 3. Health Certificate for Imports of Honey and Other Apiculture Products Intended for Human Consumption. The required documents must be submitted to the CFIA inspection office at least 7 working days before the shipment is to leave Canada. If the shipment is not available for verification no export certificate will be signed.

Only honey that is produced and processed in a CFIA registered honey establishment is eligible for export from Canada. The CFIA advises that despite the implementation of Working Residue Levels 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 market. 

Karo Group, a design house, has the unique distinction of hosting four colonies of bees on it’s roof in downtown Calgary. Last year the resident beekeeper at the Karo Group installed a couple of colonies of bees on the roof of the two story office building. It provided entertainment for the staff and clients as well as a small, but still respectable harvest (see Hivelights, November 2006 issue).

Funded by the sale of honey futures to an expanded group of happy shareholders (Continental Imaging who shares the roof with Karo decided to join in the action), the apiary has doubled in number to four producing colonies.

Karo is looking for some interesting jars and will create a new label for the honey. The honey will make its way to staff and clients of the two companies.
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Common Name: Prairie crocus; also known as the eastern or Prairie pasque flower.

Scientific Name: *Pulsatilla vulgaris* (L.) Miller; common synonym *Anemone patens* L.

Native Range: The pasque flower, or Prairie crocus as it is generally called in Canada, are a native of western North America and Eurasia. The name pasque flower comes from the French for Easter or Passover, the time they bloom in Canada.

The *Pulsatilla vulgaris* is a perennial forb or herb in the Ranunculaceae (or buttercup) family.

Canadian Distribution: *P. vulgaris* is a native of western Canada from the Yukon to southeastern Manitoba. It has been chosen as Manitoba’s provincial flower. Prairie crocus is found in the mid-western USA and the western Great Lake states all the way south to Texas.

The old genus name *Anemone* comes from the Greek word for ‘wind’. *Anemone* plants are known as windflowers, because it was believed that they blossomed only when the wind blew in springtime. Often being the first flowers in a Canadian spring after a long winter, the prairie crocus is observed with some excitement by beekeepers – it’s the first ‘guarantee’ of coming spring.

Description: Pasque flower is an early wildflower featuring hairy, fern-like foliage and erect, open bell-shaped, solitary (1 per stem), blue-violet flowers, they can occasionally be yellowish or white. These beautiful wildflowers arise from woody roots and often form colonies. The first sign is a gray-green, leafless, hairy stalk rising from a branched, woody base.

They often have many stems 5 to 20 cm tall. The basal leaves are grey-green, divided into narrow lobes. The basal leaves only appear (expand) after the flower fades. Flowers are 2 to 4 cm in diameter with 5 to 7 petal-like...
sepals. They have silky hairs on the back of the sepals and yellow stamens.

The flowers are open during the day but close at night or in inclement weather. After the flower fades and the sepals fall off, a seedpod develops. Flowering is followed by a plume of seeds (2 to 3 mm) attached to silky slender fibers similar to clematis. Because of this, it is sometimes referred to as Prairie smoke.

The stems and foliage grow taller after the bloom. The plants typically grow to 20 to 30 cm height.

**Ecology:** *P. vulgaris* and related species are native to prairies, sub-alpine meadows and dry rocky areas in North America, northern Europe, and Siberia. They grow best in coarse, medium to dry, well-drained soils in full sun to light shade. The plant prefers cool climates, and further south, it is found at higher elevations.

The pasque flowers are difficult to transplant or grow from seed. Once established they are persistent. For this reason the prairie crocus is sensitive to loss of habitat. Its main habitat, native prairie grasslands are now largely gone, replaced by ‘tame’ pasture, crops, and urban infrastructure.

**Canadian Habitat:** The Prairie crocus grows from the prairies to alpine meadows and in dry, open woodlands. In most of southern Canada they generally bloom in April/May, sometimes late March.

In pockets of the southern Prairies, where the landscape is not conducive to grain crops, fields of crocuses still occur. In suitable areas the numbers can exceed dozens of flowers/m².

**Methods of Reproduction and Spread:** The name prairie crocus is a misnomer as they are not a true crocus (*Iridaceae*) and thus do not reproduce from bulbs. Rather they produce shaggy clusters of windborne leafy seeds. Even with seed they can be somewhat difficult to grow. Seeds exhibit morphophysiological dormancy requiring pre-planting treatments of cold moist stratification for 60 days. Germination occurs at 18° to 21° C.

**Honey/Pollen Potential:** Little, if any, nectar is collected from the pasque flowers. Their main benefit for honeybees is as an early source of pollen. Honey provides energy for adult and juvenile bees, but for the spring buildup of larval bees, a key source of protein from pollen is critical. In many honey producing areas of western Canada the pasque flowers are the first source of fresh protein.

In Poland, with a cool temperate climate similar to much of Canada, the flowers tend to open from morning to midday (8 to noon), whereas the pollen 'exposition' lasts only 2 to 3 hours, its peak occurs between 10 and noon. The rate of pollen collection by honeybees during the day was positively correlated with the intensive bursting of the anthers. During the 3 to 6 day period of pollen presentation, production varied from 8 to 15 mg/flower.

Weather affects the time and length of blooming of the plants and controls the regularity of the developmental stages. The pollen is a creamy yellow and is considered a valuable food source of honeybees and other wild pollinators.

**Reference:**


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The brochure is available from your provincial associations.
**Anarchist Bees**

Dr Ben Oldroyd, Professor, University of Sydney School of Biological Sciences, has developed a line of honey bees in which workers lay eggs at high frequency.

“Anarchist bees” are rare genetic mutants that lay eggs even if they’re not the queen, and do not destroy the eggs of other anarchist non-queens. Through selective breeding, it is possible to create queenless “anarchist hives” where the sisters do it for themselves.

These selectively bred anarchist hives have some other odd features. Normal workers transplanted into them may start laying, which suggests that the queen’s pheromones are weaker than normal. Most strangely, taking the queen out of an anarchic colony - which triggers worker egg-laying in normal hives - causes anarchic workers’ eggs to lose their deceptive properties. They are eaten if transplanted into a normal hive, says Oldroyd.

Naturally anarchic hives contain a few dozen laying workers, and seem to function well. But by selective breeding, Dr Ben Oldroyd and his colleagues at the University of Sydney have got the egg-layers up to about 40% of the workforce. In these hives, breeding workers neglect their chores and the hives become decadent to the point of collapse. “They can barely feed themselves, and they do weird things like trying to raise queens out of male larvae,” Oldroyd says.

These anarchistic bees do precisely the opposite thing to ordinary honey bees, providing us with an experimental opportunity to study how sterility is enforced in ordinary bees.

**Shattering the folklore: black flies do not pollinate sweet lowbush blueberry**

It is often said that on the Canadian Shield, black flies pollinate the sweet lowbush blueberry, because years with high black fly populations also tend to be those with large blueberry crops. This folklore has never been tested experimentally. Researchers Fiona F. Hunter, Steven G. Burgin, and Allan Woodhouse Department of Biological Sciences, Brock University, St. Catharines, Ontario, designed an experiment and tested whether or not black flies can act as pollinators for sweet lowbush blueberry (Vaccinium angustifolium). They found there is no evidence that blackflies transfer pollen or increase fruit set in sweet lowbush blueberry. However, the authors do not exclude the possibility that in the wild, blackflies act as opportunistic nectar thieves of sweet lowbush blueberry, forcing the true pollinators to work harder (visit more flowers for food).

**Reference:**


Projects are available in 2007 for students who would like the opportunity for some really groundbreaking work in genetical aspects of animal behaviour. Possibilities include the identification of genes controlling the expression of worker sterility or anarchy. Contact the University of Sydney at http://www.bio.usyd.edu.au/Social_InsectsLab/2005_6/2007_hons_projects_web.doc for more information.
Queen bees avert the sting in the tail
Honeybee queens may use scent to stay popular in negative situations.

Honeybee queens produce a chemical cocktail that politicians would swarm to get their hands on: the scent of a queen keeps her drones and workers loyal to the throne, dutifully feeding and grooming their ruler.

Now it seems that this chemical perfume also prevents worker bees from developing aversions. This means that undergoing a negative experience around a queen won’t lead a worker bee to learn to hate her.

“They can still respond to something nasty,” says entomologist Alison Mercer of the University of Otago in Dunedin, New Zealand. “But what they can’t do is learn to associate particular stimuli with nasty outcomes.”

Negative association
Mercer and her colleagues tested this by training bees to associate a particular smell (not from the queen) with a mild electrical shock. They strapped the bees down, released the odour, and administered the shock. The bees extended their stingers in response to the jolt.

After a few repetitions of scent and shock, the smell alone was enough to trigger the stinger reflex even without a jolt of electricity — so long as the bees didn’t scent their queen.

Bees exposed to the queen’s pheromones, and specifically to a compound called homovanillyl alcohol (HVA), did not learn to associate the smell with the shock. They could, however, still learn to associate a particular smell with food, showing that HVA was acting specifically on aversion rather than general learning or physical responsiveness. The results are published this week in Science.

Previous work had shown that HVA acts on the bee brain via a signalling molecule called dopamine. In humans, dopamine plays a role in motor control and reward-seeking behaviour. In insects, however, dopamine is responsible for motor control and aversion. A different chemical, called octopamine, mediates positive associations, which could explain why HVA did not affect responses to food.

Smells like queen spirit
HVA is just one of many compounds within the queen mandibular pheromone coating the queen’s body. The queen’s attendant workers groom her with their proboscises and by rubbing her with their antennae. Then, when they mix with the rest of the hive, they distribute her pheromones to other bees. This calms the crowd and prevents reproduction among worker bees. “As soon as you put a queen into a colony, the young workers are less active and less aggressive,” says Mercer.

So why would a queen need to chemically prevent the workers from learning to hate her? One possibility, suggests Mercer, is that the queen may have a problem with body odour: in high concentrations, their heady mix of pheromones become repellent.

“You can overdo any odorant,” says Mercer. “We experience that in humans, too.” If worker bees, particularly those closest to the queen, were to get a whiff of that stench too many times, they may begin to avoid her. And that could spell the end of the queen.

Entomologist Mark Winston of Simon Fraser University in Vancouver, Canada, says the study provides an exciting glimpse into the relationship between genes and behaviour, but he finds the “stinky queen” explanation unlikely. “I doubt that pheromone concentrations ever get high enough in a colony to be repellent,” he says. But he says suppressing aversion may still be important for other bee activities.

References

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