

November 2002
Vol 15 # 4



Hive Lights

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Canadian Honey



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in Manitoba**

Chinese Honey Recall

**Making Mead
in Ontario**

**Canada/US 2002 Joint
Apicultural Meetings**



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A reliable partner

Beekeepers have had to broaden their management skills even further with increasing challenges by diseases and pests.

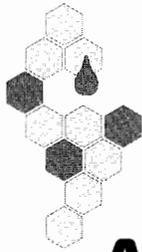
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CHC Activities

Heather Clay
National Coordinator CHC

Small Hive Beetle in Manitoba

It was an unwelcome announcement to hear that SHB was detected in Manitoba. We understand that the wax rendering operation voluntarily ceased operation while the investigation and cleanup took place. A thorough clean up has been conducted to ensure that there are no adults or larvae. Measures were taken to process all remaining wax. The soil around the facility where larvae may have pupated has been removed and treated.

The CHC is concerned that there is no standard for the importation of wax cappings and there is no regulation for the use of cappings wax that would prevent the transmission of any pests of disease to bee colonies. We will pursue this with the Canadian Food Inspection Agency.

Organic honey

The CHC has been acting in an advisory capacity to the Livestock committee of the Canadian General Standards Board (CGSB) to develop realistic standards for the production of organic honey. We have several concerns with the current standards. One is that the buffer zone of 3.5 km has outdated examples of what is acceptable. We want to see the standard allow for site specific determination of admissible activities. Another concern is the temperature for processing honey which is currently 35 degrees C. We have requested that the standard meets the international standard of 47 degrees to make it possible for packers to recrystallize granulated honey. The draft has been voted on by CGSB but we

understand that the changes were not made in this round. We have to wait for the final copy of the standards which should be available in the near future.

Recalled honey

Labonté Honey, Victoriaville Quebec has voluntarily recalled product under the

Labonté and Paradise Honey brand names that was packed in February 2002. The honey was packed before CFIA started testing imported Chinese honey in April. Over the summer CFIA did random testing of product in the marketplace and found chloramphenicol in Labonté honey. The honey was

labelled product of Canada. The CHC is encouraged that the CFIA is continuing their monitoring and we have assurances that they will prosecute companies not in compliance. On the positive side — Canadian honey from other packers was found to be free of chloramphenicol.

Infant botulism

Last year Health Canada and the CHC worked together on a project to sample and test Canadian honey for the spores that cause infant botulism. Beekeepers from across Canada sent in samples for testing at the Ottawa lab. The results were excellent and no spores of botulism were found in any of the honey samples. This is good news for Canadian producers. We are pleased to be able to show that Canadian honey is consistently pure.

Canadian On Farm Food Safety

The CHC has been working developing a national strategy for honey under the COFFS program. Several other commodities have produced HACCP based plans for COFFS for their producers. The CHC has agreed to pursue the idea for honey producers. We have submitted a code of Good Manufacturing Practices to the CFIA for their opinion. This is a first step in setting the guidelines and identifying the resources needed to continue with development of the national COFFS program. A meeting to develop the Phase 2 initiative will be held in Edmonton and the steering committee is expected to select a coordinator who will bring this project to fruition.



Annual meeting

Plans are well underway for the annual meeting in Niagara Falls. The agenda is packed with information for beekeepers. Top researchers from around the world will be there. The trade show will be extensive and we recommend this event not be missed. Reserve rooms at the Sheraton Fallsview hotel, quoting "Honey" to get the best price. Details of the symposium registration and agenda are on the CHC website at www.honeycouncil.ca and click on "events".

No EU Ban on Canadian Honey

A story that the European Union (EU) has banned Canadian honey has been circulating on the internet for over a year. There is no truth to this rumour. The CHC is working on clearing up this misinformation by making available the correct information.

Some European countries have expressed concern about genetically modified (GM) crops and there has been an unofficial moratorium on authorizing new GM products for EU farmers to grow or sell since June 1999. The decision not to grow GM crops in some countries has not influenced the overall export of Canadian honey to the EU. Some EU countries have increased imports from Canada over the past three years (UK up from \$451,000 in 1999 to \$700,000 in 2001). Some countries decreased Canadian imports (Germany down by \$1.3 million 1999-2001). The changes in the export market were largely driven by supply and demand and not by responses to GM concerns.

1998 was a bumper honey crop accompanied by record exports. Drought in the following years has reduced the quantity of honey available for export. In 2002, honey prices have doubled and product has been in short supply. It is a sure bet that exports to the EU will be lower than previous years but it is not because of GM concerns in the EU. More information can be found on our website www.honeycouncil.ca/gmo.html

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Report from the president

David MacMillan, President CHC, Ontario



**Dave MacMillan
Ontario**

Interesting times we're living in these days wouldn't you say? I've been waiting 25 years to be able to combine an excellent crop with unheard of prices. This year mother nature smiled on us in this northern region of Ontario. Production was over 230 lb per colony which is a record for this area. My apologies for gloating a little because I know that a lot of the country has suffered with the drought.

Some of the credit for our good fortune has to go to the O.B.As. breeding program. We have been using Buckfast stock for a number of years now and have seen a steady rise in our average yields. We have also seen a dramatic decrease in the number of swarms. I am told that there will be a limited amount of Russian stock available next year and I am anxious to include this in our gene pool.

Most of Southern Ontario has seen little rain this summer and yet many beekeepers report yields around the hundred pound mark. The goldenrod flow has not materialized in many areas and this can be blamed on the drought finally having its effect.

Testing for fluvalinate resistant varroa has been conducted in the high risk areas and so far has been negative with the exception of the Cornwall district. We are still free of the small hive beetle even though it is present across the river in New York State. The recent finding of the small hive beetle in Manitoba brings to light an interesting point. Certification is only a useful guarantee when there is an adequate program to support it. The open border supporters have often said that there could be a certification program for bringing bees in, the above situation clearly shows the flaws in this outlook.

The high prices seem wonderful at the moment, but I am concerned about the damage it may do to the marketplace. Consumer resistance could see honey back up very quickly and industrial users may switch to other sweeteners. Once these customers are gone will they ever come back?

As the season winds down plan to attend CHC annual meetings in Niagara Falls at the beginning of December. Hope to see you there.

Cross Canada reports

Maritimes

In June Prince Edward Island had 35 beekeepers and 3187 colonies compared to last year's 40 and 2848 respectively. The increase was the result of splits in 2001, imported colonies from Nova Scotia, and packages from New Zealand. The increases would have been greater but there were 30% winter losses. Apiary Inspector Claude Clement visited all operations detected 6 cases of scattered AFB. No tracheal mites detected in the province to date but 60% testing is planned for September. Bee Health Regulations were amended to allow importation of Queens from Hawaii.

The N.B. Department of Agriculture, Fisheries and Aquaculture has launched a "bee recovery program" to help replace the heavy losses of 2000/01. New Brunswick Beekeepers Association is concentrating on the treatment of Resistant Varroa in partnership with Agriculture and Agri-food's CARD fund. As an incentive to prevent misuse, all beekeepers who apply coumaphos to treat their colonies will be eligible for a rebate with the return of the strips. A significant number of AFB findings were reported in

three areas. Climatic conditions were relatively good for honey production this summer season throughout the province.

Québec

We'll talk about a bizarre year. To start with a warm winter and not too much snow, followed by a warm March and April. Then May and June were rainy and cool, which was not good for Spring build up. The first honey production started early in June and ended in July with a second honey flow that started in August

and lasted until early September.

In the Montréal area honey production is expected to be average if not slightly above average. For the rest of the province the production is reported to be slightly under the hundred pound average.

Now for the good news... The price... Where do we stop it or do we want it to stop? Honey sales range from \$1.50 /lb and up but now even \$2.35/lbs. And maybe more, well I don't know about you but I do not see a honey barrel the same way... They seem precious all of a sudden!



Paul Vautour
New Brunswick



Alain Moyen
Quebec

Manitoba

Everyone was caught by surprise when the Small Hive Beetle was found in Manitoba. The find was associated with the importation of cappings wax to a beeswax rendering plant located near MacGregor Manitoba. The operators of the wax plant alerted

Manitoba Agriculture and Food that they suspected the small hive beetle after they learned that Texas was no longer free of the pest. Since they had recently imported raw cappings wax from that state, they feared the worst.

The owners of the rendering plant have been very cooperative and pro-active about this problem. They imported this raw wax legally, and they have voluntarily accepted other restrictions to prevent the spread of diseases and pests. Furthermore, they have taken some trouble to try and eradicate the pest by drenching and removing soil from close to their building, and have taken themselves out of production until we learn more about how to proceed.

Unfortunately, we know that the beetle has already moved into nearby honeybee colonies. What we don't know is whether this pest is a serious threat in Manitoba. Some people think that our cold weather will inhibit it. We do know that northern states like Minnesota are not experiencing the severe impact of the southern states like Florida. A group of MBA directors will work with the beekeeper and wax plant operators to limit the spread of this pest, and to develop measures to prevent re-introduction.

Since the detection of resistant varroa in Manitoba, our request for the emergency registration of Coumaphos (trade name Chek-Mite) has been approved by PMRA. Beekeepers in municipalities where resistant varroa are known to be present can use this product. Beekeepers

should be aware that Coumaphos is not necessarily a better product than their current control methods. I strongly suggest that beekeepers considering using this product.



Phil Veldhuis
Manitoba

Beekeeper survey returns were

collected and tabulated by a neutral party. The results of the survey did tell us some important things. For instance, there is very little support for the sort of complete deregulation suggested by the Alberta Beekeepers present at the 2002 annual CHC convention. It also tells us that a majority of beekeepers would like to see restrictions on U.S. bees eased, but that they take the risks associated with bee diseases and pests very seriously. In light of the survey results, the board of the MBA has written to the CFIA, asking them to consider the matter of bee importation. We intend to take a resolution to CHC that will be a roadmap for going forward on this issue in a constructive way.

We started the summer worrying about spray damage associated with forest tent caterpillars. Cold weather in May dealt with that issue. However, a much more serious situation developed as the West Nile Virus spread into Manitoba. Two circumstances have put beehives throughout

beehives throughout Manitoba at significant risk of pesticide damage. Requests from beekeepers with hives registered in city limits, and residents who had asked for their properties to be exempted from nighttime fogging were ignored. The Provincial Government announced that they would fund 70% of anti-mosquito fogging by any municipality. This is likely the most important issue for our industry this winter. Provinces and Municipalities will be under strong political pressure to spray mosquitoes next summer.

The MBA was founded in 1903. We will be hosting the annual CHC meeting during our celebration and convention in 2003.

Saskatchewan

The Spring and Summer of 2002 was not kind to Prairie beekeepers. Here in Saskatchewan, a bitterly cold May slowed colony growth and resulted in higher than normal spring losses for packages and nucs. The cold spring also slowed colony growth so that hive populations were somewhat less than normal when the flow began in late June. Saskatchewan had virtually no snow in most areas during the winter, and was not blessed, in most areas, with spring rains. The resulting drought conditions greatly reduced the flow during July, and although some honey was coming in, almost all areas were wishing for rain. I think most of us are familiar with the saying "Watch what you wish for, as you might just get it!" We wanted rain, and in early August, most of the province started to get it.



Wink Howland
Saskatchewan

However, the arrival of the weather change coincided with record cold temperatures, and during the night of August 2nd, many areas of the province were hit by a killing frost. Temperatures plummeted to as low as -4° and stayed there for a 4 to 5 hour period, appreciably damaging many crops. The cold and wet conditions ushered in by that frost, stayed in place for the next 3 weeks, effectively killing the time when we usually see our heaviest honey flow. As of the first week of September, most provincial beekeepers still had a few boxes on their colonies, hoping that a few nice days might allow their bees to find some late nectar, which would bolster their crops somewhat. Although most of the province received reasonable rainfall amounts in August, water tables throughout the province are well down from their normal levels, and most sloughs are dry. Dugouts and holding ponds need filling, and many of our resort lakes are suffering from low water levels. We need a good amount of snowfall this winter.

If anything helps our beekeepers survive the crop shortage, it will be the honey prices. No doubt all beekeepers, with the possible exception of some hobbyists, are well aware of the escalating prices being offered for our virtually non-existent crops. The Chinese have not been able to resolve their contamination problem, and that, coupled with our own short crop, has created a large demand for honey. Offers are already being made in excess of \$1.80 per pound, and one can only expect that this figure will continue to rise. Although some honey

has already been sold here, many beekeepers are still holding out for even higher prices. Fortunately for a few buyers, and unfortunately for a few beekeepers, advance crop sales were made this spring, at prices in the \$1.40 range. Some beekeepers are finding themselves in the position of trying to buy honey to fill their contracts — an unenviable position to be in when there is a shortage. Most Saskatchewan beekeepers went into this year optimistically, given the good crop that they obtained in 2001 and also being assured of higher prices. It's fair to say that the optimism has faded somewhat.

British Columbia

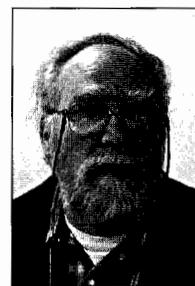
This is a synopsis of the 2002 honey crop in B.C. Down towards Grand Forks – 60 lb average due to hot dry weather, Creston – 45 lb, Castlegar / Nelson – 80 lb, Quesnel – 125 lb, Peace River – 130 lb, Fraser Valley – 40-50 lb, Armstrong 70 lb, and the Republic of Vancouver Island – low areas – 70-100 lb, higher areas – 150-250 lb.

It looks like the Island did the best. What a change! June was fairly warm and dry. The black berry bloom arrived right on schedule. About 3 weeks in, we had 2 weeks of rain and cold weather in early July. Then it cleared up, warmed up and the flow started.

One Vancouver Island beekeeper says that he has never seen it so good in his 57 years of beekeeping. He had

some supers that he did not want to lose to the wax moth, so he thought he would put them on the hives and let the bees look after them.

However, he didn't explain to the bees that they were just to look after the supers. The bees kept filling everything he put on.



Stan Reist
British Columbia

This is the first year that I know of on Vancouver Island, that a dead out gave you a 150 lb crop. I almost think that if you put an old shoebox out they would have filled it.

So, with a good crop and the prices as they are, it should be a good year. At \$2.00 a pound wholesale, where's it stopping!

Bee Maid

Rain! This word has dominated the beekeeping and honey gathering season all across western Canada. In some areas, such as sections of southern Manitoba, Saskatchewan and Alberta, generally south of the Trans-Canada highway, it was so wet that bees had difficulty finding flying time, so honey production was down. In much of central Alberta and Saskatchewan the problem was just the opposite. A winter with very little snow, and no rain during the spring or summer meant that canola, either did not germinate at all or was very patchy.

Alfalfa and sweet clover seemed to shrivel more each day as summer progressed. If the lack of moisture was not enough to deal with we also had grasshoppers and several periods of record breaking high temperatures. The upshot



John Pedersen
Beemaid

of all of these climate woes was that there was little or no nectar for bees to gather.

Some parts of Alberta and Saskatchewan did receive showers in late July and early August. This moisture stimulated second growth in many of the canola fields, so that by the second half of August the countryside was covered with as many yellow fields as one normally sees in late June and early July. This flush of bloom led to a late

August - early September honey flow. Despite this late honey flow the general honey crop in western Canada will probably be below average.

The good news for beekeepers is that honey prices will be at record high levels. Where the final price for honey will be this season is still anybody's guess. It seems to be climbing daily. The September prices are hovering around a record \$2 per pound which is great for those who have product to sell.

Honey in Short Supply: Prices UP

Heather Clay
CHC National Coordinator

The Canadian honey industry has been affected by regional drought conditions that have reduced the canola and clover crops on the prairies. Honey is in short supply. The overall production in 2002 is expected to be lower than 2001 and 10% below the 10 year average of 72.7 million pounds. Similar reports of drought related decreases in honey production have emerged from the USA and Australia. There is a world wide shortfall in honey available for export and this has affected the world price of honey.

Until September 2001 China was a major honey exporter to Canada and other many other countries. Sales to Canada ended abruptly in 2002 when the Canadian Food Inspection Agency found residues of the prohibited antibiotic chloramphenicol in Chinese honey. Europe banned Chinese honey in February 2002 and there has been a loss of market for Chinese honey in Canada and other countries. As well the USA has imposed antidumping duties of 34-180% against Chinese honey to prevent cheap imports from flooding their domestic market. Although there is honey available in China the western export market has been severely curtailed.

Argentina is one of the largest foreign sources of honey currently available in Canada. Imports of Argentinian honey have increased since September 2001. It has been traditionally lower priced than our domestic honey. The price of Argentine honey has been affected by the loss of US market due to anti dumping tariffs but it has increased with the global increase in honey prices.

The rise in Canadian honey prices is a result of a combination of factors. Lower domestic honey production, higher export prices paid by our major market, the USA, and the unavailability of cheaper imported honey from China have contributed to push honey to unprecedented prices. Bulk raw honey has doubled in value from \$0.80-\$1.00 per pound in 2001 to between \$1.70-\$2.10 per pound in 2002.

The CHC recognizes that increased honey prices will place pressure on the marketing of honey. We encourage manufacturers and distributors not to seek cheaper substitutes but to maintain the quality and value that honey brings to the food industry. While the higher prices help producers, a sudden escalation of price can cause consumer resistance which is something we wish to avoid. It is important to find the right balance between what is good for the industry and the consumer. We look forward to more normal conditions, with good prices and market stability in 2003.

B-Qual Australia Pty Limited

Laurie Dewar
Chairman B-Qual Australia Pty Limited

B-Qual Australia is an exciting platform by which industry will be able to assure its customers of the quality of its products and services. It is an industry owned and developed quality assurance programme which has been designed to meet the requirements of the new food standards and Australian export requirements.

The draft handbook of the new program is located on the AHBIC website at www.honeybee.org.au. The first auditors have completed their training in March 2002 and three trial workshops were held June 2002. Training workshops are now underway for beekeepers.

This project will include the production and delivery of:-

- ▶ Industry Food Safety Plan
- ▶ 'Honey Quality Standard' booklet
- ▶ Quality Assurance (QA) templates to assist beekeepers with the writing of a risk management plan to suit their own particular operation
- ▶ Food safety templates to assist packers and beekeeper/packers to write their own individual food safety manual Templates will also include criteria for the production of organic honey.

The project involved a three year programme with the ultimate aim of ensuring that in excess of 90% of all honey produced in Australia is quality assured for both domestic and export customers.

The Bee Qual QA system has long-term benefits for the entire industry and we commend the programme to the industry.

On Farm Food Safety

Heather Clay
CHC National Coordinator

Canadian consumers have become increasingly concerned about the source of their food and food safety. The major hazard as seen by the public are food borne bacteria and the diseases they cause. Less obvious and harder to identify are problems of residues from antibiotics and pesticides. Fortunately honey is a safe product and does not harbour bacteria but there have been recent concerns about imported honey that contains residues of antibiotics, in particular chloramphenicol. This is a wakeup call for our industry. Consumers must be assured that their food is safe and of high quality. The best way to provide that assurance is through a certification system. Retailers are moving towards a requirement that they only purchase from certified producers.

What is COFFS?

At its annual meeting in Banff 2002, the Canadian Honey Council agreed to begin working towards establishing a national Canadian On Farm Food Safety (COFFS) program for honey. The COFFS Program is based on the internationally recognized Hazard Analysis Critical Control Point (HACCP) principles and complies with the Canadian Food Inspection Agency's Food Safety Enhancement Program (FSEP). The concept of a voluntary producer driven program is appealing because the honey industry does not have the same concerns of bacterial contamination as do

the livestock, chicken and dairy industry. We do not want personnel who are untrained about the honey industry determining what are necessary procedures.

The COFFS program promotes safety practices with the focus is on getting honey producers to document them. The issue of traceability is very important. Most honey producers already have a well documented operation and implementing the COFFS system will be a relatively easy step. Producers will not have to spend hours in the office logging everything that happened. The idea is to have a workable system that has been designed by honey producers for honey producers. It should be in operation at every step of the process as part of the Good Manufacturing Practices. The expression "write what you do and do what you write" is the key to a good food safety program

The CHC is working on developing a code of Good Manufacturing Practices for the industry. One of the biggest problems in the honey industry is tracing the use of antibiotics and chemicals used for pest control. If there is a problem in the apiary the honey producer must record the date, the action and the outcome. Most of the time the documentation only requires a minute or two. Good documentation is the key to a successful on farm food safety program.

What stage are we at?

There are 4 phases in the COFFS program. CHC has entered Phase 1. We have assembled a steering committee and are developing a national COFFS strategy for honey.

Phase 2 will be to assemble a project team, undertake generic hazard analysis, identify Good Management Practices, develop program materials, establish Critical Control Points. During 2003 we expect to develop a HACCP model for honey production, record keeping requirements, pre-assessment guides, audit checklist and training materials.

Phase 3 will be the implementation of COFFS and the establishment of administrative capacity. At this stage it will be rolled out to farm level. The current timeline for this step is 2004.

Phase 4 is official recognition. This is still under negotiation and it is expected to be led by CFIA with provincial recognition to follow.

What commodities are adopting the COFFS program?

The chicken industry with 2,800 members has moved into Phase 3 and is getting its technical assessment in readiness for implement of a COFFS program. Other industries working on national strategies are the Dairy Farmers of Canada (20,000+), Sprouts (90+), Sheep (10,000+), Grains, oilseeds & Special crops (200,000), Bison (1,000+), Fresh fruits and vegetables (20,000+), Turkey (600+), Hatching Eggs (300+), Cervids - elk deer

(2,200 +), Eggs (1,400 +), Hogs (20,000 +), Mushrooms (150 +), Cattle (100,000+) and Hatcheries (50+).

Industry Concerns to be answered

Will imported honey be required to meet the same high standards expected of Canadian honey?

Most honey producers feel that the same high standards set by the Canadian industry should be applied to imported honey. This is a trade issue and will likely not be resolved quickly. The counter argument is that Canadian packers supplying specific markets want assurances that the honey they are buying is carefully documented and traceable. Producers could lose market share without this certification.

How much say will industry have in setting the standards?

Other commodities have been able to implement a COFFS program with major involvement from their industry. We expect it will be the same for honey producers.

Will COFFS be affordable?

There is a cost to going through the certification process as well as capital improvements and staff training. These may end up being very high and it is hard to estimate the final cost. The federal government has been funding the program design work. There is a cost to implementing COFFS but can we afford not to do it?

L'Aethina Tumida au Manitoba

Don Dixon et Rhéal Lafrenière
(Agriculture et Alimentation Manitoba)

L'*Aethina tumida* (small hive beetle) a été détecté près de la localité de MacGregor au Manitoba

durant le mois d'août 2002. Il s'agissait de la première découverte confirmée de ce parasite au Canada. Il semble que le parasite ait été introduit au Manitoba en juillet 2002 avec un voyage d'opercules provenant du Texas et destiné à un établissement de fonte de cire établi près de MacGregor.

À la mi-août, l'apiculteur texan qui avait expédié les opercules a informé l'entreprise de fonte de cire qu'on avait découvert la présence d'*Aethina tumida* au Texas. L'entreprise a avisé le Département de l'Agriculture et de l'Alimentation du Manitoba de l'occurrence probable du parasite à MacGregor à la fin d'août. Des échantillons de larves ont été soumis à l'Agence canadienne d'inspection des aliments (ACIA) afin d'en confirmer l'identification. L'inspection de ruches voisines a permis de découvrir un *Aethina tumida* adulte dans une trappe à pollen. L'insecte a été prélevé et remis également à l'ACIA aux fins d'identification. L'Association des apiculteurs du Manitoba, le Conseil Canadien du Miel, l'Association Canadienne des Professionnels en Apiculture et l'ACIA ont été informés immédiatement par Agriculture et Alimentation Manitoba de la présence possible de l'*Aethina tumida* dans cette province.

Au début de septembre, l'ACIA a confirmé l'identification des larves et de l'adulte prélevés. L'entreprise de fonte de cire a pris les mesures nécessaires pour réduire au minimum la propagation des coléoptères. On a volontairement suspendu les livraisons de cire pour permettre un nettoyage complet. Le sol entourant le bâtiment a été traité avec un insecticide approprié afin de tenter d'éliminer tout *Aethina tumida* autour du bâtiment. En outre, on a retiré 30 centimètres de sol autour du bâtiment, et ce sol a été placé dans des contenants

scellés. Le bâtiment a aussi été scellé dans le but d'empêcher les larves et les adultes de s'échapper.

Le Canada possède une loi sur les rayons de cire qui interdit l'importation d'équipement de ruche usagé en provenance des États-Unis. Toutefois, l'ACIA a confirmé que des opercules et de vieux rayons détachés des cadres peuvent être apportés au Canada depuis les États-Unis pour être fondus, à la condition que le produit fini ne soit pas employé pour l'apiculture. De plus, concernant la découverte de l'*Aethina tumida*, l'ACIA a fait savoir qu'il ne s'agit pas d'une maladie nommée et que pour l'instant l'Agence ne prévoit pas légiférer au sujet de ce parasite. Agriculture et Alimentation Manitoba a fourni des conseils techniques à l'Association des apiculteurs du Manitoba et aux propriétaires de l'entreprise de fonte de cire mais n'essaie pas de légiférer sur ce parasite, à cause de la façon clandestine dont il est entré au Canada.

L'Association des apiculteurs du Manitoba a formé un comité avec le mandat de travailler avec les propriétaires de l'entreprise de fonte de cire dans le but de développer des procédures pour empêcher d'autres introductions d'*Aethina tumida* au Manitoba. Le personnel du département d'Agriculture et Alimentation Manitoba fera office de consultant auprès des deux parties concernées.

L'*Aethina tumida* est un petit coléoptère charognard originaire des régions tropicales et subtropicales de l'Afrique. Il a été identifié en Floride en 1998, et s'est ensuite répandu à travers les États-Unis, en particulier le long du littoral oriental. Les apiculteurs américains ont rapporté que l'*Aethina tumida* était responsable de la destruction de milliers de colonies et peut devenir un problème majeur dans les mielleries. Cela s'est particulièrement confirmé pendant les premiers mois suivant la découverte de l'*Aethina tumida*, puisqu'à l'époque peu de choses étaient connues sur les procédures de contrôle et de gestion qui peuvent réduire l'impact du parasite.

Les larves d'*Aethina tumida* percent des tunnels dans les rayons et se nourrissent de pollen, de couvain et de miel. Pendant que les larves s'alimentent, elles défèquent sur le miel, le faisant fermenter et bouillonner hors des cellules. Le miel fermenté et les sécrétions des coléoptères forment une substance gluante qui souille l'équipement et incite les abeilles à cesser l'élevage du couvain et à abandonner la ruche infestée. La littérature indique que l'*Aethina tumida* peut être disséminé par les colonies qui sont transportées dans divers ruchers ainsi que par l'essaimage et la vente de paquets d'abeilles. Les adultes peuvent se répandre rapidement puisqu'ils peuvent voler et sont capables de survivre jusqu'à 5 jours sans nourriture ni eau.

Le cycle de vie de l'*Aethina tumida* commence par le développement des larves à l'intérieur de la colonie, se poursuit par le départ des larves matures hors de la ruche jusqu'au sol environnant où elles se métamorphosent en nymphes. Elles émergent par la suite sous la forme adulte puis cherchent à rejoindre une ruche pour s'y accoupler et pondre. L'expérience aux États-Unis a indiqué que l'*Aethina tumida* préfère les sols sablonneux friables, et survit difficilement dans les sols argileux. On ne connaît pas encore quel effet le long hiver froid du Manitoba pourrait avoir sur le parasite, mais on sait cependant que les adultes ont hiverné avec succès à l'intérieur des colonies au Minnesota.

Aux États-Unis, on recommande le CheckMite + (10 % de Coumaphos) pour le contrôle de l'*Aethina tumida* dans des colonies et le GardStar 40% (40% de Permethrin) comme traitement sur le sol autour des ruches. Ces produits ne sont pas actuellement enregistrés pour ces usages au Canada. Toutefois, on a accordé au Manitoba un enregistrement d'urgence au Coumaphos pour le contrôle de la varroase résistante au fluvalinate, et le Permethrin est la substance active majeure de 214 produits enregistrés au Canada.

Agriculture et Alimentation du Manitoba continue à surveiller l'impact de l'*Aethina tumida* dans notre climat pour déterminer l'ampleur des dommages économiques que ce parasite peut causer à l'industrie apicole du Manitoba.

Labonté brand natural honey from clover flowers may contain chloramphenicol

The Canadian Food Inspection Agency (CFIA) and Labonté Honey Inc. are warning consumers not to consume Labonté brand Natural Honey from Clover flowers as it may be contaminated with honey imported from China. Honey imported from China may contain chloramphenicol.

The following products are affected by this alert:

Labonté brand, Natural Honey from Clover flowers, sold in a 500 g glass container with UPC 0 64597 00110 9 bearing codes 042035, 052035, 062035, 072035 and 082035. The code is found on the bottle shoulder.

Paradise ("A taste of paradise Natural Honey." by Labonté) brand, Natural Honey, sold in a 500 g glass container with UPC 0 64597 00113 0 bearing code 012035, 022035, and 032035. The code is found on the bottle shoulder.

Labonté brand, Natural Honey from Clover flowers, sold in a 500 g glass container with UPC 0 64597 00110 9 bearing codes 042035, 052035, 062035, 072035 and 082035. The code is found on the bottle shoulder.

Labonté brand, Natural Honey from Clover flowers, sold in a 15 kg container with UPC 0 64597 00280 9, bearing code 012035.

The manufacturer, Labonté Honey Inc. of Victoriaville, Quebec, is voluntarily recalling the affected products from the marketplace. This product has been distributed in Ontario, Prince Edward Island, Quebec, New Brunswick and Nova Scotia.

The presence of chloramphenicol in honey from China poses a risk (although small) of a serious blood disorder known as aplastic anaemia. Chloramphenicol is a drug which is not permitted for use in Canada in food producing animals, including bees. There have been no reported illnesses associated with the

Canadian Food Inspection Agency, Ottawa
25 September 2002-

consumption of these products.

The CFIA is monitoring the effectiveness of the recall.

For more information, consumers and industry can call one of the following numbers:

Labonté Honey Inc., Josée Michaud,
Quality Control, at 819-758-3877

CFIA, in the province of Quebec 1-800-561-3350; or CFIA, in other provinces and territories 1-800-442-2342

Future Importations

China

Until the authorities in China have acceptable controls and a certification program in place, the CFIA will be detaining all shipments of honey from China. Importers will be responsible for having all product tested at their expense at a laboratory recognized by the CFIA to carry out the required testing. The honey must be proven to be free of all drug residues, including chloramphenicol, and other adulterants such as foreign sugars before it can be released. Sampling of the honey will be carried out by a

CFIA inspector. One positive result from analysis of Chinese product will result in rejection of the whole shipment.

Pacific Rim (e.g. Vietnam and Thailand)

Based on the CFIA's current knowledge, Vietnam and Thailand are current sources of imported honey among Pacific Rim countries. Shipments of honey from these countries will be subjected to the same hold and test procedure as honey from China. Analysis of the honey will be carried out by CFIA laboratories at the CFIA's expense. Should importation from any other Pacific Rim countries occur, they will be subject to the same procedures.

All Other Countries (e.g. Brazil, Argentina, Greece, New Zealand, India, United States)

Importers should be prepared to provide evidence on request that shipments do not contain honey of Chinese origin. Honey from these countries will be subjected to the CFIA's regular monitoring programs which will include a test for chloramphenicol. Should results indicate any problems with residues or adulteration, the CFIA will intensify their inspection and sampling activities on products from these countries. All products found to be in violation will be returned to the country of origin.

For information on recalls or for other food safety facts, visit our web site at www.inspection.gc.ca.

Le miel naturel de fleurs de trèfle de marque labonté peut contenir du chloramphénicol

L'Agence canadienne d'inspection des aliments, Ottawa
le 25 septembre 2002

L'Agence canadienne d'inspection des aliments (ACIA) et Labonté Honey Inc. avisent le public de ne pas consommer le Miel Naturel de fleurs de Trèfle de marque Labonté car il peut être contaminé par du miel importé de Chine. Le miel importé de Chine peut contenir du chloramphénicol.

Les produits suivants sont visés par cette mise en garde :

Miel Naturel de marque Paradis ("Le goût du paradis Miel Naturel." par Labonté Honey Inc.), vendu en contenant de verre de 500 g, portant le CUP 0 64597 00113 0 et les

Honey Combing

Ron Miksha

IT's November. Not too late to haul your eight hundred colonies into the basement. Stack them away from the windows and furnace, perhaps in the billiard room. Push your billiard table against the wall.

Carry the eight hundred hives through the kitchen, down the stairs. Pile the hives atop each other, leave some space between the rows. Keep the basement dark. Heat turned down – but not off! Put blackened cardboard over the windows. Or dump gravel against the side of the house, totally burying the windows. Except for one window. Smash the glass out and put in a small sliding door so you can control wintertime ventilation.

This may be a dramatic wintering scheme, surely one to make you popular with everyone in the house. But that's the way folks have wintered their hives for hundreds of years in many parts of North America and Europe. When your grandmother hosted a bridge party, she may have led guests down the stairs to the wine cellar and all the visitors took turns 'Oh-ing and Ah-ing' at the stacks of hives.

Preparing bees for winter is surely the least thankful and most tedious of the beekeeper's chores. It's hard work, all done in dreary anticipation of the gale-force winds and frigid arctic blasts that will come in a few weeks. Wintering costs money – you feed the hives, you wrap insulation around them. Perhaps you move them. You know you'll lose at least a few colonies - what would a beekeeper's spring be like if you didn't have wet, smelly, mouldy bee carcasses rotting in your combs?

You want your bees to survive. Particularly so you don't have to deal with the nasty combs of dead bees. So, you have to consider – what kills bees during the winter? Smarter beekeepers than I will tell you the culprits are disease, starvation, failing queens, wet hives, and something called dwindling. Let's examine these killers.

Disease: Some claim that nosema and mites are serious wintering threats. I suggest that you paint one of your trucks white and put big red crosses on the front and sides. Then stock antibiotics and poisons. Oxytet-25 and Terramycin (to prevent European and

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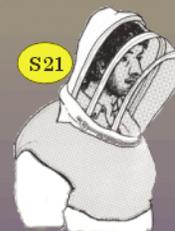
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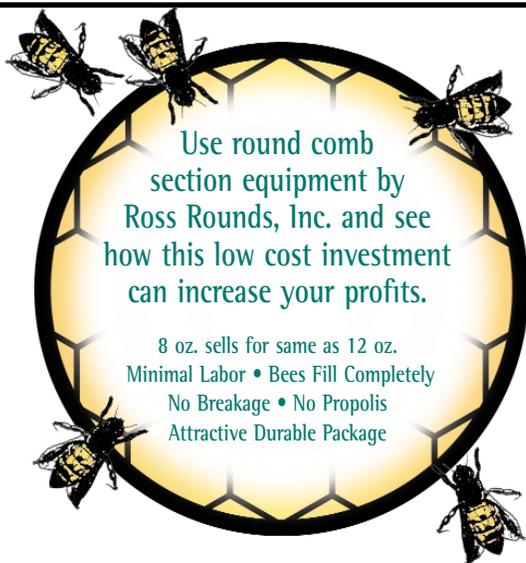
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Miel Naturel de fleurs de Trèfle de marque Labonté, vendu en contenant de verre de 500 g, portant le CUP 0 64597 00110 9 et les codes 042035, 052035, 062035, 072035 et 082035. Le code se trouve sur l'arrondi de la bouteille, près du goulot.

Miel Naturel de fleurs de Trèfle de maque Labonté, vendu en contenant de 15 kg, portant le CUP 0 64597 00280 9 et le code 012035.

Le fabricant, Labonté Honey Inc., Victoriaville (Québec) rappelle volontairement ce produit du marché. Ce produit a été distribué en Ontario, à l'Île-du-Prince-Édouard, au Québec, au Nouveau-Brunswick et en Nouvelle-Écosse.

La présence de chloramphénicol dans le miel provenant de la Chine pourrait causer (bien que le risque soit faible) une anémie aplastique, une hémopathie grave. Le chloramphénicol est une drogue qu'il est interdit d'administrer aux animaux producteurs de denrées alimentaires, y compris aux abeilles, au Canada. Aucun cas de maladie associé à la consommation de ce produit n'a été signalé.

L'ACIA surveille l'efficacité de ce rappel.

Pour de plus amples renseignements, les consommateurs et les gens de l'industrie peuvent appeler à l'un ou l'autre des numéros suivants:

Labonté Honey Inc., Josée Michaud, Contrôle de qualité, au 819-758-3877

L'ACIA, dans la province de Québec: 1 800 561-3350 ou

L'ACIA, dans les autres provinces et territoires: 1 800 442-2342

Importations futures de miel Chine

Tant que les autorités chinoises n'auront pas mis en place des méthodes de contrôle et un programme de certification acceptables, l'ACIA retiendra tous les envois de miel en provenance de Chine. Il incombera aux importateurs de faire analyser les produits, à leurs frais, par un laboratoire reconnu par l'ACIA pour effectuer l'analyse exigée. Le miel doit être exempt de tout résidu de médicament, dont le chloramphénicol, et d'autres produits d'adultération comme les sucres étrangers avant qu'il ne soit déconsigné. Le miel sera l'objet d'un

échantillonnage par un inspecteur de l'ACIA. L'obtention d'un résultat positif lors d'analyses du produit chinois entraînera le rejet de l'ensemble de l'envoi.

Pays riverains du Pacifique (par exemple, le Vietnam et la Thaïlande)

D'après les données dont dispose l'ACIA actuellement, parmi les pays riverains du Pacifique, le Vietnam et la Thaïlande sont des fournisseurs actuels de miel importé. Le miel expédié de ces pays sera assujéti à la même procédure de retenue et d'analyse que celui de la Chine. Les analyses du miel seront réalisées par des laboratoires de l'ACIA à ses frais. Toute importation d'un autre pays riverain du Pacifique sera assujéti aux mêmes procédures.

Autres pays (par exemple le Brésil, Grèce, l'Argentine, la

Nouvelle-Zélande, l'Inde, les États-Unis)

Les importateurs doivent être prêts à fournir sur demande des preuves que les envois ne renferment pas de miel d'origine chinoise. Le miel de ces pays sera assujéti aux programmes de surveillance ordinaires de l'ACIA, notamment à des analyses de détection du chloramphénicol. Si les résultats indiquent la présence de résidus ou d'un produit adultérant, l'ACIA intensifiera la fréquence d'inspection et d'échantillonnage des produits en provenance de ces pays. Tous les produits jugés non conformes seront renvoyés au pays d'origine.

Pour obtenir d'autres renseignements sur la salubrité des aliments, visitez notre site Web à l'adresse www.inspection.gc.ca.

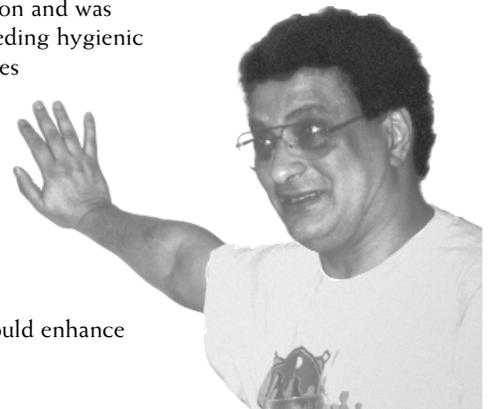
Provincial Apiarist for Alberta

Canada welcomes back researcher Dr. Medhat Nasr from his post at Rutgers University, New Jersey where he was involved in a team approach to Cranberry and Blueberry pollination. Medhat has accepted the position of Provincial Apiarist in Alberta, replacing Kenn Tuckey who retired in February 2002.

His work in the USA with coumaphos resistant mites will give him a head start on some of the anticipated resistance problems in Alberta.

Prior to his position in the USA, Medhat worked in the tech transfer programme of the Ontario Beekeepers' Association and was instrumental in helping them forge ahead in breeding hygienic queens and introducing effective IPM programmes for bee management. The value of the OBA breeding programme has not been lost on western beekeepers and Medhat is now working towards assisting Alberta beekeepers to acquire hygienic stock through a cooperative programme using Russian bee genetics and Ontario expertise.

His fostering of partnership and cooperation should enhance and benefit the national industry.



Rayon de miel

Ron Miksha, Calgary

Déjà novembre. Il est temps de rentrer vos huit cent colonies dans la cave de la maison. Empilez-les loin des fenêtres et de la fournaise, peut-être dans la salle de billard. Poussez votre table de billard contre le mur. Transportez les huit cent ruches à travers la cuisine, puis en bas de l'escalier. Empilez les ruches l'une sur l'autre, laissez un peu d'espace entre les rangs. Maintenez votre sous-sol dans l'obscurité. Baissez le chauffage, mais ne le fermez pas! Placez des cartons noirs sur les fenêtres. Ou encore étendez du gravier contre les murs de la maison, en enfouissant toutes les fenêtres. Sauf une. Brisez-en le verre et installez-y une petite porte coulissante pour contrôler la ventilation.

Cette façon de procéder vous rendra sûrement populaire avec tous les habitants de la maison. Il n'en reste pas moins que c'est ainsi qu'on a hiverné les ruches pendant des siècles dans plusieurs régions de l'Amérique du Nord et de l'Europe. Quand votre grand-mère recevait des amis pour le bridge, elle pouvait les emmener à la cave et les visiteurs devaient poliment s'exclamer à tour de rôle devant les piles de ruches.

Préparer les abeilles pour l'hiver est sûrement la corvée la moins gratifiante et la plus pénible. C'est un travail difficile, que l'on effectue en anticipant les vents violents et les rafales glaciales qui arriveront dans quelques semaines. L'hivernage coûte des sous --- vous nourrissez les ruches, vous les enveloppez d'isolant. Vous les déplacez peut-être. Vous savez que vous allez perdre au moins quelques colonies – comment serait le printemps d'un apiculteur sans quelques cadavres d'abeilles malodorants et moisis en train de pourrir sur les rayons?

Vous voulez que vos abeilles survivent. Surtout pour ne pas avoir à manipuler des cadres pleins d'abeilles mortes. Donc, vous devez vous interroger – qu'est-ce qui tue les abeilles pendant l'hiver? Des apiculteurs plus futés que moi vous diraient que les coupables sont la maladie, la famine, les reines défaillantes, les ruches humides, et ce qu'on appelle la décroissance. Examinons ces tueurs.

Maladie: Certains croient que le nosérose et les acariens sont des menaces sérieuses. Je suggère que vous peigniez un de vos camions en blanc et y ajoutiez de grandes croix rouges en avant et sur les côtés. Puis stockez-y des antibiotiques et d'autres remèdes. De l'Oxytet-25 et de la terramycine (pour contrôler les loques européenne et américaine), du Fumidil-B (pour empêcher la nosérose), de l'Apistan (pour éliminer la varroase), du menthol (parce que ça sent bon), des galettes de graisse (pour contrôler l'acariose), de l'acide formique (pour tuer tout sauf les abeilles), de la strychnine (contre les mouffettes), du chlordane (pour tuer les fourmis), et du poison à rat. Après une visite équipé de la sorte, vous n'avez vraiment pas à vous inquiéter des maladies.

Famine: Il y a un quelque temps déjà, nous avons réalisé que les abeilles ont besoin de nourriture (de miel) pour s'alimenter durant l'hiver. Apparemment, elles utilisent cette substance pour combattre la famine. Certains apiculteurs prétendent que les abeilles ont besoin de 150 livres de nourriture, d'autres affirment que 14 livres suffiront. Je n'en sais rien. Vous pouvez essayer de laisser 14 livres. Cela représente deux pleins cadres de miel. Si toutes vos abeilles meurent de faim pendant l'hiver, essayez trois cadres l'année suivante. Après quelques années d'expérimentation, vous arriverez à la quantité minimale de miel nécessaire à leur survie. Ou encore vous pourriez les nourrir abondamment en automne, en vous basant sur la théorie qui veut que cet investissement vous procurera des dividendes année après année.

Reines défaillantes: Nul n'aime se voir défaillir, pas même une reine-abeille. Il est beaucoup plus charitable de l'écraser en automne et de lui épargner l'embarras d'échouer au printemps. Changez vos reines aux deux ans et ce problème restera mineur.

Ruches humides: Vous reconnaîtrez le syndrome de la ruche humide si vous pataugez dans un marécage pour vous rendre au rucher. Gardez vos ruches au sec. En dehors hors du lac à truite. Un flanc de colline est parfait, même si les poissons y sont rares.

Décroissance: Je ne suis pas certain de savoir ce que c'est. Mais vous pouvez

continued on page 16

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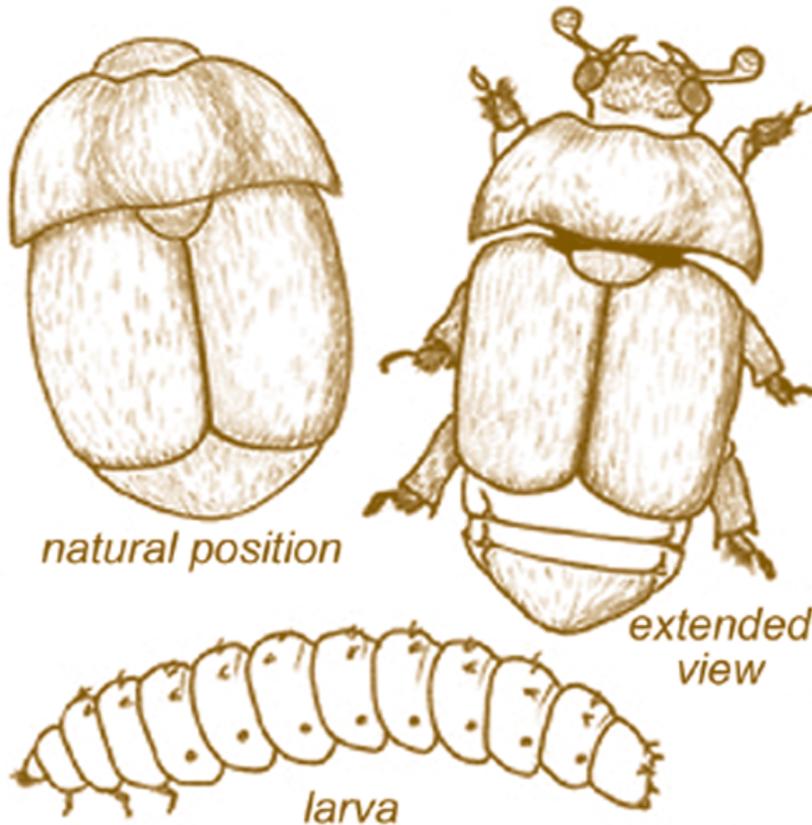
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Small Hive Beetle in Manitoba



Don Dixon, Rhéal Lafrenière
(Manitoba Agriculture and Food)

The small hive beetle (SHB) (*Aethina tumida*) was found in Manitoba during August, 2002. This is the first confirmed discovery of the pest in Canada.

The beetle was found near MacGregor Manitoba. This introduction of SHB was apparently brought into Manitoba in late July, 2002 with a load of beeswax cappings originating in Texas and delivered to a wax rendering facility near MacGregor.

In mid-August the Texas beekeeper, who shipped the cappings, informed the wax plant of the discovery of SHB in Texas. Manitoba Agriculture and Food was advised of the likely occurrence of SHB at the MacGregor facility in late August. Larval samples were submitted to the Canadian Food Inspection Agency (CFIA) for confirmation of identification. An inspection of nearby honey bee colonies found one suspected SHB adult in a pollen trap. This beetle was collected and also submitted to CFIA for identification. The Manitoba Beekeepers' Association, Canadian Honey Council, Canadian Association of Professional



Small Hive Beetle: Scavengers of the Hive

Heather Clay
CHC National Coordinator

The Small Hive Beetle (SHB), *Aethina tumida* (Murray) is a tropical beetle that belongs to the family of sap beetles called Nitidulidae. The beetle is called "small" to distinguish it from the large hive beetle, *Hyplostoma fuliginosus*, but it is big enough (5-7 mm, 1/5 inch) to see by eye. Their preferred food is pollen, old wax, honey and sometimes honeybee eggs.

Habitat

According to the Agriculture Canada (Anon 1989) there are 120 species of sap beetles in North America. Most of these beetles are scavengers and live in over ripe fruit, fermenting plant sap, mouldy logs and rotting bark. Some occur in fungi and flowers. The Nitidulidae are small, brown or black, beetles with a large head, large eyes and short sometimes spotted elytra (modified front wings that protect the hind wings).

Role of the sap beetle

Roger Morse (1998) wrote that "the role of the nitidulids on earth was perhaps best captured by A. Murray in 1864 and quoted by Lundie (1940) The quotation reads,

"Their main business is to clear off decaying substances from the face of the earth, especially those minute and neglected portions which have escaped the attention of other scavengers . . . after the beast of prey has satisfied his hunger on the animal he has slain, after the hyena and the vulture have gorged

Controlling SHB in the Honey House

Jeff Pettis

Bee Research Laboratory Beltsville MD
Report presented at CHC/CAPA meeting
Moncton 2001

The Bee Research Laboratory in Beltsville, Maryland believe we have developed a simple technique to reduce or eliminate beetle damage to stored honey during extraction. During our studies on the basic biology of small hive beetles, we observed that beetle eggs did not hatch when the relative humidity was below 50%. While this observation did seem to be useful in controlling beetles in the apiary, it did seem to hold promise in the honey house.

Subsequently, we have tested - and are confident - that it is possible to reduce or eliminate beetle damage in stored honey simply circulating air through the stacks. This air movement reduces the relative humidity within stored honey in turn, leads to egg desiccation (dying out).

Tests were conducted in Florida to test ideas about protecting honey from beetle damage. In three honey houses, stacks of three medium-depth supers were stored "closed" (migratory covers, top and bottom), "open" (no covers) or "open" with a small fan capable of circulating air up through the stacks. Small hive beetles were intentionally introduced into all stacks, and the results were encouraging. In one location, more than 4000 larvae developed in the "closed" stack, about 40 larvae in the open stack, but no larvae in open stack with a fan. The open stack with a fan at this location had no larvae present even on the one comb raising brood. At the second location, overall development was low in open stacks - with and without the fan. Interestingly, the third location had no development in any of the stacks even though adult beetles were present. Upon careful observation, the combs at this location contained no pollen or brood, demonstrating the importance of brood pollen for larval development. Small hive beetles should cause little damage in stacks of pure honey.

Based on these results we established a further study consisting of stacks of six



Making Mead in South Western Ontario

Heather Clay
CHC National Coordinator

Nestled in the small farming community of Alvinston, south western Ontario, is a thriving new mead production business. The owners, John and Davis Bryans have expanded their honey and pollination business, to include the production of an exceptionally good mead or honey wine.

Munro Honey is an established name in the Alvinston area since 1914. When Howard and Mavis Bryans bought the business from Warren Munro in 1956, they retained the Munro name to distinguish their business from other Bryans enterprises in the district. In 1989 their sons Davis and John became the new owners of Munro Apiaries. The brothers have formed a successful partnership, with John looking after the mead enterprise and Davis running their more than 2000 colonies of bees. Munro Apiaries is now Munro Honey and Meadery.

In 1994 the Bryans' honey plant was burned to the ground by a devastating fire. A malfunctioning boiler set the wooden building on fire, causing loss of equipment, product and the warehouse. This setback forced the brothers to relocate and build a new facility.

vous épargner beaucoup de chagrin si vous faites des réunions à l'automne. Évaluez les ruches. Considérez la possibilité de jumeler les plus faibles. Si vous combinez les huit ruches les plus faibles, vous obtiendrez une bonne ruche qui peut passer hiver alors que les huit misérables n'y arriveront pas. Évidemment, soyez sûr de les avoir traitées d'abord : vous ne voulez pas répandre la maladie partout dans le rucher.

Ce sont les bases de l'hivernage. Vous trouverez des informations supplémentaires dans tout bon livre d'apiculture. Même dans certains mauvais livres. Vous devriez au moins savoir tout ce qui précède, mais j'ai deux suggestions supplémentaires à vous faire sur l'hivernage. Si vous n'avez pas l'intention d'employer le sous-sol cette année, vous hivernerez probablement dehors. Voici mes recommandations sur l'équipement.

Laissez une entrée dans le haut de la ruche. Pensez à une ruche comme à un animal vivant, pas comme à un ramassis de bibittes. Votre créature doit pouvoir évacuer l'air usé créé par la transformation de miel en chaleur, en anhydride carbonique et en vapeur d'eau. L'anhydride carbonique est lourd, il descend et devrait sortir par l'entrée inférieure, mais vous l'avez considérablement réduite pour garder les souris, les rats, le bétail et les petits enfants hors de la ruche. Un bon nombre d'apiculteurs négligent d'installer une ouverture dans le haut de la ruche. Cette ouverture ne sert pas d'abord à laisser les abeilles voler quand la neige atteint sept mètres de haut, mais tient plutôt lieu de tuyau d'échappement pour la vapeur d'eau. Sans elle, vos abeilles peuvent devenir détrempées quand la vapeur

qu'elles produisent s'élève jusqu'au couvercle, y gèle, puis fond sur la grappe.

L'autre suggestion que je veux vous faire est d'emballer vos ruches. À ce sujet, il faut tenir compte de l'expérience régionale. Demandez conseil aux apiculteurs compétents de votre voisinage. Le papier noir conserve la ruche au sec et l'isole des vents d'hiver. Il peut également absorber la chaleur du soleil et aider à réchauffer la ruche les jours froids mais ensoleillés. L'isolation est importante mais trop isoler est une grave erreur. Vous devez connaître votre climat et ne pas trop emballer les ruches si le printemps apporte régulièrement des journées ensoleillées. Les abeilles produisent de la chaleur en faisant frissonner les muscles de leurs ailes. Elles élèvent la température extérieure de la grappe à 10 degrés Celsius, l'intérieur de la grappe de 20 à 36 degrés. Quand l'intérieur de la ruche atteint 5 à 10 degrés Celsius, les abeilles peuvent se dégrapper et partir butiner vers de nouveaux pâturages à miel.

Une dernière considération : choisissez le bon moment. Enveloppez vos ruches tard dans la saison, autrement vous pourriez les faire surchauffer et provoquer une consommation excessive de miel. Et déballez tard. Un de mes amis - un de ces apiculteurs opérant mille colonies dans le nord de la Saskatchewan - a oublié un de ses ruchers un beau printemps. Le premier juillet, un fermier l'a appelé, se demandant si peut-être il devrait venir déballer les ruches puisque les abeilles se regroupaient dehors sur le papier noir. Il s'est avéré que ces colonies ont été les meilleures cette année-là!

Bonne chance et joyeux hivernage! À bientôt,

Apiculturists and CFIA were advised immediately by MAF of the possible discovery of SHB in Manitoba. During early September confirmation of identification of both SHB larvae and adult was received from CFIA.

The wax rendering facility took steps to minimize the spread of the beetles. New wax deliveries were voluntarily suspended by the plant to allow a thorough clean up. The soil surrounding the building was treated with an appropriate insecticide in an attempt to kill any beetles attempting to pupate around the building. In addition the top 30 cm of soil near the building was removed and placed into sealed containers. The building was sealed in an attempt to prevent larvae and adults from leaving.

Canada has a "no comb law" that disallows the introduction of used hive equipment from the United States. However CFIA has again confirmed that wax cappings and comb removed from frames may be brought into Canada from the U.S. for rendering, provided that the material will not be used for bee feed. In addition, regarding a regulatory response to the discovery of SHB, CFIA has advised that this is not a named disease in their regulations and therefore they do not intend to regulate this pest in Canada at this time. Manitoba Agriculture and Food has provided technical advice on this concern to both the Manitoba Beekeepers' Association and the owners of the wax rendering facility but are not attempting to formally regulate this pest due to the unregulated conditions under which it entered Canada.

The Manitoba Beekeepers' Association has appointed a committee to work with the owners of the wax rendering plant with the intention of developing procedures that will prevent further introductions of the SHB into Manitoba. Manitoba Agriculture and Food staff will work with both parties in an advisory capacity.

The small hive beetle is a scavenger beetle native to the tropical and subtropical regions of Africa. It was first identified in North America in Florida in 1998 and has since spread across the U.S. and particularly along the eastern seaboard. U.S. beekeepers reported that the small hive beetle was responsible for the destruction of thousands of honey bee hives and can be a major problem in honey houses. This was particularly the case during the first months following the discovery of the SHB, when little was known about control and management practices that could be used to reduce the impact of this pest.

The beetle larvae tunnel through combs feeding on pollen, brood and honey. As the larvae feed, they defecate on the honey causing it to ferment and bubble out of the cells. Fermented honey and beetle secretions produce a slime that contaminates the equipment causing the bees to stop raising brood and abandon the infested hive. The literature indicates that the beetles can be dispersed with honey bee colonies that are moved to different locations as well as through swarming and package bee movement. Adult beetles can also disperse quickly since they can fly and are capable of surviving up to 5 days without food or water.

The life cycle of the SHB involves the development of the larvae inside the colony followed by the movement of the mature larvae outside the hive and into the surrounding soil where they pupate and eventually emerge as an adult and then

Starting from a clean slate they were able to redesign, modernize and expand their operation. The next step came with the purchase of Chrysler Bee Supplies and they began selling bee equipment. Curious residents of the area dropped in to see the new facility and to see what was happening. The idea of honey tours took off.

In 1997 the Bryans were running small tours through the plant and educating people about bees and pollination. John had been producing mead on a hobby scale for a number of years but when the Province of Ontario announced new rules for Cottage Wineries he thought it was time to expand. He applied for a manufacturing

*Of Meade: Mead is mad
of honny and water
boyled both togyther; yf
it be fyred and pure, it
preserveth helth; but it is
not good for them the
whiche have the Ilyache
or the Colycke.*

- Andrew Borde

licence and then the fun started. Numerous licences and inspections later, Munro Meadery began commercial mead sales in February 2000. It has not been easy. Ontario liquor laws are antiquated and the bureaucracy daunting. Mead can be produced but not sold liquor outlets or to the Liquor Control Board of Ontario (LCBO) until the meadery can guarantee sufficient production. However his mead can be shipped to other provinces by Canada post (not to minors - proof of age may be required)

What is Mead?

Mead, sometimes referred to as honey wine, is an alcoholic drink made by the fermentation of honey. Humans were traditionally hunters and gatherers. After honey was removed from the hive it would ferment naturally, making mead the oldest alcoholic beverage known. It is no wonder mead is often referred to as "the nectar of the gods", as its appearance seemed miraculous.

The term "honeymoon" is derived from the Babylonian tradition of giving newlyweds enough mead to last a lunar month and to promote fertility.

The QC Label: Quality Certified Mead

Heather Clay
CHC National Coordinator



The QC (Quality Certified) label on a bottle of fruit wine or mead is a statement that the wine or mead was produced according to nationally accepted standards. Fruit Wines of Ontario is an association of independent wineries that was instrumental in setting up Fruit Wines of Canada in 1998. The board of directors together with provincial and federal governments developed the national fruit wine standards and a marketing plan that includes agri-tourism initiatives.

The QC system is modeled after the successful VQA (Vintners Quality Alliance) system that has been established for grape wines. A fruit wine or mead bearing the QC seal certifies that the wine:

- is produced from 100% Canadian fruit, juice or honey.
- contains the fruit species stated on the label
- contains no artificial flavourings
- has passed lab tests for
 1. Alcohol by Volume
 2. pH Level
 3. Residual Sugar
 4. Total Acid
 5. Volatile Acidity
 6. Total SO₂
 7. Free SO₂
- contains at least 95% of the fruit or honey harvested from the designated year
- is produced from fruit or honey grown on land owned or controlled by the bottling fruit winery or meadery.

- is processed from harvesting to bottling, entirely at the winery or meadery.
- has passed a quality check by a wine-tasting panel.

The original fruit wine standards that were established in 1998 did not include honey. John Bryans, Munro Honey and Meadery, had a lot of convincing to do before the Fruit Wines of Ontario association accepted mead as a listed product. Having gained the approval for mead, John was the first person in Ontario to have his meadery certified for using the QC label. Munro Meadery has been using the QC label since 2001 and sales have increased every year since production began. Following his lead several fruit wine producers are now making mead.

Canada has become known as an international fruit wine leader. Fruit wine is commercially produced by over 53 licensed wineries in nine provinces — British Columbia, Alberta, Saskatchewan, Ontario, Quebec, New Brunswick, Nova Scotia, Prince Edward Island and Newfoundland. The QC label has become a recognized standard both within Canada and internationally.

<http://www.fruitwinesofontario.com/standards.htm>

<http://www.vqaontario.com>

<http://www.winebc.com/vqa/>



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begin seeking bee hives where mating and egg laying occurs. Experience in the U.S. has indicated that the beetles prefer soft sandy soil and do not survive well in heavy clay soils. It is not known what effect, if any, the long cold winter in Manitoba will have on the SHB however, it is known that adult beetles have been able to successfully winter inside honey bee colonies in Minnesota.

In the U.S., CheckMite + (10 % Coumaphos) is recommended for the control of SHB in honey bee colonies in bee hives and GardStar 40% EC, (40% Permethrin) is recommended as a soil drench treatment for the control of beetles in the soil around hives. These products are not currently registered for these uses in Canada, however coumaphos has been granted Emergency Use Registration in Manitoba for control of fluvalinate resistant Varroa and Permethrin is the primary active ingredient in 214 registered products in Canada.

Manitoba Agriculture and Food will continue to monitor the SHB under our conditions to determine how much of an economic concern this will be to the Manitoba beekeeping industry.

SHB Beetle Life Cycle

Dr Lundie (1940) was the first to study the SHB. He found that

-  female beetles lays thousands of eggs in dark places, cracks and crevices
-  eggs hatch into larvae within 2-4 days
-  larvae feed for 10-16 days, 30% need an extra week
-  mature larvae seek the soil under the hive to pupate
-  preference is sandy soil, not too wet or too dry
-  emerge as adult beetles in 15-60 days (average 3-4 weeks)
-  beetle lives up to six months (average 2 months)
-  5 generations produced over summer
-  adult beetles can fly, but their range is not known with certainty
-  larvae burrow in 6-8 inches

Lundie, A.E. 1940. "The Small Hive Beetle, *Aethina tumida*". Union of Sth Africa, Science Bulletin 220: 30pp.

Small Hive Beetle Management

Malcolm T Sanford
Emeritus Professor, University of Florida,
Institute of Food and Agricultural
Sciences

If *A. tumida* is suspected or detected, the following precautions are suggested:

1. Be scrupulously clean around the honey house. Leave filled supers standing only a short time before extraction. Beetles may rapidly build up in stored honey, especially where honey has been stored over pollen.
2. Be careful stacking infested equipment or extracted supers onto strong colonies. Beekeepers doing this before the beetle was identified may have inadvertently dealt a deathblow to uninfested, healthy colonies by providing space for the beetles to build up that the bees could not protect.
3. Pay close attention when supering colonies, making splits or exchanging combs; all these activities could provide room for the beetle to become established away from the cluster of protective bees.
4. Monitor colonies for hygienic behavior; are the bees actively attempting to rid themselves of both larval and adult *A. tumida*? If not, replace them.
5. Experiment with traps in an attempt to keep larvae from reaching the soil where they complete their development. Try moving bees from place to place. Adult beetles can fly, but their range is not known with certainty. Some areas may be much more hospitable to beetles due to local soil conditions than others.

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themselves on its carrion, after the fly with its army of maggots has consumed the soft parts, and when naught but the bones remain, then come the nitidulids."

However, it is also pointed out that some live in flowers where they "feed upon fresh victuals."

In other words, beetles belonging to the family Nitidulidae are primarily scavengers, which appears to be the role of the small hive beetle."

Common Sap beetles

Canada's most common sap beetle is the picnic beetle, *Glischrochilus quadrisignatus* (Say), also known as the "beer bug" or the "four-spotted sap beetle". They are aptly named because of their persistence in finding food at a picnic. These sap beetles are particularly attracted to fermented products such as beer or wine and odors of ripe fruit, prepared food and soft drinks. Corn crops can be affected by *G. quadrisignatus*, especially corn that is has been damaged by corn borer or varieties that are open husked or have high sugar. They can be secondary invaders of overripe or damaged fruit such as raspberries, tomatoes, apples and plums.

Introduced by accident in the early 1900's the sap beetle *Brachyterolus pulicarius* L. is now widespread in Canada. Fortunately it thrives on Dalmatian Toad Flax (*Linarea vulgaris*) an introduced weed from Eurasia that has become a pest in large parts of Canada. This sap beetle has been released as a biocontrol in many provinces to reduce the spread of Toad Flax. Larval feeding causes the Toad Flax flowers to abort and not produce seed while adult

beetles feeding on sap from the stems causes the plants to become bushy.

SHB in Canada

The first SHB arrived by accident in Canada in 2002 in a shipment of cappings wax. Action was taken to contain the beetle. If it has escaped, it is unlikely that it would survive the freezing outdoor winter temperatures of a Canadian winter. However, beekeepers in northern states of the USA report that the SHB beetle will overwinter with the colony however their biggest problem occurs in the honey house. Beetles mate when disturbed especially when beekeepers move or vibrate honey supers. Within hours, larvae hatch out in the humid warm temperatures of the honey house and immediately begin to cause damage to the honeycomb.

Beekeepers can often overlook the presence of this scavenging small hive beetle because it can co-exist for weeks with bees, hiding from light and tucking into dark corners on the bottom board of the hive. The damage caused to the honeycomb is usually the first clue. As the larvae chew through the comb, uncapped honey runs down the through the stack of supers and onto the floor. If not cleaned up immediately, warm temperatures in the honey house and microorganisms can cause the honey to ferment and smell like burnt oranges.

What is being done to protect Canada from SHB?

The Canadian Food Inspection Agency (CFIA) has maintained a ban on the importation of honeybees from the USA to prevent the introduction of unwanted diseases and pests. The ban, which ends in December

2004, has allowed beekeepers in Canada some valuable time to manage their bees without the problem of SHB.

Migratory beekeepers in the USA operate from zones of infestation in the USA and bring bees to the Canadian border. Ontario has set bait traps at points along the border with New York. So far no SHB has been caught.

The CFIA has co-operated with the CHC request that empty honey drums brought into Canada are washed.

The future importation of wax cappings is under review by the CFIA and will be discussed at our annual meeting in Niagara falls.

Future Research

In the USA beekeepers use a soil drench Permethrin (Gardstar 40%EC) as well as coumaphos strips in cardboard traps to kill beetles. These chemicals are untested in Canada and not registered for use in the control of SHB. Beekeepers in Canada are reluctant to add another chemical to their apiculturists medicine kit. Given the nature of Canada's climate there may be a possibility of manipulating temperature and humidity to gain a non-chemical control. Research is necessary to establish which non chemical controls can be employed in Canada and it is important to provide this information in extension programmes. It is known that:

Σ freezing temperature (below zero celsius) will kill all stages of the SHB

Σ low humidity limits SHB survival (see Pettis article this issue)

Σ a strong colony of bees selected for hygienic behaviour will control SHB (Nasr, personal

communication)

-  a clean apiary limits the spread to uninfested sites
-  washed honey drums reduce the attraction to SHB
-  honey should be stored below room temperature
-  moving bees from their stand will reduce reinfestation of SHB (Lundie. 1940)
-  paving the ground outside of honey house removes habitat for larvae to pupate.

Canadian beekeepers have gained the advantage of time to learn how to deal with SHB. Ontario and Manitoba have now developed a plan of action. Most apiarists along the Canada /US border agree that it is a matter of time before they find SHB in their colonies and they keep a watchful eye on their pollen traps. Vigilance is important. If you are concerned about SHB contact your provincial apiarist for more information.

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medium-depth honey supers in each of three honey houses in Palm Beach, Florida. We established both closed and open stacks, and adult beetles were added to all stacks. All open honey supers had air forced down through the stacks by a box window fan set on the lowest setting. Additionally, open stacks were raised off pallets by two-inch wooden blocks, which allowed for airflow down and out of the stacks. The honey combs used in this study were from colonies infested with adult beetles and some combs contained brood and/or pollen. Thirteen days following this setup stacks and honey combs were examined for larval development. The results were dramatic. The movement of air down through stored honey resulted in complete or nearly complete protection from small hive beetle damage. The first location was quite dramatic with more than 50% of the combs from the closed stack having thousands of larvae, while NO combs in the open stack were infested. The other two locations yielded similar results, though a few developing larvae were found in open stacks. Live, adult beetles were still present on day 13 at all locations.

The use of circulating air across stored honey prior to extraction provides the beekeeper with an inexpensive and chemical-free method to protect honey from beetle damage.

Moving air over stored honey, even with brood and adult beetles present, provided protection from the beetles. One of the commercial beekeepers we worked with

was so impressed with our results that he has mounted window fans in his storage area and simply places pallets of honey beneath the fans if he can't extract the honey immediately. He has also modified his pallets to raise the supers two inches off the base of the pallet to facilitate airflow.

Parasites tickle their captors into slipping them a drink.

It's hard to hoodwink a jailer, but incarcerated beetles fool their honeybee guards into feeding them, new research shows¹.

Small hive beetles storm honeybee hives to plunder pollen, honey and even developing larvae. They are the fastest-growing honeybee pest in the United States, where they were accidentally introduced from South Africa in the 1990s.

The beetles are too tough to attack so bees imprison them in chambers made from tree sap. Worker bees stand guard to stop the beetles escaping, as the jails are often poorly sealed. "It's like a rugby scrum," says Randall Hepburn, an entomologist at Rhodes University in Grahamstown, South Africa.

The beetles can be held like this for months, yet never seem to waste away. To get to the bottom of this prisoner's dilemma, Hepburn, and his colleagues in the United

Beekeepers will invariably find their own way of modifying and adapting these findings to their operations. In areas with high relative humidity it may be necessary to use a dehumidifier or air conditioner to reduce the relative humidity. Keep in mind you must provide a means for the air to circulate in the stacks of honey by

removing the covers and raising the stacks off the pallet or floor. Small hive beetles will force us to maintain clean efficient honey house operations. What we have shown is that regardless of the presence of adult beetles on combs, the movement of air across stored honey allows protection against small hive beetle damage

TOM CLARKE
Nature News Service 16 May 2002

States, used transparent beehives and placed the penal units under TV surveillance.

Video recordings of the scrum revealed that small hive beetles use their antennae to tickle their guards, just as other bees do. This encourages the guards to regurgitate a drop of honey. It's hit-and-miss, says

Hepburn, "but eventually the bees get tricked into feeding their arch-enemies - it's ridiculous to watch". To check their suspicions, Hepburn's team added dye to the laboratory bees' food supply. Sure enough the dye showed up in the beetles guts the next day.

"This is a brilliant example of the arms race between a parasite and its host," says Peter Neumann, an entomologist at Martin Luther University in Halle, Germany, who first documented the bees' incarceration policy.

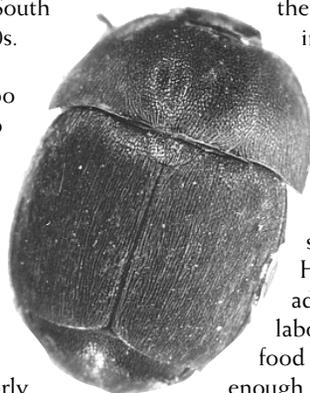
"They are using the same begging language as the bees to obtain a meal," he says.

How this situation evolved is baffling, as there is rarely such as thing as a free lunch in biology: most animals that feed others expect something in return. The beetles may be giving the bees some hidden advantage, says Hepburn, but it's far from obvious what that might be.

More likely, the team suspects, is that beetles capitalize on their misfortune. By surviving in the hive they will be there when the bee colony absconds in search of new premises, which often happens. This gives the beetles "a massive head start" on other empty hive plunderers such as wax moths, fungi and bacteria, says Neumann

References

1.Ellis, J. D., Pirk, C. W. W., Hepburn, H. R., Kastberger, G. & Elzen, P. J. Small hive beetles survive in honeybee prisons by behavioural mimicry. *Naturwissenschaften*, published online doi:10.1007/s00114-002-0326-y (2002).
<http://www.nature.com/nsu/020513/020513-7.html>



Observations of Beetle Behaviour

- ☐ When the number of small hive beetle larvae reaches a certain level in a colony, honey bee brood rearing stops.
- ☐ Adult beetles appear to be eating bee eggs and may even consume their own eggs.
- ☐ Amber light shone on frames at night will cause adult beetles to move and be detected.
- ☐ Adult beetles do not get caught on sticky boards, and move quickly across them.
- ☐ Adult beetles will lay eggs on fruit, but this does not appear to be their preferred diet.
- ☐ Beetle larvae are frequently detected in great numbers, on the bottom board.
- ☐ Best survey technique for beetles is carefully examining the frass (droppings) on bottom boards and/or cardboard inserts, with one side removed and the exposed

corrugated portion in contact with the bottom board. The beetles apparently are drawn to this material and easily hide in the corrugations. This has now been integrated with use of coumaphos impregnated plastic strips.

- ☐ Control of Varroa will keep beetle populations from exploding, as there are more bees to deal with the problem in the colony.
 - ☐ Keep a fluorescent light on all the time shining on the honey house floor. This attracts beetle larvae, which can then be scooped up in a shovel and put in water where they quickly drown.
 - ☐ Remove bottom boards from stacks of stored supers so larvae can drop out of the stacks and be attracted to the fluorescent light.
 - ☐ Larval cannibalism is reported.
- Reprinted from University of Florida
 Creature Features EENY 94
http://creatures.ifas.ufl.edu/misc/bees/small_hive_beetle.htm

Cleaning Up After Small Hive Beetle

Park *et al.* 2002 found that bleach was the most effective (100% kill) and fast acting product for control of SHB larvae in honey houses and for salvage of of combs that have been infested with larvae. Detergent was also effective and killed around 85% of treated larvae in 24 hours. If no larvae are present, slimed combs can be washed with plain water.

Park, A., J.Pettis and D.Caron. 2002. Use of Household Products in the Control of Small Hive Beetle Larvae and Salvage of Treated Combs. *American Bee Journal*. 142(6): 439-442

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Gerald "Gerry" Gordon Smeltzer - 97 of Kentville, Nova Scotia, passed away September 13, 2002. He is



Gerry Smeltzer (left) and Hugh Mahon (centre) represented CHC at a meeting with Minister of Agriculture, Eugene Whalen (right) in Ottawa, 1983.

survived by his wife Helen, son Gary (who is also a beekeeper) and two daughters Margaret and Nancy. Gerry was a graduate of the Nova Scotia Agricultural College

(1940) and McGill University (MacDonald College) in 1944. Pursuing a career in agriculture he worked at the Nova Scotia Agricultural College, the NS Department of Agriculture in extension services from 1953-1978 and later at Agriculture Canada's illustration stations project. He was a distinguished member of the Nova Scotia Institute of Agrologists and received his 50-year pin from the Agriculture Institute of Canada. In 1989 he received the honour of being inducted into the Atlantic Agriculture Hall of Fame.

For 53 years Gerry was an active and well respected beekeeper. He served on the board of directors of the Nova Scotia Beekeeper's Association and the Canadian Honey Council. For 25 years he was secretary of NSBA the during that time organized the Honey and Wax display at the Atlantic Winter Fair. He believed in the importance of Maritime beekeepers belonging to a national association. Without hesitation he generously donated his travel costs and represented them as their delegate to the CHC from 1980-1985. He served as an Executive Director on the CHC board of directors and in 1982-83 he was Vice President of the CHC. In 1986 the CHC presented Gerry the Fred Rathje award for his outstanding contribution to beekeeping. Gerry was a dominant figure in the beekeeping world and he will be missed.

continued from pg. 17

honey then allowing it to ferment and produce alcohol". To make mead:

1. Prepare the "must"- a combination of honey and water.
2. Do not boil the must or the honey will burn.
3. Add yeast and yeast nutrients
4. Allow the mixture to ferment for several weeks
5. Do not shake the mixture after adding yeast.
6. Filter periodically through food grade mesh to filter out the sediment.
7. Bottle the mead when fermentation is complete.
8. Age mead for six to 12 months before drinking.

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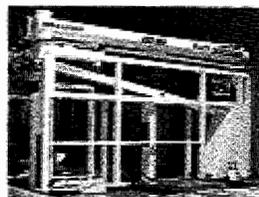
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- When: **Dec. 2 - Dec. 7, 2002**
- Where: **Sheraton Fallsview Hotel & Conference Centre Niagara Falls Ontario**
- What: **Dec 2. Registration**  
**Dec 3. OBA Directors' Meeting, AAPA/AIA/CAPA Meeting, CHC Directors' Meeting**  
**Dec 4. Trade Show, Honey Competition**  
Morning: Business and Directors' meetings for OBA, CHC, CAPA, AIA, AAIA, ESHPA and CBRE.  
Afternoon: Joint Apiculture meeting.  
**Dec 5. Trade Show, Research Symposium:**  
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**Dec 6. Trade Show, Research Symposium:**  
Submitted papers  
Poster session  
**Dec 7. CHC Business meeting**

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**Starvation:** Some time ago, we figured out that bees need feed (honey) to eat during the winter. Apparently they use the stuff to stave off starvation. Some people claim bees need 150 pounds of the stuff, others say 14 pounds will suffice. I have no idea. You may consider leaving 14 pounds. That's two solid deep frames of honey. If all your bees starve over winter, try going to three combs the next year. After a few more years of experimentation, you may arrive at a minimal number of frames of honey to leave in your hives. Or you could just plug the hives full of feed in the fall on the theory that once the investment is made, it will repay dividends year after year.

**Failing Queens:** No one wants to be a failure, not even a queen bee. So it is much more merciful to squish her in the fall and save her the embarrassment of failing. Develop a system to replace your queens every other year and this won't be a great problem.

**Wet Hives:** You will recognize wet-hive syndrome if you find yourself wading through a marsh to reach the beeyard. Keep the hives high and dry. Out of the trout lake. A south-facing hillside would be nice, even if fish are scarce there.

**Dwindling:** I'm not sure I know what this is. But you can save yourself a lot of grief if you do your dwindling in the fall. Assess the hives. Consider doubling up the poorest ones. If you throw the weakest eight hives together, you'll get one good hive which may winter while the eight sloths will not. Of course, be sure the bee medi-van has been around first, you don't want to mix diseases all over the apiary.

These are the basics of wintering bees. You'll find more material in any good beekeeping book. Even in some of the bad ones. This is the least you need to know, but I have two more thoughts on

wintering. If you don't intend to use the basement this year, you'll probably be wintering outside. Here are my equipment recommendations.

Leave an upper entrance. Think of the hive as a live animal, not as a collection of bugs. Your creature needs to expel the exhaust created by turning honey into heat, carbon dioxide, and water vapour. The carbon dioxide is heavy, it sinks and should leak out the bottom entrance which you've seriously reduced to keep mice, rats, cattle and small children out of the hive. But lots of folks neglect installing an upper entrance. This entrance is not so much to let bees fly when the snow piles seven metres high. The upper entrance is the water vapour exhaust channel. Without it, your bees may get soggy when the stuff they exhale rises towards the cover, freezes into ice, then melts back down on the cluster.

The other suggestion is a winter wrap. Here regional experimentation is a necessity. Ask successful neighbouring beekeepers for advice. Black wrapping paper keeps the hive dry and deflects the winter winds. It may also absorb sunlight and help warm the hive on cold, but sunny, days. Insulation is important. Too much insulation is a big mistake. You need to know your climate and not dress up the hives too much if sunny spring days are a regular event. Bees generate heat by shivering their flight muscles. They raise the outside cluster temperature to 10 degrees Celsius, the inner cluster from 20 to 36. Any day the hive interior reaches 5 to 10 Celsius, the bees can loosen their cluster and shuffle over to new, unused honey patches.

A final consideration is timing. Wrap late, else you may warm the hives, resulting in excessive honey consumption. And unwrap late. A friend – one of those thousand colony operators in north Saskatchewan – forgot a yard one spring. On July first, a farmer called, asked if perhaps the beekeeper should come by and uncover the hives as bees were hanging out on the black wrapping paper. Turns out they were the best colonies the guy owned that year!

Good luck and happy wintering!

Cheers, Ron Miksha

## 2003 Bee Masters Short Course: 50th Anniversary

The 2003 Bee Masters Course will be offered February 10-14 at Simon Fraser University, Burnaby, BC just outside the scenic city of Vancouver.



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Lecturers for the 2003 course include Don Dixon, Cynthia Scott Dupree, John Gruszka, Stephen Pernal, Mark Winston, Paul van Westendorp, John Gates, Doug McCutcheon, Aganetha Dyck and many others. For information and registration contact: ChristineDempster 604-291-3012, Email: Conference\_Services@sfu.ca, web site www.sfu.ca/beemasters2003

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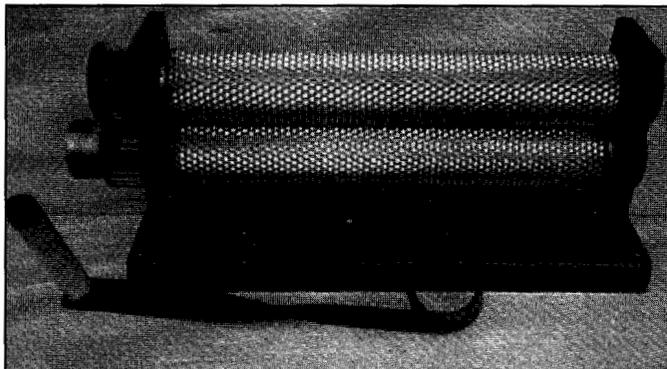
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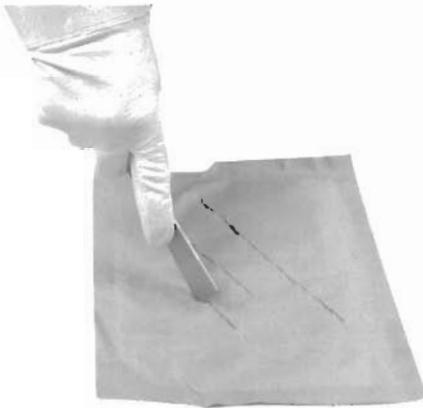
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