

The Bee Cause



Volume 13, Issue 4

April 2016

Next general meeting is 7:30 Tuesday, 12 April 2016 at the The Elmwood Legion 920 Nairn avenue , Winnipeg.

Speaker:

Reading the hive condition, more on spring management , update on Club apiaries.

Inside this issue:

- *Identifying a Winter Death* Pg 1
- **RRAA President's Report** Pg 2
- **RRAA Minutes of March & Exec. meeting** Pg 3
- **MBA Report** Pg 4
- The Classifieds* Pg 6
- *Editor's Notes*
- **Guidelines for Wpg Urban Beekeeping** Pg 8
- **Winter Queen Bank** Pg 9
- **Resin Tech.** Pg 10
- **Bees more NB than fertilizer**
- **Sunlight, Water, Nosema** Pg 11
- **RRAA registration**

LEARNING TO IDENTIFY A COMMON CAUSE OF WINTER DEATH IN NORTHERN CLIMATES

Why did my honey bees die?

By Meghan Milbrath, Michigan State University Extension, March 8, 2016

Beekeepers in northern climates have already lost a lot of colonies this winter. While official counts won't be recorded for a few months, some trends are starting to emerge. One of these trends is a specific type of colony death. In Michigan, I've received so many calls describing the scenario below, that I can describe the deadout before opening the hive, or before the beekeeper describes it over the phone. While I may impress some with these predictive powers, the frequency of these types of losses indicates a real epidemic that is affecting honey bee colonies in northern states.

Characteristics of the common early winter death in northern states:

1. The colony was big and looked healthy in the fall
2. A lot of honey is left in the top supers
3. The cluster is now small, maybe the size of a softball
4. There are hardly any bees on the bottom board
5. Near or just below the cluster is a patch of spotty brood – some fully capped, and some with bees dying on emergence (heads facing out, tongues sticking out).
6. If you look closely in the cells around the brood, you will see white crystals stuck to the cell walls, looking like someone sprinkled coarse salt in the brood nest.
- AND 7. You don't have records showing that varroa was under control.

(Continued on page 5)

2015 Executive**President: Waldemar Damert**

Ph 204-755-2340
 Box 15 Grp. 150
 Beausejour, MB R0E 0C0
 Email: wdamert@yahoo.ca

1st Vice President: John Badiuk

Ph .204-943-0166
 128 Victoria Ave W
 Winnipeg, MB R2C 1S5
 Email:honeyb@mymts.net

2nd Vice President: Armand St Hilaire

Ph 204-427-2757
 P0 Box 93
 Roseau River, MB. R0A 1P0
 Email: asthil@mymts.net

Secretary: Art Quanbury

Ph 204-489-6994
 35 Cordova St.
 Winnipeg, MB R3N 0Z9
 Email: quanbury@shaw.ca

Treasurer: John Speer

Ph 204-222-3007
 Box 16, Group 555, RR 5
 Winnipeg, MB R2C 2Z2
 Email: jursss@outlook.com

MBA Delegate: Margaret Smith

Ph 204-254-4509
 1051 Porcher Rd
 St Andrews, MB R1A 3N4
 Email: margshoney@gmail.com

RRAA web site administrator:

Duane Versluis
 Ph 204-268-4223
 Box 12
 Tyndall, MB R0E 2B0
 Email: rraaweb@gmail.com

Newsletter Editor:

Ken Rowes
 Ph 204-755-3427
 Cloverleaf Box 758
 RRI Anola, MB R0E 0A0
 Email: Roweskd@mymts.net

Presidents Comments for March, 2016

Greetings to all fellow beekeepers,

Spring is up on us? Or at least according to the calendar. It is very similar to 2015 with temperatures up and down and snow in between.

Beekeepers are reporting different wintering success. Some have a small lose others a complete lose. Most indoor wintering bees have not even been looked at. I did feed all my hives with a 2 lb icing-sugar-honey patty and the beehives look healthy with 2-4 frames of brood and big clusters. My winter lose is 0.5%.

The 4 Finland hive boxes with my bees in them wintered okay and the clusters look good too. One hive would have starved, I fed it just on time with the patty and later added frames with feed. That specific hive had the queen stock from the US. So much for that stock. As soon as the weather will warm up I intend to feed liquid syrup. With the winter over and the new season almost here Beekeepers have a lot of their last year's crop still not sold. The buyers and packers of honey in Canada are playing a game with the livelihood of the beekeepers. They are importing and blending cheap honey (syrup) with small amounts of Canadian honey and then calling it Canadian honey on the shelf. Where are the regulatory institutions? There is a petition going to pressure the honey packers not to blend Canadian honey with the imported products, please support the petition. Through the fall and winter buyers have been pushing the price down but not offering any contracts or buying honey. I am not sure if they are aware or even know in what situation the Canadian beekeeping industry will be come spring. China has developed a resin technology that is able to filter residue, pollutants or pollen out of honey or syrup and blend it with honey sourced from countries that are not banned from shipping to North America.

Our annual Honey bee day will be held at the Forks June 4th, more updates will follow at the meeting.

We also had a meeting with the Zoo administration on Friday April 1st, discussing the needs and the possibilities of the queen rearing yard. We will have some news on April 12th at the meeting.

Looking forward to see you all.
 Waldemar

**Red River Apiarist's Association
Minutes of the Regular Meeting
March 8, 2016**

Chairman: Waldemar Damert
Recording Secretary: Art Quanbury

Approval of the Minutes of the previous general meeting
Motion: That the minutes of the general meeting held on February 9, 2016 be accepted

Moved: Jim Campbell
Seconded: Victor Dyck
Carried

Financial Report

No report.

MBA Report

No formal report .re: Day of the Honeybee. Discussions are taking place among MBA, Canadian Honey Council and the Minister of Agriculture to have a World Bee Day where one day is recognized worldwide. It may be May 20 but the date is not finalized. There is a talk on Friday at U of W by Dr. Packard on native bees. There are a number of Dept. of Ag. Events that could involve club volunteers including Ag. In the classroom, Made in Manitoba Breakfast and Ag. Ventures. See Margaret Smith if you are interested.

President's comments

Waldemar gave a summary of the many sessions presented at the annual convention. They included:

1. CropLife app. for locating apiary sites to assist sprayers in alerting beekeepers of activities.
2. Nuc developing. Started with 1, 2 or 3 frames and all grew to full size over the summer.
3. Q Breeding. Breeders from Quebec to make stock more sustainable, resistant to mites. Started in Oct. 2015.
4. Probiotics. A study to see what is in the gut of bees.
5. Breeding for Varroa resistance. Using artificial insemination to do this. A cross country study.
6. Queen selection program. For choosing bees that are more calm and docile vs. high honey production.
7. Rob Currie. How viruses affect bee health. Viruses are transported with mites. Bottom line is to keep mite numbers low.
8. Local vs. Imported queens: some queens do not have sufficient sperm.
9. Nosema talk. Low in fall, high in spring, treat in March.
10. Registration of Beekeepers and yards in N. Dakota. Yards must be registered.
11. Honey Health. A survey across Canada.
12. Water sources. Problem with bees around swimming pools. Bees don't go to chlorinated pools. Adding salt and some syrup to water source will help attract bees. Bees are attracted to smelly water. Have a water source between bees and the neighbour's pool.
13. Natural Pollinators. Talk by David Ostermann.
14. Call to Develop native bee homes.

Bee Yard at Zoo. Still in negotiating stage. Some issues to sort out.

Early Spring Management

Early spring feeding can be dangerous to bees. Must be done quickly (less than 2 minutes) and with least shock to bees. Smoke

first, lift inner cover gently (5 seconds) Place food patties, replace inner cover with raised lip to provide room for patties. If replacing winter inner cover with large lip feeding cover you must shake bees off the inner cover. Place an empty super over the brood box and shake bees into it to minimize shock. Remove this super and replace inner cover. Feed with Bee Candy which is 80% icing sugar, 20% honey by weight and some Bee Pro. (6 kg of Bee Pro to 40 kg of icing sugar. Make into 2 lb patties in zip lock bag. Will last 4 weeks. Fold bag mouth back on itself before placing in position. Sugar syrup should be 1:1 ratio. Give in 3rd week of March in ½ L bag. Puncture with 4 or 5 holes. Close bottom opening mid-March for a few weeks. This encourages brood development. Insulation covers come off May long weekend as a rule. Mite Control: Can do flash treatment with formic acid before honey flow. March is treatment time if you didn't treat in the fall. There is a residue left from Apivar strips. Can also use oxalic acid but must be brood free. Cut out drone cells.

Loonie Draw

Next Meeting

The next meeting will be on March 8, 2016.

—/\\—

**Red River Apiarists' Association
Executive Meeting
March 07, 2016**

Present:

Waldemar Damert
Armand St. Hilaire
Art Quanbury (recording secretary)
Ken Rowes
John Speer
John Russell
Marg smith

Newsletter Editor Expenses

Ken Rowes reported that the Newsletter Editor incurs considerable expenses in preparing and distributing the Newsletter. This includes printing costs, travel expenses.

Motion: That the Newsletter Editor be reimbursed for all out of pocket expenses occurred in the publication of the Newsletter, including travel expenses.

Moved: John Russell
Seconded: John Speer
Carried.

The Newsletter Editor was asked to keep track of all expenses and travel mileage and submit them for reimbursement.

Bee Yard

After discussions with representatives of the zoo a number of points have been raised that need to be resolved before action can move forward on the yard. The representatives are in favour of the yard but want the honey crop in return. Access by volunteers is also an issue since the yard will not be in a public access area. It was decided that ¼ of the honey crop or perhaps a set amount of 50 pounds be given to the zoo in return for having the yard there. Since the main purpose of the yard is to raise queens there will not be a lot of honey production. It was suggested that there be 4 colonies dedicated to queen rearing and a fifth hive be added specifically for honey production. A further meeting with zoo officials is to take place at the end of March at which time further negotiations will take place. John Russell will be responsible for setting up this meeting.

Day of the Honey Bee

The date of this event is on hold because the Canadian Honey Council wants there to be one date for all provinces to recognize the honey bee. There was concern as to whether the forks would hold a date and location open for this event if the date is uncertain. The traditional date is the last Saturday in April but the MBA needs to decide on this. Marg Smith will work with the MBA and try to get commitment of a date.

Honey Show

This is held in September and up to now the forks has not charged for space that could be \$800.00 if they decided to charge. It was felt that the Honey Show should have a presence from urban beekeepers and perhaps have video clips to show elements of local beekeeping and honey harvesting.

Bee Store

It was mentioned that the Bee Store is not open on Saturday and is difficult for hobby beekeepers who have full time jobs to buy supplies and equipment. It was suggested that a letter be written to them to make them aware of this difficulty. Propolis is opening an outlet in Winnipeg and this competition might force the Bee Store to adjust its hours.

Marg Smith mentioned that there are a number of events sponsored by Dept. of Agriculture that could use volunteers from the club. These include Ag. In the Classroom, Ag.Literacy week, Ag. Venture and Made in Manitoba Breakfasts. She will announce this at the next regular meeting.

Feedback from Queen Rearing Session

In response to comments from some members the following suggestions were raised: have a framework of what will be covered at each session and the intent of it, handouts, visuals, filtering questions to keep them pertinent, suggested reading ahead of time, assure people that they will be able to do queen rearing, have members write question on paper and only ask it if it is not covered in the course of the presentation.

Topics for Next Meetings

March Meeting: Spring Management including feeding and varroa mite control, summary of convention presentations.

April Meeting: Marketing products – Ken Rowes to coordinate
May Meeting: Either Rob Currie or Rheal LaFreniere

More discussion on Bee Yards

Whose bees will be used? Will they be purchased by the Club. Need to have the best stock for queen rearing so this should be the criteria when choosing stock from various members. The executive will be responsible for making the decisions re: purchase of stock from members.

—/\\—

MBA Report April 2016 Margaret Smith, RRAA MBA Representative

A formal Executive meeting was held at the end of January in Nepawa and an informal one in February just before the convention began (the latter did not produce

any minutes).

The position of **Business Manager / Tech Transfer Team for Manitoba** is being worked on by Rhéal Lafrenière and Darryl Wright, in conjunction with Len Eccles, of the Ontario Tech Transfer Team. This was supported by a vote of members. It would be a source of research on bees and bee health for all beekeepers.

A letter has been sent by the MBA to the Minister of Agriculture, requesting government **registration of an approved chemical for skunk control**. This will possibly not be able to be dealt with until after the election.

The **convention** has been held, and report from this was detailed by Waldemar at the last meeting of the RRAA. Attendance was pretty fair and the presentations were good.

Canadian Honey Council : MBA Rep, Allan Campbell reported that the Canadian Agricultural Human Resource Council (CAHRC) would be holding a labour consultation for the honey sector of Agriculture in Edmonton in February, and another much larger all sectors summit in March, in Winnipeg, to talk about how to grow the labour force in agriculture. The first meeting dealt with job classifications and competencies in our sector. The second was looking generally across the many sectors of Agriculture in terms of various themes concerning the whole picture of the agricultural labour force. It was a sobering picture that was painted of the labour force shrinkage in the last ten years and projections into the future. In Agriculture, 1 in 12 jobs goes unfilled. For all other sectors it is 1 in 36. Aquaculture, Apiculture, beef and oilseeds have the greatest shortages. Currently, the domestic workforce is 331,100, and foreign workers make up 45,000. The demand for these workers varies widely. On the supply side, currently, Canadian residents make up about 344,000. That's a gap of about 59,000. The projection is that in the next ten years this situation will double. Causes for the gap are the seasonality of the job, rural location and wage gap. Overall, during the conference, we were able to see that we in agriculture need to do a better job of talking up what we do. We need to be proud of what we do (as beekeepers!) and never let an opportunity to speak with and hire good hard working young people pass us by. The suggestion was made regarding questions to ask young people when we have the chance: Why do you not want to work long seasonal hours and Why do you not want to work for lower wages. Then we need to find ways of making this kind of situation better. Young people now work differently from when most of us began - they want a better work-life balance. We need to tell our stories!

There will be a change to the **registration forms for MBA membership**, requiring both the Business Number and the Provincial Registration Number.

The **next Executive meeting** is to be held in **Nepawa on April 5th**.

—/\\—

Sound familiar?

We see this classic set of symptoms over and over in the states with a proper winter. A big colony that seems to just shrink down and disappear. Many people want to use the term colony collapse for this type of death, and while collapse is a good descriptor of what happens, this is not true colony collapse disorder. This is death by varroa associated viruses.

How does it happen?

1. The big colonies – While beekeepers are often surprised that their big colonies are the ones that are gone first, it makes perfect sense in terms of varroa growth. Since varroa mites reproduce in capped brood, the colonies that made the most brood (i.e. got the biggest) are the ones most at risk of having a high population of varroa. Colonies that swarmed, or didn't take off, or even fought a disease like chalk brood are less at risk from high varroa populations, because they didn't consistently have large amounts. You should have good notes indicating cluster size going into winter, but even if you don't, you can see the large circle of food eaten by a large cluster.

his colony had a large brood nest (indicated by the dark comb in this frame from the top deep box), and a large cluster going into winter (indicated by the large amount of honey that is eaten away where the winter cluster started). Varroa were never monitored or managed in this colony, and it was dead by February, if not sooner. (Photo by Meghan Milbrath)

2. Lots of Honey – Lots of honey means that the colony died fairly early. Colonies with high levels of varroa, they tend to die fairly early in the season (before February), leaving lots of honey behind. Once the bees are stressed and in cluster, the viruses take their toll very quickly. In some cases the colony will even abscond in fall, or be dead

before winter really hits.

The colony shown above had a third deep box that was filled with capped honey, indicating that the bees died early, and starvation was not the culprit.

3. Small cluster – Varroa levels peak right when the winter bees are getting formed. The bees that emerge from varroa infested cells are weakened, and more importantly, are riddled with viruses. Varroa mites are notorious for carrying deformed wing viruses (DWV), but are known to transmit many more. When bees are close tight in a winter cluster, the viruses can spread very quickly.

In our colony, the cluster was only the size of our hand – some bees had their heads stuck in the cells, trying to stay warm, others had fallen between the frames.

4. No bees on the bottom board – When a colony starves, the bees just drop to the bottom board, and you end up with a pile of dead bees in the hive. When bees get sick with viruses and other pathogens, however, they often will fly away. Sick bees by nature leave the colony to die in the field, an act designed to prevent pathogen transmission in the colony. When most bees are sick, they either fly away, or are too weak to return after cleansing flights. An early fall illness means that a lot of the bodies probably got removed by workers too.

The colony we examined had only a few bees left on the bottom board (1-2 cups). We didn't see a lot of varroa, but there had been some robbing, so wax cappings covered a lot of the board.

5. Patch of spotty brood/ Bees dying on emergence – When a colony succumbs to varroa associated viruses or parasitic mite syndrome (PMS), we see a lot of effects in the brood. Unlike American Foulbrood (AFB), which attacks the larvae at one particular stage, PMS will affect developing bees at many stages of development. It is one of the only diseases where you see bees dying right as they emerge.



Editor's Note & musings by Ken Rows
Wow winter is hanging on by the Arctic Vortex swing. Checked my bees before the latest snow and they haven't touch much of the paddies and look very clean and healthy. Have had the odd one foraging so established a "Bee Pro" station. The pussy willows and popular catkins are out but not pollinating yet in my apiaries.

FYI the Selkirk beeyard location: at the lights (at Sobeyes) in Bird's Hill looking north head 18 kilometres north to Hay Road turn left follow up to creek and turn right. Signs will be established at site.

The time line to prepare hive equipment is narrowing so check your lists: clean, scorch frames and boxes if needed, build those extra frames and may be build a swarm box or a fed / water station. It has been mentioned that bees need a complex of nutrients and salt is one what can you do to provide these? Bring your questions to the meeting April 12. Oh yah, be creative, think of apiary signage.

Bee Well

Your Beefriend Ken RRAA editor

CLASSIFIEDS

1 For Sale: Plastic queen excluders \$3.50 each.
Contact, Lance W. Phone # 712-6783, Email; lancewld@gmail.com

2 For Sale: Nucs with 4 frames full of bees. Lots of brood on 2 of them. All nucs have 2015 raised queens from winter hardy, mite tolerant, own local stock. No foul brood in my apiary. Price TBD. 2) New inner covers 7/8" x 7/8", pine rimmed with 3/8" solid plywood. \$10.75 each
Contact Ted Scheuneman: 204-338-6066

3. For Sale: Insulated hive boxes with Metal Lid and Bottom Treys \$20; Honey-Frame Display Case \$20; Cobana boxes for comb honey \$20; Nuc Boxes \$10; Super shells with damaged frames \$15; Boxes with wired frames but no foundation \$10; Supers and Brood Boxes -\$20 - \$40; Honey pails- various sizes, Hive stands \$5; Lids with metal or wood top \$10; Bottom boards \$5 / Screened Bottom Boards \$8; Bee blowers \$75-\$150; Skunk prevention plates \$1; Screened Plastic bottom boards \$15; Inner covers \$1; Frame building jig and Wiring jig and pre-cut wood pieces for building boxes and frames; Pure beeswax foundation \$120; Boardman feeder trays, jars and lids \$4; Beekeeping suits, gloves, veils, tools -all in excellent condition. Smokers \$20-\$25; Fencers for bear protection \$75 - \$200; Metal Fence Posts, Fencing Wire; Bee Cozies Winter Wrap [new] \$15; Mann Lake 3" pro feeders [new] /

The Bee Cause is the official publication of the Red River Apiarists' Association for distribution to its members and their colleagues in the beekeeping industry. It is published eight times a year on a monthly basis except December and the summer months of June, July, and August when membership meetings do not occur.

Articles can be best submitted in word documents as email attachments. Though they may be edited for spelling and basic grammar, no changes will be made to their contents, message and opinions. They are those of their originator and not of the Red River Apiarist Association.

Deadline for any submission to this newsletter is the second Saturday preceding the membership meeting to allow for publishing and mailing delays. Regular membership meetings are normally scheduled 7:30 PM on the second Tuesday of every month at the **Elmwood Legion 920 Nairn Avenue** in Winnipeg except the months as noted above.

The Red River Apiarists' Association, formed in 1963, represents the beekeepers of the Red River Valley and environs in southern Manitoba. The association provides a forum for the promotion of sound beekeeping practices through education, networking opportunities, meetings, field days, workshops, presentations by local apicultural experts, as well as the dissemination of this monthly newsletter.

We are on the web!
www.beekeepingmanitoba.com

\$25 case of 5.; Misc.

Charles Polcyn at 204 284-7064 or at vernapolcyn@yahoo.ca

Contact Charles_polcyn@ymail.com or Charles 204-284-7064 Wpg. Or farm 204-348-2506.

4. Wanted: Honey contact: John at

204-943-0166 Email:honeyb@mymts.net

5. For Sale: Three frame nucs for sale with new Carniolan queen; can deliver to Winnipeg. Price is \$180, deposit required; paul@interlakeforageseeds.com, Interlake Honey Producers Ltd. 204- 372-6920

6. For Sale: Four frame nucs after mid May; contact **Chris Argiriou at 204-296-4848 or e-mail christos-a@shaw.ca**

7. For Sale: Four frame nucs with young local queens. Queens available in July contact: **Waldemar Ph 204-755-2340 or Email: wdamert@yahoo.ca**

—//\—

Note the bee in the upper left is fully formed, and died on emergence. You can often see frozen/melted larvae along with dead pupae. Many beekeepers instantly suspect AFB, but AFB infected colonies usually will not be large and have produced a lot of honey going into the winter. (Photo by Meghan Milbrath)

6. White crystals in the brood – Around the cells where the brood died (the last place of the brood nest), you will often see white crystals stuck to the walls of the cells. These are dry (not suspended in liquid like crystallized honey), and are the crystallized pee of varroa. Varroa mites defecate in the cells, and the resulting guanine crystals are left behind, and visible to the naked eye.

Cells on the right hand side of this photo contain small crystals of guanine acid, indicating varroa defecation. Notice the dry, irregular shape, and that they appear stuck to the walls on the cells. Some cells on the left hand side of this photo contain crystallized sugar. Note the wet/liquid appearance, and that it is largely in the bottom of the cell. (Photo by Meghan Milbrath)

7. No records that varroa was under control. Notice that this says ‘varroa was under control’, and not that ‘the colony was treated’. You may have applied a treatment, but it may have been too little, or (more likely) too late. This year was a particularly difficult year for this, because in Michigan we had a really late summer – it stayed warm enough for beekeepers to go into their hives well into October. Many beekeepers took the extra time to put on a varroa treatment, thinking that they were lucky to get one in. While that treatment could help the bees for next season, it was too late for this winter. September and October treatments would have been applied *after* varroa had gotten to their winter bees. Winter bees are born in the fall, and

with their special fat deposits that allow them to live through the winter months, they are the one who carry the colony to the next season. If the winter bees have already been infected with viruses, the damage is done. No amount of treatment or varroa drop would bring the colony back.

The only way to know that you have varroa under control is to monitor using a sugar roll or an alcohol wash. Just looking at the bees does not work; varroa mites are so sneaky, that you rarely ever see them, unless the infestation is out of control, and it is too late. Many beekeepers say that they never see varroa in their hives, so they don’t think that they have a problem. In fact, a varroa infested hive can actually look like it is thriving. Underneath the lovely brood cappings, and away from our view, the mites are reproducing and biting the developing bees. The colony can look fairly healthy until the mites reach a threshold, and the colony succumbs to disease. By the time you see parasitic mite syndrome, or see varroa crawling on bees, it is often too late for that colony (especially if winter is just around the corner). Getting on a schedule of monitoring and managing mites will give you peace of mind that your healthy looking colony is indeed healthy.

The silver lining

If the above scenario is familiar, don’t despair. First, you are not alone. Many beekeepers got caught off guard with varroa this year. They didn’t realize how bad it was, or got thrown off by odd weather patterns. Second, when the bees die, the varroa mites die too. We don’t yet have evidence that the viruses would stay in the equipment, so you can reuse your old frames. The honey that is left can be extracted to enjoy (if you didn’t feed or medicate), and frames of drawn comb can be given to new colonies. Most importantly, if you recognize the above scenario in your colonies, you now have more knowledge as to what is harming your bees, and you can take positive action. You have time for this season to

develop a strategy. Monitor your varroa mite levels using a sugar roll kit (available at pollinators.msu.edu/mite-check/ or at Mann Lake), read about integrated pest management for varroa, and make a commitment to prevent high mite levels this year *before* your winter bees are developing. This is going to be the year!

Meghan Milbrath, Ph.D.

mpi@msu.edu /517-884-9518

Meghan Milbrath is a beekeeper and the coordinator of the Michigan Pollinator Initiative at Michigan State University. She performs pollinator related research and extension work, and works with beekeepers and stakeholders around the country. She started keeping bees over 20 years ago, and currently owns and manages a The Sand Hill apiaries, where she manages 150-200 colonies for queen rearing and nuc production —//\—

In February 2016, the City of Winnipeg amended the Downtown Zoning By-law 100/2004 to support properly managed apiaries for beekeeping in downtown Winnipeg. Following is some helpful information and resources related to urban beekeeping.

Winnipeg Guidelines City web 18 Mar 2016

<http://winnipeg.ca/ppd/planning/beekeeping/default.stm#6>

Guidelines for Urban Beekeeping

The following City guidelines complement provincial regulations and promote good management practices for urban beekeeping.

Best Practice

- Urban beekeeping is discouraged before completing a recognized course in beekeeping and/or seeking membership in a local bee club. See resources below.
- All beekeepers shall register with the provincial apiarist and shall comply with the Manitoba Bee Act wherever required. See resources below.

- Every beekeeper shall adhere to good management and husbandry practices and maintain bees in such condition as to prevent swarming, aggressive behaviour and disease.
- Indications of disease should be reported to the provincial apiarist.

Planning and Design Standards

- Maximum number of hives on a site is four plus one nucleus hive.
- Ensure the beehives are located to ensure adequate sun exposure and airflow for the health of the bees.
- Installation of a windbreak structure may be required as bees may have trouble foraging if wind inhibits hive access.
- A constant source of water must be provided at all times for hives starting before the snow melts in the spring and continuing late into fall.
- Hive openings should be oriented away from nearby public spaces, balconies, terraces or elevated patios.
- Hives on ground level must be within a secure fenced enclosure. Hives should be set back at least 20 feet (6 metres) from the edge of a permeable fence.
- No setback is required if it is a solid fence or includes a vegetative obstruction at least 5 feet (1.5 metres) tall.
- No fencing or setback requirement for hives on rooftops or elevated decks/balconies at least 8 feet (2.4 metres) above grade.
- Rooftop locations should have access via an enclosed staircase or elevator, and have adequate structural integrity to support the additional weight of beehives.
- Appropriate railings around the perimeter of the roof should be considered for the safety of beekeepers.

***Latest update:** For Downtown Bees, The City of Winnipeg permit process is now in place. Development Permit is \$88, and could be a Fire Dept fee, although not sure if this is applicable or not as no one has tested process, yet Fire Dept get copies of all permits.

Permit will need a 1 -2 line supporting letter from property owner approving the applicant to apply for a permit for Bees on their property. Also, include a diagram showing how many hives and where/how located on property.

Winnipeg Zoning and Permit Office is at 31-30 Fort St (at South end of Fort Street) and phone number is 204-986-5140. —//\—

The Winter Queen Bank, using 1 frame

Ted Scheuneman March 22, 2016

After years of experimenting, I have had great success bringing queens through the winter on 2 frames. There are many variations. In spring, 4 queens can be used where needed; to replace inferior queens, to replace dead queens, to make a split, etc. You can be totally self-sufficient if you have a queen available in late winter or in early spring.

In the last few years I have developed a process, whereby it is possible to bring queens through the winter on 1 frame.

- A standard size box is somewhat modified and divided into 9 compartments, that hold 1 standard frame each.
- This kind of a queen bank is established as late as possible. That would be in October.
- Starting in September, 10 fully drawn out new honeycomb frames are put onto a super strong standard hive (colony) to fill the frames full with food; sugar syrup only.
- Then in October, when the nights are getting colder, and there is no more or very little flying temperature during the daytime, the box, which is full of food and bees, is taken off and put in a dark cool room for 3 to 4 days. This lets the bees know that they are without a queen.
- On the 3rd or 4th day, at sunset, 9 frames, which are full of bees and full of food, are transferred into a 9-plex box. Once that is done the queens are introduced immediately. It is important to have the queens at the ready in order to do this.
- Put food, from one of the frames, in a little dish and soil the queen in it. Then set the queen on top of the frame and close the compartment. The bees will do the rest.
- Investigate, 1 week later, by lifting the frame up to see if everything is okay. You may find some eggs on some frames. That is okay. Since there is no pollen on those frames, which is desirable, the bees can't raise brood and will then eat those eggs.
- The 9-plex box is over wintered in an indoor

overwintering facility where the temperature is kept between plus 1 C. and plus 5 C. The 2 sides of the 9-plex box are protected with 1 inch Styrofoam insulation.

- Around the last week of February or the first week of March, a 1 inch strip of pollen is put on top of each frame, cut from a well filled pollen frame which was harvested the previous summer. This is more becoming, and healthier for the bees, than a pollen substitute.
- Now the bees are able to and will start a little brood nest.

It is best if all queens are used before May! If desired, 1 to 3 nucs can be established from the bees of the 9-plex.



—//\—

International Honey Market

“Resin technology applied to honey creates products which cannot be labelled as honey.”

In February 2016 the US government officially confirmed receiving application of resin technology applying to honey creating which will help clarify the status of a technology which is in recent years believed widely used to disguise honey origin.

A point of inflection in the price of honey prices was reached in the 4th quarter of 2014. The honey market is thought to need a Point of Stability.

Resin technology has legally and properly applied to different types of food to remove various contaminants. Interestingly the Chinese manufacturers and exporters of honey over 3 years have used it. Resin technology can 1) disguise country of origin; 2) remove not only pollen but also antibiotics and other residues reducing risks to importers, exporters and packers; 3) remove chemicals that give colour to honey; 4) remove chemicals that give honey flavour and aroma.

The manufacturers, users and sellers of the resin machinery claim the use was FDA approved; “[The]..resins may be safely used as articles or components of articles intended for repeated use in producing...food, in accordance with...Federal Regulations.....the regulation does not address the use of the resin for any specific food products or contaminants, including carbendazim in honey, nor is such specific use elsewhere addressed in FDA regulations.”

“...calling the product that has been treated with the resin technology simply “honey” would not accurately identify the food generally understood to be honey. The product should be labelled with a name that sufficiently describes its characterizing properties in a way that distinguishes it from honey which has not been treated with resin technology.”

The FDA is working on finalizing a guidance for proper labelling honey and honey products.

THE nuclear Magnet Resonance (NMR) Technology applied to honey is a promising and sophisticated scientific technology developed not only by private-for-profit laboratories, but also by independent academic scientists and governmental labs concerned with food safety and food authenticity.

Systems of tractability allow the producing industry to trace not only where, when honey was produced, but also the floral sources, climate conditions and other relevant variables which determine the chemical profiles of honey as well as blends of honey. The assessment of purity and authenticity of honey, its method of processing

(such as ultra filtration or resin technology, and country of origin may come by means of collaborative scientific research now underway to mirror the general theme of “Precision Analysis within the context of Global and Integrated Data.”

The Chinese beekeepers extract honey with moisture levels of 35-40% using moisture reducing factories. The Nuclear Magnetic Resonance technology may distinguish immature and inauthentic honey from natural honey.

The global appreciation of the honey bee more acute, widespread or deeply understood at present. —//\—

Bees can be more important than fertilizer

Date: June 10, 2014

Summary:

Insects play a key role in the pollination of cultivated plants, and a new study suggests that they can be even more important than fertilizer. In the study, fertilization and watering only had an effect on harvest yield in combination with pollination manipulations. Results led the scientists to the conclusion that an almond tree can compensate for a lack of nutrients and water in the short term by directing stored nutrients and water to the fruits but cannot compensate for insufficient pollination.

Lack of bees and other wild insects to pollinate crop plants can reduce harvest yields more drastically than a lack of fertilizer or a failure to provide the crops with sufficient water. When crops are adequately pollinated, on the other hand, the plants bear more fruit and their nutrient content changes. These are the findings of an experiment on almond trees conducted in California by the Freiburg ecologist Prof. Dr. Alexandra-Maria Klein and her colleagues from the USA. The team published articles presenting their findings in the journals *Plant Biology* and *PLoS ONE*

Journal References:

1. A.-M. Klein, S. D. Hendrix, Y. Clough, A. Scofield, C. Kremen. **Interacting effects of pollination, water and nutrients on fruit tree performance.** *Plant Biology*, 2014; DOI: 10.1111/plb.12180
2. Claire Brittain, Claire Kremen, Andrea Garber, Alexandra-Maria Klein. **Pollination and Plant Resources Change the Nutritional Quality of Almonds for Human Health.** *PLoS ONE*, 2014; 9 (2): e90082 DOI: 10.1371/journal.pone.0090082 —//\—

Sunlight, Water and Nosema Spores

by Thomas C. Webster Kentucky State University
American Bee Journal V 152 No. 5, May 2012

Summary by Ken Rows RRAA editor

Here is an interesting article to share wherein Sunlight is considered a sterilizing agent for bee equipment and outdoor water sources reducing potential Nosema infection.

Nosema ceranae is the species investigated in this study although the common Nosema apis biology's are much similar. Their life cycles are in part developing and reproducing inside the mid gut of the bee where food is digested. Here is where the Fumagillin antibiotic prevents the growing or vegetative phase of producing nosema spores. Mature spores leave the bee mainly in feces and can last for very long periods on comb and equipment. Note Fumagillin has no effect on spores. So it is important to eliminate spores left inside bees and on equipment after a colony has died or struggled with the infection.

To eliminate spores one focuses on points of vulnerability applying practical beekeeping practices for ideal control; effective, safe for bees and beekeepers, simple, quick, sustainable and relatively inexpensive.

Ultra-violet sunlight is a sterilizing agent and has been proven to breach the walls of spores, in the lab under a stain design study. More to it; pure

spores never exist in a hive or on stored equipment. Normally spores are shed in the bee's feces although in hive manipulation a crush bee can inject spores from it's feces or tissues. So bees are part of the issue. Feces were thought to block sunlight UV impacts on spores but the reverse occurred. In the lab test the feces increased the efficacy. Northern latitudes would have less effect so closer to the equator or at higher elevations is suggested as better killing spores. Other studies have suggested that the rectum has a killing effect on spores.

In the case of water born spores, they proved that being heavier than water they quickly settle out of the water column or to the bottom of a puddle or water body. Bees can contaminate many areas around the environment they travel; however, sunlight will impact many spores so the potential of infection outside the hive is much reduced. It is still prudent to establish water stations further from hives where they will receive more sunlight.

Killing spores on equipment is possible by exposing the equipment to sunlight. For the hobbyist possible and the equipment would have to be rotated. I have always had the practice of flaming / scorching tools, frames, and hive structures, a practice I picked up during my time assisting in a pathology lab in the 1970's. At any rate my thinking is that the spore or other pathological impacts would be reduced. —/\—

Bee Thieves Winnipeg Free Press—Jenny Starrs captures a Washington Post article on bee thieves during February pollination season in California. There's money in "Bounty Bee Hunting" GPS works. —/\—

Red River Apiarists' Association - Winnipeg, Manitoba 2016 MEMBERSHIP APPLICATION

I apply for membership in the Red River Apiarists' Association. Membership includes one-year subscription to the newsletter "The Bee Cause" (8 issues)

RRAA membership fee (cheque payable to RRAA or Red River Apiarists' Association) @ \$25.00/year
NEW: Optional Beekeeper Liability Insurance (details on RRAA web, Links, Insurance) @ \$45.00/year

TOTAL PAYMENT ENCLOSED.....\$_____

Name _____ Tel. _____
Address _____
City _____ Prov. _____ Postal Code _____
E-mail address _____
Signature _____

New Member [] Renewal [] Student U of M Beekeeping course [] [free 1st year] Other. Please specify. _____

Newsletter Delivered in electronic pdf via e-mail [] or on paper via Canada Post []

This completed form may be brought to the meeting or mailed with your cheque to : **John Speer, RRAA Treasurer**
Box 16, Group 555, Winnipeg, Manitoba R2C 2Z2. Please do not send cash in the mail