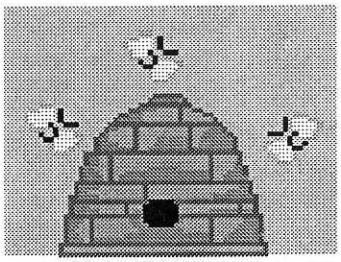

http://www.geocities.com/ve4tg/

# The BEE CAUSE

***The Official Publication of the Red River Apiarists' Association***

March 2002 | Free to Members | Volume 5: Issue 3

***Important Dates:***

Next Meeting Date is:
12 March 2002
7:30 PM Upstairs Meeting Room

Program: Rheal Lafreniere will talk about Spring Management for Summer Honey Production

Door Prize: Door Prizes for the February 19 meeting will be a hand crafted barrel scraper donated by Ron Rudiak.

***Meeting Location:***
River Heights Community Centre
1370 Grosvenor St.
(Intersection of Oak & Grosvenor
Door Prizes will be offered, Guests are welcome and free coffee will be available.

The Bee Cause Newsletter is published by the **Red River Apiarists' Association** eight times per year excluding June, July, August and December.

Membership in the **Red River Apiarists' Association** is $20.00 per year and includes a subscription to the **Bee Cause.**

**Web Site at:** http://www.geocities.com/ve4tg/

## President's Comments

It was great to see some of our members attend the MBA Convention in Brandon this year. Lots of activities and information to help us keep in business as well. With the mild temperatures this month, it felt strange going to the convention. Usually it is bitterly cold for our guests and us. Great for driving as the roads were nice and dry too!

The executive will still be looking for more feedback into the plans we have made for the upcoming meetings. Don't hesitate to let any of us know your suggestions.

As we move along into March, we all very anxious to recheck our colonies for successful over wintering. That is especially true now as the weather hovers around the thawing mark, we are very anxious to take a peek into the hives. The other day I started cleaning some of the dead bees away from the entrances of my hives. Several bees were spotted in the snow surrounding the colonies. Possibly a good sign that there are lots of bees in the boxes? As we heard back in January, treating with Apistan in the fall may not entirely ensure survival of the colonies infected with Var-

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## RRAA Executive Members

**President:** Jim Campbell
Ph 467-5246
Box 234
Stonewall, MB R0C 2Z0
Email: jaycam@mb.sympatico.ca

**1st Vice President:** Rhéal Lafrenière
Ph 945-4825
Manitoba Agriculture & Food
204-545 University Crescent.
Winnipeg, MB R3T 5S6
Email: Rlafreniere@agr.gov.mb.ca

**2nd Vice President:** Gilles Lantagne
Ph 885-6047
1018 Cavalier
Winnipeg MB R2Y 1E1
Email: lantagne@mb.sympatico.ca

**Secretary:** Ron Rudiak
Ph 326-3763
Box 1448
Steinbach, MB R0A 2A0
Email: manbeekr@mb.sympatico.ca

**Treasurer:** Dennis Ross
Ph 878-2924
Group 125, Box 10, RR1
Vermette, MB R0G 2W0
Email: rosskr@mb.sympatico.ca

**MBA Delegate:** Jim Campbell
Ph 467-5246
Box 234
Stonewall, MB R0C 2Z0
Email: jaycam@mb.sympatico.ca

**Reporter:** Ron Rudiak
Ph 326-3763
Box 1448
Steinbach, MB R0A 2A0
Email: manbeekr@mb.sympatico.ca

**Past President:** Ron Boudreau
Ph 885-3344
795 Pepperloaf Crescent
Winnipeg, MB R3R 1G2
Email: ggoldrod@shaw.ca

**Newsletter & Website:** Doug Henry
PH 757-4694
Group 321, Box 6, RR3
Selkirk, MB R1A 2A8
Tel: 757-4694
Fax: 833-2566
Email: ve4tg@rac.ca

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roa. It appears that the population has been stressed during the honey flow and goes into winter in a very tired state. Thus despite the treatments, and ample food, they still do not survive. It is very clear to me that the spring treatment is critical to get the upper edge. It is also quite evident that we all must check our colonies for infestation. As some of our members have told us, an easy method is to pull out capped drone brood. If you discover any little friends on the brood, you must take action. Appearance of five mites per drone is a sure sign of a short life for your bees.

As the health of the hive is of utmost importance to us all, your executive has asked Rhéal to review the spring management topic for our March meeting. With the possibility of an early spring, the topic should be timely.

We are also in the early stages of planning our annual picnic. At the moment, we are looking at June 15 for a tour of Phil Velhuis operation, close to Winnipeg.

Just a reminder, if you have a favourite topic for our meeting, let any of the Executive know. We can discuss how or when to fit it into our plans. Our next meeting will look at Spring Preparations needed to give our bees a good start for the year.

See you at our March 12th meeting!!!

Jim Campbell

**Attentive Audience at Annual Convention.**

The 96th annual Manitoba Beekeepers Association convention held recently at the Victoria Inn, Brandon, Manitoba, was attended by over 90 interested beekeepers.

The mild temperatures (- 5 degree Celsius), fair prices for honey, and an interest in the outcome of several resolutions, contributed to a good attendance at this years convention! Beekeepers from across the province were invited to hear speakers from Iowa, Alberta, and around Manitoba. Several Equipment Suppliers were in attendance as well, demonstrating various products and services for our industry.

Philip Veldhuis, chair of the Manitoba Beekeepers Association, reported on the recent Canadian Honey Council meeting in Banff, Alberta. Although Manitoba and Alberta desire to import queens from USA, other provinces throughout Canada are not in favor of such a change in policy. Phil also noted the discovery of fluvalinate resistant mites in British Columbia, Manitoba, and New Brunswick. The M.B.A. board will continue to evaluate options for mandatory bee yard registration. There continues to be a need to work with aerial applicators so that they know where our bee yards are located, so that these can be protected from sprays.

Antibiotic resistance of American foulbrood disease is a major concern for beekeepers in Alberta. Dr. Steve Pernal, Beaverlodge Research Station, noted their research continues in three areas. Studies continue to look for strains of Bees with hygienic behavior, replacement antibiotics, and to look at spores in honey as an early indicator of Americans foulbrood disease.

Mr. Manly Bigalk, from Iowa, spoke on his experience with the Russian honeybee. In some results it appears they seem to produce more honey, and appear to be resistant to tracheal mite, thus never needing any medication or treatment. At the University of Guelph, Geoff Wilson echoed the need to study the Russian stock for their resistance to the mite. Tests continue, as the Russian stocks appear to have good hygienic behavior, slightly lower use of winter food, almost no stinging when manipulating hives, as well as some resistance to varroa.

A panel discussion dealt with arranging for foreign workers to help with the honey harvest. Sometimes it is difficult to get local workers as the harvest continues when local students go back to school. It can also be difficult getting people to work with Bees! Most indicated the need to train workers properly, as well as mechanizing as much as possible.

Don Dixon recalled the study on imidicloprids. There is no evidence that imidicloprids pose a threat on either honeybees or bumblebees. The concern for beekeepers remains however, in evaluating what else was the cause of the high bee mortality that triggered these initial studies.

Two Red River Apiarist members have been doing some study into increasing the effectiveness of varroa kill by using formic acid. Ted Scheumenan and Ron Rudiak have developed a way to treat bees in the hives during the wintertime. Their heating / evaporating device being evaluated is not commercially available, yet the research continues since the mite reduction can be significant within two days of treatment. Meanwhile Robert Curry and Robin Underwood, continue research at the University of Manitoba. Their goal is to identify an economical way to treat over wintered hives indoors with formic acid to reduce varroa impacts.

Report by Jim Campbell, MBA rep

## Mites No Match For Manitoba Invention

Two Manitoba beekeepers, Ted Scheuneman and Ron Rudiak, have applied for North American patent protection for their invention, an effective mite treatment system. This modern system rapidly devastates varroa and tracheal mite populations without contaminating the hive with harmful chemicals.

Ten years ago Ted began using screened bottom boards to monitor the hive conditions in his outfit. It was well known by Ted that his varroa screens with slide-out observation trays provided a window on conditions within his hives. As well Ted was determined to eliminate the popular but harmful chemical, fluvalinate, from his operation and instead focused on formic acid as the preferred miticide. Formic acid seemed a logical choice because it is normally found in varying amounts in honey and other foods that we consume every day. Formic acid, even though it is well known to kill mites, can be unpredictable in its action and frequently provided inconsistent results.

There are several causes of these inconsistencies. Mainly, vapourisation of formic acid from reservoirs or absorbent material is dependent on temperature. Formic acid does not vapourise readily at low temperatures and surges when temperatures are too high. Humidity and air pressure, to a lesser degree, also affect the rate of vapourisation. All of these variables add up to less than satisfactory control of mite populations.

It is the opinion of many in the beekeeping industry that formic acid will not loose its effectiveness in the treatment of varroa and tracheal mites because this material is naturally found as a component of honey and therefore bee mites have always been exposed to varying sub-lethal amounts. Up to the present time, there have been no reports of formic acid resistant mites developing anywhere in the world.

Their precision vapouriser takes advantage of a constant temperature and an adjustable metering system to achieve consistent rates of vapourisation over a wide range of ambient conditions. It is now feasible to effectively treat hives with outdoor temperatures as low as -10C or indoors while the bees are confined for the winter. Treatment time to effectively kill mites in a colony is between 3 and 4 days using a constant rate of vapourisation. Almost no mites survive this treatment including all stages within the trachea and within capped brood cells. Very few bees are ever killed using this method and only the occasional queen.

In operation the first step is to monitor the natural mite fall within the hive. The number of mites per day is counted and recorded. For each mite that falls (per day) there will be approximately 500 live mites within the colony, 3 mites (per day) means that there will be 1500 mites living in the colony and so on. With this information available it is now possible to determine the effectiveness of any treatment that is used. On the first and second day of treatment with formic acid a large percentage of the mites will fall onto the observation tray where they can be counted. Many will be alive on the first day, fewer will be alive on the second day and almost none will be found alive on the third day. For awhile, it is normal to see a few mites fall daily after the vapouriser is removed at the conclusion of the three or four day treatment. All of these residual mites, which are remnants of the mite population which has been killed beneath the cappings of brood cells, will be

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found dead. These residual mites consist of mature females, immature females and a few smaller males.

The precision vapouriser is inserted through the entrance diagonally to ensure that all parts of the hive will receive equal amounts of formic acid. The heating system has no adjustment and is programmed during manufacture to produce the correct temperature. All components are of the highest quality, able to withstand the harsh environment of formic acid vapors and designed to demanding specifications. The electronic heating system is plugged into a fuse protected, multi-outlet, power supply and observed for a short period to ensure that the red indicator LED cycles on and off indicating that the system is maintaining operating temperature. The inventors have not experienced any heater failures in over two years of testing many units, a testament to their reliability. The original prototype heating unit has operated continuously, logging nearly 20,000 hours while the attached thermometer varies from the programmed set point by only a fraction of a degree.

During the period of winter confinement ten to fifteen hives are easily treated with an individual unit because the treatment cycle is normally 3 to 4 days. In actual practice. Ted and Ron have found that by observing natural mite fall not all hives will need treatment because some will drop less than 1 mite per day indicating a level that will not be a problem if left untreated. However if there are tracheal mites present in the colonies a formic acid treatment may be required to bring them under control.

Up to this time they have treated and observed hundreds of hives for tracheal and varroa mites, counted and recorded the mites as they fell into the trays and made incremental improvements to the equipment. All of the development costs incurred have been borne by the inventors as well as the production of many prototypes and time used in evaluation. Ted and Ron are presently working to accomplish the final stages of engineering so that manufacture of the device may begin in the near future.

The screened bottom board with the associated tray underneath is an essential part of any beekeeping operation at any time of the year. For example, if the natural mite fall is more than 2 mites per day at the end of the honey flow, this is an indication that treatment should begin quickly. It is during the late summer that winter bees are raised and eliminating mites is the best guarantee of having a strong, vigorous colony to take through the winter.

A bee which has raised one family of mites in its cell is scarred for life and may not live long enough to see the awakening of spring. Furthermore it will not be able to perform all functions required of a bee in bee society and will become a burden to its colony. If you have a mite fall of less than one mite per day, you may choose the most convenient time for treatment. If the hive is treated late in the season there is less chance of re-infestation from nearby poorly-managed hives which may collapse and spread mites with absconding bees.

Estimating Mite Populations

We have worked with these numbers for more than three years while Ted & I were developing the equipment for mite treatment with formic. An important thing to remember is that we are looking for mite fall from front to back, side to side and corner to corner underneath our hives. One of the faults of the many attempts at estimating mite fall is the use of a sticky board which

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is usually very much smaller than the bottom of the hive. This just is not good enough. One thought to keep in mind is that any attempt to sample bees for mites, observe mite trays or sticky boards will produce only an estimate, not an exact quantity. The only way to get the exact quantity is to wash all the bees in alcohol or kill all the mites in the colony. (We don't like the first option).

Soon, in the development of our treatment system we were killing virtually all of the mites, even those under the cappings. We continued to do this and count mites before the treatment and after treatment each time. It quickly became apparent that there's a relationship between natural mite fall and the number of mites which we destroyed during the 3 - 4 day treatment.

The number (500) living in the hive for each mite that falls in 24 hours became our guide number for treatment. Because it is an estimate, there will be a margin of error but if we estimate 2500 mites in a colony using 500 as a basis, we never see 50 or 5000 on the tray after treatment. More often than not the colonies we treated were within several hundred mites of the estimate. The number 500 is important when I treat some of our colonies with Apistan. If I don't know what mite load the hive is carrying, how can I know if the Apistan is still effective or when the treatment is successful? If beekeepers all estimated mite levels we could treat more effectively and perhaps for much longer without reaching the point where our chemicals become ineffective.

Hope that this clarifies the issue

We have collected numbers from hundreds of hives and find that this number is workable here in our climate and conditions. The numbers could be verified by beekeepers in other climatic regions. The hives which are treated with formic are done on an annual basis and have seen no other miticides for several years. They are prolific in the brood nest and honey boxes while producing many splits per colony at the same time

Sincerely, Ron Rudiak

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## RRAA PICNIC PLANS

The Executive of RRAA are discussing several ideas for our Spring Picnic.

Usually, we hold an activity in May. This could be an auction, a tour, or just a picnic. Last year we held a field day at the U of M Apiary site. This included a tour of the over wintering facility and a review of various queen rearing methods.

For this year's picnic, we propose to delay the date until mid June so that we can tour a beekeepers operation, with a side trip to a leaf cutter site. If this seems to be OK with our group, we will continue with our plans. Let me know what you think.

Jim Campbell, Chair.

## Items for Sale:

**Presenter Wanted:**
Roma Falsarella, teacher at Precious Blood School, St. Boniface, 233-4327 is looking for a French speaking Beekeeper to do a presentation on Bees and Honey for her class. If you can help, please call her and arrange a time. Please let Jim Campbell (467-5246) know if you agree to help her, so he will stop looking for a presenter.

**Desperate Requirement for Buckwheat Honey:**
Pierre Charbonneau desperately wants 8 to 10 barrels of buckwheat honey. Please pass this message on to anyone who may be interested in making a sale. Pierre may be reached at 1-450-295-2667.

**Bee Keeping Equipment For Sale:**
Bottom boards and lids - $2.00 each.
Styrofoam hive inserts - $0.50 each.
Brood frames with bees - $25.00 each; available late May.
Call Paul Gregory at Interlake Forage Seeds (204) 372-6920 or email:info@interlakeforageseeds.com

**Bee Keeping Equipment For Sale:**
Nucs for sale.
Over wintered hives for sale.
2-Frame Extractor (Hand Operated).
Marine Type storage containers; one 8 x 40 holds up to 1200 supers, one 8 x 20 holds up to 600 supers. For further info call Rod Boudreau at (204) 885-3344 or email: ggoldrod@shaw.ca

**Bee Keeping Equipment For Sale:**
Total equipment for a 5 colony apiary ( no bees ), in good condition. Many extras. Will sell individually or as a package. Prices negotiable. For further info contact Jack Edge at 166 Lockwood Street, Winnipeg MB, R3N 1R8. Phone 204-489-7561 or email at edge@pangea.ca

**Bees and Equipment For Sale:**
New standard screened bottom boards, hot dipped in paraffin to prevent wood rot for years, with entrance reducer and metal mite tray for easy mite counts, reduces wax moth as well. With galvanized screens $45.00, with stainless wire mesh $57.00. Limited number of healthy nucs from April 15 to end of May. Bees on 4 very good frames with brood on at least two of them. Each nuc comes with a 2001 over wintered Manitoba queen; only $100.00 Contact Ted at (204)338-6066 between 1800 and 2100 hours.

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## Editor's Comments

We are a bit light on articles for this month's edition. Hopefully we can make up for it next month.

Let me know if you have any items for sale. Members can place their ads in the newsletter free of charge. I also list them on the web site; in fact I put them there as soon as they are received so if you want to check for items for sale, you should look there first.

In a few weeks the bees will be out and about. Let's hope survival rates are high.

Hope to see you at the meeting on 12 Mar 02.

Doug.