Summer 2018
Volume 26 Number 2

Saskatchewan Beekeepers Newsletter

Table of Contents

Advertisers Index

2018 Board of Directors

Simon Lalonde PRESIDENT
(Portfolio: President, Finance Committee)
Box 42, Clavet, SK S0K 0Y0
Office: (306) 931-0155
Email: simon@tonylalondesales.ca

Jake Berg VICE PRESIDENT
(Portfolio: Vice President & CHC Representative)
Box 4031, Melfort, SK S0E 1E0
Cell: (306) 921-8360
Email: sjbeez@hotmail.com

Sarah Comerford AUDIT CHAIR
(Portfolio: Audit Chair & Finance Committee)
Box 105, Grandora, SK S0K 1V0
Cell: (306) 280-6790
Email: sara@sunriverhoney.com

Derek Moyen DIRECTOR
(Portfolio: Labour, TFW Representative)
P.O. Box 249, Zenon Park, SK S0E 1W0
Cell: (306) 281-8098
Email: Moyenhoneyfarms@gmail.com

Dave Gane DIRECTOR
(Portfolio: 2018 Convention Director)
Box 1013, Nipawin, SK S0E 1E0
Phone: (306) 862-4649
Email: superdaveshoney@gmail.com

Nathan Wendell DIRECTOR
(Portfolio: Bear Fence Director)
P.O. Box 199, Inglis, MB R0J 0X0
Cell: (204) 937-7588
Email: nathan@wendell.ca

Andrew Hamilton MEMBER AT LARGE
(Portfolio:, Finance Committee)
P.O. Box 6A R.R. #1, Regina, SK S4P 2Z1
Phone: (306) 526-9277
Email: crazy_bee_man@hotmail.com

Linda Haggerty ADMINISTRATOR
Box 22083 RPO Wildwood, Saskatoon, SK S7H 5P1
Cell: (306) 715-4281
Email: info@saskbeekeepers.com

Geoff Wilson
PROVINCIAL SPECIALIST IN APICULTURE
Crops and Irrigation Branch, Ministry of Agriculture
800 Central Avenue, Box 3003,
Prince Albert, SK S6V 6G1
Phone: (306) 953-2304
Email: Geoff.Wilson@gov.sk.ca

Graham Parsons
APICULTURE INDUSTRY SPECIALIST
Crops and Irrigation Branch, Ministry of Agriculture
800 Central Avenue, Box 3003
Prince Albert, SK S6V 6G1
Phone: (306) 953-2773
Email: graham.parsons@gov.sk.ca

Hannah Neil LEAD RESEARCHER
TAT Researcher
Prince Albert, SK
Phone: (306) 314-2885
Email: Hannah.mae.neil91@gmail.com

SBCD Address:
Attention: Linda Haggerty / Administrator
Box 22083 RPO Wildwood
Saskatoon, SK S7H 5P1

NEWSLETTER ADVERTISING RATES

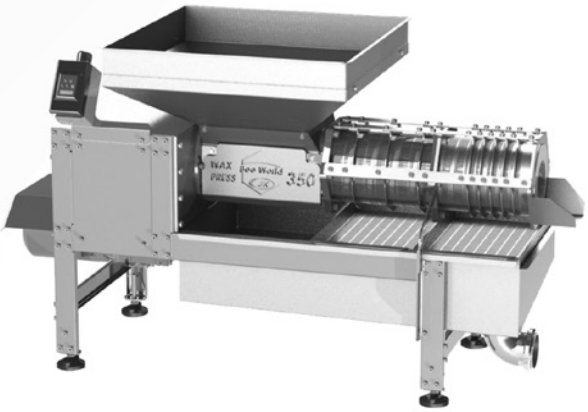
AD SIZES	1 ISSUE	2 ISSUES	4 ISSUES
Business Card	$ 35	$ 62	$120
1/4 Page	$ 75	$140	$240
1/3 Page	$ 85	$150	$260
1/2 Page	$140	$250	$450
Full Page	$250	$425	$750
Full Page Insert	$150	$250	$400

Propolis-etc...

Beekeeping Supplies

Perfecting the technology for beekeepers

These powerful wax presses will give you the best result in the separation of honey capping and wax.
The press goes right under your uncapper.
Different sizes available for all beekeepers.



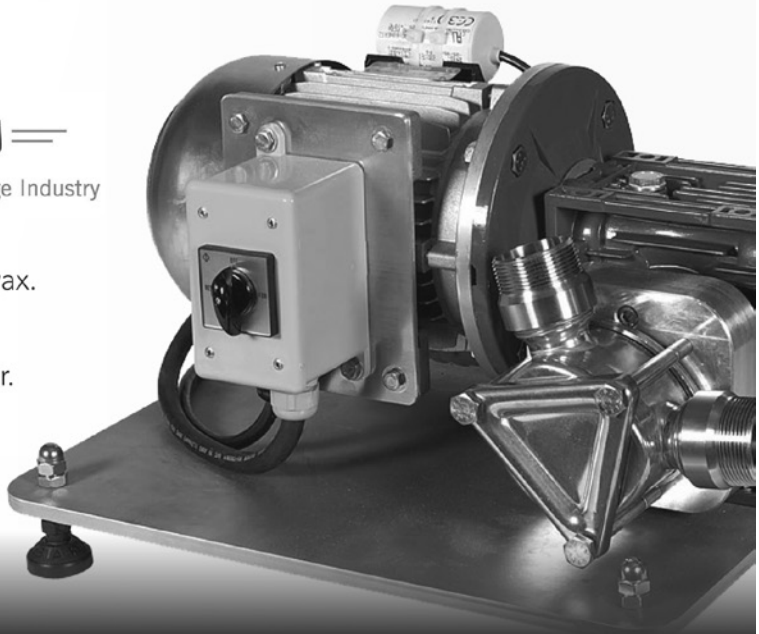
Bee World

We are the North American Distributor

Vermont Flexi Pumps

Manufacturer & Supplier of Quality Pumps for the Food & Beverage Industry

The best pump for honey even if it contains slurry wax.
Mounted on a stainless steel plate.
Forward and reverse - food grade - flexible impeller.
Fixed or Variable Speed.
Available sizes : 1 1/4" - 1 1/2" - 2" - 2 1/2" - 3"



View all of our products at :

www.propolis-etc.ca

888-660-6665

Like the page!

President's Report *by Simon Lalonde*

Welcome to summer! Although it seems like many places it has been here since late April. Generally reports are that the bees seem to be picking up, although their populations may still be lower than desired for the canola flow. We'll know in two short months how the honey crop is looking and will probably even be feeding bees.

The TAT Team is working on a number of projects (see Hannah's report) and the bees are getting set-up for our 3-year pro-biotic/pre-biotic project. Although the intent was not to replace Fumagilin at the start of the project, the lack of availability of Fumagilin has given this project somewhat greater importance. There are rumours out of Alberta that access to Fumagilin may become available again, but likely not in the near future. I am sure it will be discussed at length at the Alberta convention and that will probably be the best time for an accurate update.

I am sure anyone with TFW's from Nicaragua are receiving updates about political unrest in Nicaragua. Many are hopeful that changes may help the situation, and are in touch with their families continuously. Depending on how the situation progresses, please be aware that some may be asking to leave early to go home.

New funding programs for biosecurity have been announced by the Government of Saskatchewan and we are still awaiting application forms. When these become available we will add them to the webpage to hopefully simplify looking for them. Currently it appears that funding will be available at 50% to a maximum of $30,000 expenditure ($15,000 back to the beekeeper) for these biosecurity programs. Please watch for updates.

Lastly, a big Thank you to Christopher and Lori Warriner for all the behind-the-scenes work they put in for a successful field day – it sure made our job easier! Please give the Warriners a pat-on-the-back at convention!

We hope all beekeepers have a safe and successful honey season!

Sara's Musings

The winter of 2017 turned out to be our worst year ever for winter mortality.

To recap our 2017 season, after three back to back seasons of using Apivar as our primary spring treatment we, along with a number of other commercial beekeepers in the Saskatoon area decided we would go back to using Apistan for our spring treatment in 2017, to give our hives a break from Apivar. The last time we had used Apistan, in 2013, we had had very good control of the varroa mite as evidenced by our post treatment tests showing undetectable levels of varroa mites in our hives post treatment. This was not the case in 2017. At mid-treatment some beekeepers in our area who had decided to try Apistan again reported mite levels increasing in their hives! These beekeepers pulled their strips and went back to Apivar for a full Apivar treatment in 2017. As we were seeing that our mite levels had dropped by 85% at mid-treatment we decided to complete the Apistan treatment and see what our levels would be at the end of the treatment period.

In our post treatment tests, what we found was that if our hives were showing a pre-treatment mite load of 3-4% , post treatment, we were still seeing a <1-1% mite load in our colonies after the full Apistan treatment. This gave us a 75% efficacy, on average.

Not wanting to run the season with a 1% mite level, which we knew would grow exponentially over the honey season, we decided to do a MAQs treatment in June and follow it up with another MAQS treatment in late summer /early fall of 2017.

This plan worked well for controlling the remaining mites in our hives. We ended the season of 2017 with mite loads of 0- <1% going into winter. Our mite loads coming out of winter were low as well. On average our pre-treatment mite loads were <1-1.5%. But, despite that, our winter losses this year were the highest we have ever had. In mid-March we knew something was up because we were already sitting at an 8% loss at a time when we were accustomed to seeing only a 2-3% loss in the past. After the cold snap in April that number had grown to a 25% loss and then to a 30% loss and so on.

We ended the spring with a 43% loss overall. 32% of our hives were dead or drone layers and another 11% were hives that had dwindled to less than 3 frames of bees and brood by the middle of May!

So what was the cause of our winter losses?

Upon doing the forensic autopsies on our hives there seemed to have been a number of factors at play that contributed to our high winter losses this year:

1. Inclement weather and premature Queen Supersedure. These two factors working in tandem appear to have been our biggest issue this year. In hive after hive that died or became a Drone layer this spring we found evidence of the hive trying to requeen itself too early in the spring and being unsuccessful in its attempts. In another year the story may have ended differently for those hives. For example, in the spring of 2017, some of these hives may have been successful in requeening. You will recall in the winter of 2016/17 we had a mild winter and by the time April came we had +20 degree weather and the hives were already full of mature drones that had been raised earlier that spring. Any hive superseding in the spring of 2017 had a good chance of successfully mating. This was not the case this spring! In the winter of 2017/18 we had a much colder winter, followed by a very cold April with -20 degree weather. There were very few drones in the hives and even if there had been the weather for the virgin queens to fly in April of this year, any hive attempting to requeen early this year was doomed to failure.

2. Starvation, due to the spring cluster getting separated from feed. We didn't see a lot of this but when we did see it, it looked like the queen had missed raising her mid-winter brood cycle and so the cluster in the spring was smaller coming out of winter this year. Some hives looked like the queen had not raised sufficient replacement bees in mid-February and March and she only had her old girls left with her in the hive to help feed the spring brood and protect it from the cold we had in April. As a result some of these hives appear to have died of starvation in April despite having feed in the hive , one frame away from the starved, dead, spring cluster that was huddled around one or two frames of capped brood and larva that the remaining bees had died valiantly trying to protect from the cold.

3. Nosema also may have played a role in our winter mortality in the later part of April and early May. Despite our Nosema levels having been very low in the fall and low still in our tests that were done on the bees collected from our pre varroa treatment samples in March of 2018, when we tested again in the end of April and mid-May the Nosema levels in some of our yards had risen again to above treatment thresholds, likely due to the bees long confinement in the hive and their inability to start their cleansing flights until May.

So how do we plan to deal with these issues going forward so that we don't have another winter loss like the winter of 2017?

1. Queens: Queen failure is an issue that we should be able to address in our management practices. We can't do anything about the weather but we should be able to address the issue of premature queen supersedure by identifying colonies that may be at risk of queen failure over the winter due to failing queens and requeen those hives with a freshly mated queen before they go into winter. We thought we were doing this already in our fall management practices at SRH but clearly we need to do a better job of it going forward.

2. Small spring cluster: Ensuring all our colonies are going into winter with strong queens may also help with this issue of a small spring clusters getting separated from feed in a cold wet spring in the future.

3. Nosema: In talking with our provincial apiculturist Geoff Wilson he advises treating the hives with anything that has thymol in the formula because it seems to be the best option out there for the control of Nosema, now that we no longer have Fumagilin B as a treatment option.

Because our Nosema levels were elevated again this spring and because we did not have a stockpile of Fumagilin B available to use, we fed Complete Bee to our remaining colonies this year to control Nosema in these hives. This product is fed to the bees as a drizzle poured over the bees every 4 days. We haven't done our post treatment tests yet to see if the treatments were effective in knocking down our Nosema levels yet, but the bees appear to be building up well, post treatment. I'll let you know what we find in our post treatment tests in our next newsletter.

It was not all bad new this year. Here is some of the good news:

1. Mortality insurance: ***As Chris Warner said at field day this year, in a year when winter losses were high, it was good to have a program in place that was watching the backs of beekeepers.***

Since its inception, we at Sun River Honey (SRH), have bought into the mortality insurance program. Even with the high deductible it just made good business sense to us. We were not worried about a loss of up to 20% because we knew we could cover that kind of loss internally from our nucs made in the previous season. What we were buying insurance for was a disaster where despite our best efforts, we might incur a loss of 30% or more.

We hoped we would never have one of those years but knowing that there are things in beekeeping that are beyond our control we bought the insurance as part of our Business Risk Management Program and we were glad that we had it in place this year!

Thank you to Colleen Rooney and Kim Robert with SCIC for all the work they have done over the past number of years, working with our industry to develop this Winter Mortality Insurance program for beekeepers!

CONTINUED ON NEXT PAGE

Other good news:

2. Our previously identified queen breeders for the 2018 season survived! Each year we assess our hives and identify hives that we would like to breed from in the following year based on their absence of chalk brood, the cleanliness of their bottom board in the spring. the amount of feed left in reserve coming out of winter, the strength of the colony coming out of winter and their honey production in the last one or two years. Most of the hives that we had identified last winter to be our potential breeders for 2018, made it through the winter as strong hives! This was great news to us. It meant that we were doing something right and that we could continue, without skipping a beat, raising cells for our 2018 winter nucs.

3. Losing that number of hives has given us the opportunity to **cull frames and remove old equipment** from our operation.

4. This loss has given us the gift of natural selection. Because we are breeding from our survivors, this experience will strengthen our operation going forward. The hives that came through last winter, despite our lack of snow until well into December and despite the cold we experienced in April and despite the lack of opportunities for cleansing flights in April, can likely weather just about any winter in Saskatchewan. That is the kind of bee we need to continue to select from to improve our winter survival and honey production in Saskatchewan.

Now for something completely different: A visit to our farm:

On April 16th 2018, we at Sun River Honey were delighted to host a field trip for 16 vet students taking part in the Bee Disease Course being offered to 3rd year students at the Western College of Veterinarian Medicine with Dr. Elemir Simko and his team from the vet collage at the University of Saskatoon. In the two and a half hours they were with us visiting our farm we gave them a brief tour of our extracting facility and spent the rest of the afternoon talking with the students about our operation. The purpose of the trip was to have students visit a commercial extracting facility to see the normal flow of honey extraction and to have the students talk first hand with a commercial beekeeper about our approach to:

- disease control for Varroa, AFB and Nosema
- Queen breeding and nuc production
- Spring inspections and spring management of weak hives
- Overwintering practices on our farm.

We at Sun River Honey were happy to share some of our experiences and knowledge in beekeeping with this group of 3rd year Doctor of Veterinary Medicine students. Thank you to Dr. Elemir Simko and his team for the opportunity to be a part of this learning experience.

TFWP Summer Report *by Derek Moyen*

Hello everyone!

Honey flow is most likely underway by now. So I'll keep this short.

TFWP Primary Agriculture stakeholder meeting in Regina on May 15th was a difficult time of year to be away from the bee yard but I have to say I am glad I was able to make it. We had good representation with three board members in attendance. I would like to thank Jake and Simon for being there as well.

A few points that were mentioned at the meeting.

- Having a producer in good standing list who could qualify for a LMIA that could be used for multiple seasons.
- Better guidelines to what our advertising needs to look like.
- Instead of having a government officer show up unannounced to do a Audit. We could schedule a time for them to work with us so we can make sure we are in compliance.
- Understanding that having a current housing inspections sent in with the LMIA cost some producers a lot of money in rent when their workers are not needed for several months
- There was mention from a government official of using the KISS method when simplifying the program was mentioned.
- An Online LMIA account that kept producers information, employees information, records and a traceable LMIA.

The TFWP Primary Agriculture review will be out in the fall 2018. Keep this in mind for next season application. Changes are coming we just don't know which ones. The timing of this is never good. Watch the ESDC website for any changes and hopefully we can get a good start to the 2019 LMIA process.

It's hard to move an industry forward when the biggest hurdle is always the next one. Securing labour is one big piece to maintaining business in our industry.

Time to go pull Honey! Good luck everyone! Hope to see you all at the convention.

Concerned about pesticide drift in your area? Register your bee yards with

FieldWatch®

Communication. Cooperation. Collaboration.

beecheck™ driftwatch™

Communication + Cooperation + Collaboration = Successful Co-existence

A voluntary mapping tool to encourage communication between beekeepers, pesticide applicators, and specialty crop growers

- Free to use!
- Decrease the likelihood of pesticide incidents in your area
- Developed by Purdue University, and remains not-for-profit
- Data stewarded at the Provincial level

Signs available to order!

BEEHIVE

beecheck™

Apiary Registry by **FieldWatch**

www.fieldwatch.com

HOW TO REGISTER

1. Go to www.driftwatch.org
2. Beecheck- Map my apiaries
3. Create a profile
4. Plot your bee yards on a Google Maps supported interface

Saskatchewan Beekeepers Development Commission

Box 22083 RPO Wildwood, Saskatoon, SK. S7H 5P1 Phone: 306-715-4281 sbdc@saskbeekeepers.com

The Agri-Food Act, 2004
[section 12]

_____

THE BEEKEEPERS DEVELOPMENT PLAN REGULATIONS, 2017 –
BEEKEEPER REGISTRATION

Order No. 07/17. The SASKATCHEWAN BEEKEEPERS DEVELOPMENT COMMISSION, pursuant to the provisions of *The Beekeepers Development Plan Regulations, 2017* and *The Agri-Food Act, 2004*, hereby determines and orders as follows:

1 Each beekeeper shall be deemed to be registered with the Commission upon remittance of:
(a) levy fees to the Commission; and
(b) a $40 registration fee.

2 A beekeeper's registration shall remain in effect if the beekeeper has paid a levy pursuant to section 22 for which he or she has not received a refund pursuant to section 23.

3 Each beekeeper shall supply to the Commission the name under which the beekeeper carries on his or her business along with his or her mailing address, telephone number and e-mail address (if applicable).

4 Order No. 05/16 – Beekeeper Registration is hereby wholly revoked.

5 This Order will remain in effect for a period no longer than ten years from the date this Order is approved by the Agri-Food Council.

Order No. 07/17 is made pursuant to clauses 7(1)(b), (c) and (h) and sections 20 and 21 of *The Beekeepers Development Plan Regulations, 2017* and shall be effective upon the date of this Order. By order of the Saskatchewan Beekeepers Development Commission.

The Agri-Food Act, 2004
The Beekeepers Development Plan Regulations, 2017
Order 08/17 LEVY COLLECTION

The Saskatchewan Beekeepers Development Commission, pursuant to the provisions of *The Beekeepers Development Plan Regulations* and The Agri-Food Act, 2004 hereby determines:

1. Commencing September 1, 2017, the levy of the Saskatchewan Beekeepers Development Commission is tobe determined as follows:
2. By October 15th of each beekeeper who has 100 or more production colonies shall remit a levy of $1.60 per production colony to the Commission.
3. By October 15th of each year, each beekeeper who has 50 to 100 production colonies may remit a levy of $1.60 per production colony to the commission.
4. By October 15th of each year, each beekeeper with less than 50 production colonies may remit a ley of $80.00 to the Commission.
5. Order No. 04/09– Check-Off Collection, of the Saskatchewan Beekeepers Development Commission is hereby wholly revoked.
6. This order will remain in effect for a period no longer than 10 years from the date this Order comes into effect.

See the attached form:

Please fill out your 2019 Registration Form as follows: Contact Information & Option A or B.

Mail to the SBDC prior to October 15, 2018.

(Please Print) **THIS SECTION MUST BE COMPLETED**

First Name _____ Last Name _____

Apiary or Operating Name _____

Address _____City/Town _____ Postal Code _____

Phone _____ Cell _____ Fax _____ Email _____

OPTION A: MANDATORY REGISTRATION (100 or more Colonies)

YOU MUST REMIT A CHECK-OFF FOR OVER 99-COLONY OPERATIONS.

1. Number colonies operated at July 1, 2018 _____ x $1.60 = $_____

PLUS REGISTRATION FEE: $ 40.00

Total Remittance: $_____

OPTION B: VOLUNTARY REGISTRATION (Less than 100 Colonies)

Please circle your choice, indicate the # of colonies if any, sign the statement below and remit your fee along with this form to the Commission at the address below:

1.a. I operated less than 50 Hives (between 1 to 49 colony) as at July 1/18 and I am registering as a hobbyist at a fee of $80.00, for the fiscal year September 1, 2018 to August 31, 2019. _____(indicate # of colonies)

Total Remittance: $ 80.00

****** O R *****

1.b. I opt to register as a sideliner registering no less than 50 colonies or the number of colonies operated as of July 1/18 and remit a $1.60 check-off fee per colony for the total colonies operated (50 to 99 colonies) with a minimum fee based on 50 colonies, if more than 50 enter the actual number of colonies.

Number of colonies operated July 1, 2018 _____ x $1.60 = $ _____

Plus REGISTRATION FEE: $ 40.00

Total Remittance: $ _____

****** O R *****

1.c. I do not keep bees but am interested in supporting the commission and I am registering as an Associate member for the a fee of $80.00. **Total Remittance: $ 80.00**

If you are a new SBDC registrant and would like to receive a copy of CAPA Honey Bee Diseases & Pests, 3rd Ed., check here _____

I understand that my information will not be shared outside the SBDC Administrative Office & SBDC Board:

Signature X_____Print Name_____

Print Date: _____ (YYYY-MM-DD)

Please Make Cheque Payable to "S.B.D.C." and mail it by or before October 15, 2018, to: Saskatchewan Beekeepers Development Commission, Attention: Linda Haggerty, 22083 RPO Wildwood, Saskatoon, S7H 5P1

- Check-off fee refunds will not be available to any member who does not pay their check-off by the due date.
- Check-off Refund requests must be sent by **Registered Mail** and **postmarked** by **November 15, 2018**, and must be requested on a **Refund Check-Off Form** provided by the Commission. Contact the Office at the address or email above to request a form or more information.
- Requests that are not sent on a form provided by the Commission, will not be honoured.

Saskatchewan Beekeepers Development Commission

Box 22083 RPO Wildwood, Saskatoon, SK S5H 5P1 Phone: (306) 715-4281
sbdc@saskbeekeepers.com www.saskbeekeepers.com/devcomm

*****FILL OUT THIS FORM *ONLY* IF YOU WANT TO POST PRODUCT FOR SALE ON THE PRODUCERS' LIST*****

OPTIONAL: Approval and Permission to Post Your Information Publicly

Section 1

Please initial YES or NO

Legal Age

1. I am 18 years or older.
   YES_____NO_____

Authority

2. I have the Authority to approve and permit the posting of the information, detailed YES_____ NO_____
   in Section 2 below, publicly on any media created by the Saskatchewan Beekeepers Development Commission (SBDC) for the purposes of promoting products of the hive. **Permission**
3. I give the Permission to approve and permit the posting of the information,
   YES_____NO_____ detailed in Section 2 below, publicly on any media created by the Saskatchewan Beekeepers' Development Commission (SBDC) for the purposes of promoting products of the hive.

Section 2

Directions: Please detail any information that you want and approve the SBDC to post publicly on the producers' list.

You can also print other information that you would like to have posted publicly in the "Other Information" Area. *To help us advertise your services*, please specify any specialties/types of items or service your business sells (e.g. people contact the SBDC looking for items such as clover honey, candle beeswax, etc.).

INFORMATION PERMITTED TO BE POSTED PUBLICLY (PLEASE PRINT LEGIBLY)

Company (Apiary or Operating Name): _____

Contact Name: _____

Town/city: _____

Main Phone # (you wish to be contacted at)**:** _____

Email: _____ **Website:** _____

PLEASE CHECK:

I or my business sells HONEY ☐

Specialty: _____

I or my business sells BEESWAX, PROPOLIS, POLLEN ☐

Specialty: _____

I or my business sells BEES ☐

Specialty: _____

I or my business sells BEE SUPPLIES OR SERVICES RELATED TO BEEKEEPING ☐

Specialty: _____

Other Information:

Examples: you sell bulk honey or products, you are interested in exporting, etc.

_____

_____

Full Name (Please Print) _____

Signature: _____ Dated: _____

Upcoming Events

Saskatchewan Beekeepers Development Commission Annual Conference and Members Business Meeting:

- Radisson Hotel, Saskatoon – November 29, 30 and December 1, 2018

New Brunswick Beekeepers Association:

- Maritime Bee Tour/Field, Lochart Apiaries – August 17-18, 2018

ACHPA AGM Conference and Trade Show:

- Victoria, BC – October 26 to 28, 2018

Alberta Beekeepers Commission – Annual General Meeting:

- Fantasyland Hotel, Edmonton – November 5-7, 2018

46th Apimondia – International Apicultural Congress:

- Montreal, Quebec – September 8 to 12, 2019
  For more information go to www.apimondia2019.com

Dates to Remember

August 31, 2018	**2018 Fiscal Year Ends**
September 1, 2018	**2019 Fiscal Year Begins**
October 15, 2018	**2019 Check-off Fees are Due**
October 31, 2018	**SBDC Call for Nominations to the Board** 2 positions
November 30, 2018	**Annual General Meeting** Radisson Hotel, Saskatoon, SK – Time to be determined

TAT Update: Demonstration of Different Spring Mite Treatment Products for Honey Bees in Saskatchewan – *by Hannah Neil*

Greetings Sasky beekeepers! What a spring we have had…way too cold for too long and then knocked upside the head with 30°C weather in May! I never thought I'd be wishing for cooler weather here in northern Saskatchewan, but with another heat warning in Prince Albert this week I'm about ready to melt.

In May I was thrilled to welcome two new research assistants to the Technology Adaptation Team, Jayne Regier and Alex Wentzell. It has been a productive and fun season so far, with both ladies bringing their valuable experience and perspectives to the projects we have on the go.

Jayne and Alex in action! Taking Varroa samples while Hannah "supervises"

We enjoyed our weekly trips up to Big River this spring, conducting the ADOPT-funded (Agricultural Demonstration of Practices and Technologies) **"Demonstration of different spring mite treatment products for Honey bees in Saskatchewan"** project. Our generous host for Field Day, Chris Warriner of West Cowan Apiaries, allowed us to treat and monitor one of his bee yards over the spring. We tested the viability of three organic acid mite treatments available on the market. An overview of the project and some preliminary results will be presented in this article.

Context

The parasitic mite *Varroa destructor* has been the primary parasite of honey bees in Canada for over 20 years. They now have a global spread, affecting managed and feral honey bee colonies on every continent. The mites attach themselves to the bees, drinking the hemolymph and weakening their hosts, allowing them to transmit a number of economically significant viruses. There are a number of cultural, physical, and biological methods of managing mite populations besides the registered medications, but no single treatment should be used exclusively; an Integrated Pest Management system that uses a variety of rotating treatments is optimal.

With the recently discovered resistance to Apivar, the most widely used acaricide and considered the most effective in the province; beekeepers are looking for effective alternative treatments to control Varroa levels in their operations. Oxalic and formic acid are organic acids, thus are popular with the widespread interest in 'natural beekeeping,' however these acids can be dangerous to the beekeeper if not handled correctly. This project demonstrates the application of oxalic acid using two methods, and formic acid using a prepared product. Vaporizing oxalic acid has shown potential to be a very promising method as it has shown to cause lower adult mortality after treatment and greater brood area over time compared to other application methods (Toufailia et al, 2015). Organic acids (formic and oxalic acids) are hydrophilic, and do not accumulate in wax; Synthetic acaricides are lipophilic and are taken up in wax combs over time (Bogdanov et al, 2002; Rademacher and Hanz, 2006). By using organic acids the risk of residues that linger in the hive is reduced to nearly zero. The main goal of this demonstration is to encourage producers to rotate the treatments they use to control Varroa mites. An Integrated Pest Management plan helps to discourage the mites' development of resistance to these treatments. Resistance is a serious issue in the beekeeping industry, as the time it takes to test and register new treatments often takes longer than the time it takes for mites to develop resistance. Due to the physical action taken by the organic acid treatments rather than the neurotoxin of the synthetic acaricides, it is unlikely for Varroa mites to develop resistance to the organic acid treatments.

Objectives

1. Demonstrate efficacy of mite treatment methods in spring
2. Compare devices used to vaporize oxalic acid
3. Demonstrate impacts of different spring mite treatments on spring colony buildup

Methodology

This project was conducted in a single bee yard of 40 colonies, a mix of single and double brood chambers. This was separated into 4 treatment groups of 10 colonies each:

1. Apivar (treated control)
2. Varrox (oxalic acid vaporizer #1)
3. ProVap110 (oxalic acid vaporizer #2)
4. Mite-Away Quick Strips (formic acid)

Colonies in the demonstration were assessed for cluster size (number of frames covered in bees when clustered), and Varroa percent infestation (using alcohol wash) before and after treatments were applied to ascertain the impacts of the different treatments on colony growth and mite kill.

Colonies were first visited on April 20, 2018 for the initial cluster assessment, Varroa sample, and to apply the Apivar treatment. This has been considered the most effective mite treatment in this area for several years, and is a plastic strip impregnated with a sub lethal dose of amitraz, a synthetic miticide. Since it requires the longest treatment period, 42 days, we visited Big River when there was still snow on the ground to get the strips in so they would be out in time for the honey flow.

If applied during a broodless period, oxalic acid can be effective in just one treatment. However since only phoretic mites (on adult bees) are impacted, at least three treatments are required when brood is present to capture mites emerging from under the capped brood. Oxalic acid can be applied by dribble or spray mixed into sugar syrup, or vaporized; two vaporizers were used in this demonstration. The Varrox vaporizer uses the 'passive' vaporization action, where a stainless steel plate with the crystals is placed directly into the bottom entrance of the colony and is heated inside to sublimate the acid. The ProVap110 uses 'active' vaporization, where the acid is vaporized in a heating chamber and is then blown inside the hive by a motor. Colonies in these treatment groups were visited on May 4th, 10th, and 17th.

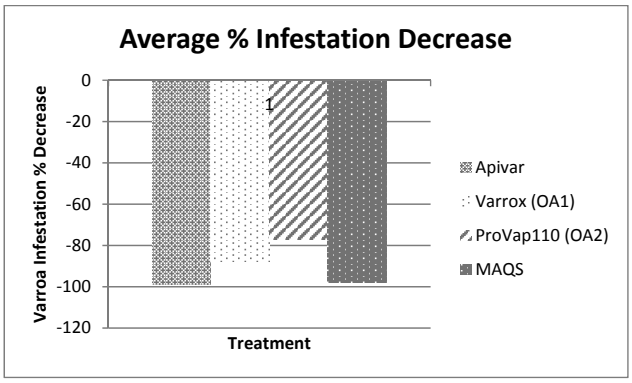
Treatment	Timing (used in this project)	Dose
Apivar	42 days + 2 week withdrawal	1 strip per 5 frames of bees
Varrox (oxalic acid)	1/week x 3 weeks • 4.5 mins/colony	1g/brood chamber
ProVap110 (oxalic acid)	1/week x 3 weeks • 20 sec/colony	1g/brood chamber
MAQS (formic acid)	7 days • (knockout treatment)	2 strips/colony

To demonstrate the use of formic acid to kill Varroa mites, the Mite-Away Quick Strips product from NOD was used. It is a strip composed of a gel matrix in a biodegradable wrap with a dose of 46.7% formic acid. Two options are presented by the manufacturers, the "knockdown" treatment of 1 strip for 21 days, or the "knockout" treatment of 2 strips for 7 days which was used in this project. It is worth noting that the MAQS must be applied between brood chambers and if running singles a second box must be added on top to hold the correct volume of air for the dose to be effective. The MAQS strips were applied on May 24th, and were removed on the same day as the Apivar strips on May 31st. This visit coincided with the final cluster size analysis. We then waited one week before returning to take the final Varroa samples on June 7th to ensure that the treatments had finished and had worked effectively.

Results

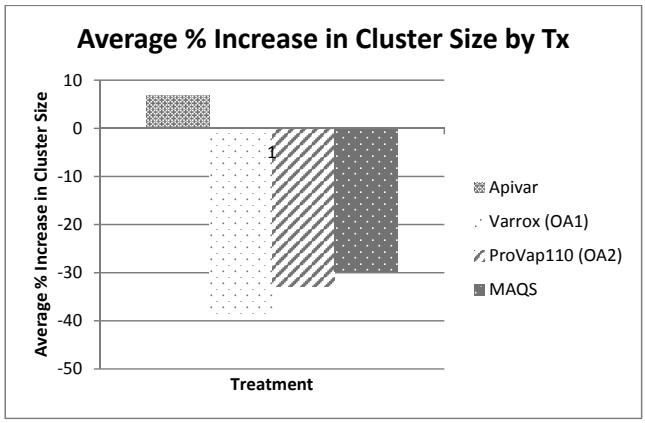
While statistical analysis has not yet been run on these results, the following trends from the project findings are presented here.

Varroa: The greatest average decrease in Varroa % infestation was found in the Apivar group, with an average % decrease of 99.02%. The second best mite kill was found in the MAQS treatment group, with a 98.09% decrease in infestation. It is worth noting that the only two colonies that ended up with >1% infestation after the treatment period were in the ProVap110 group.



Colony growth: With the cold and late spring that we had in Saskatchewan this year, colonies struggled to grow throughout the length of the project. Only one treatment group had a net increase in average cluster size, which was the Apivar treated group, with 6.86% average growth. The treatment group which had the least shrinking in cluster size was MAQS, at -29.75%. This highlights the toll that organic acid treatments can take on colony growth. (See graph on next page)

While these results have not been analyzed for statistical significance, there are some general observable trends here. MAQS was second only to Apivar in both mite kill and cluster size growth for this project, highlighting its viability as a promising alternative to synthetic acaricides. More research is certainly needed on the various oxalic acid vaporizers on the market. While studies have shown their success,



neither of the ones tried in this demonstration came out ahead; for the financial investment, better results were expected. The ProVap110 had the least efficacy with mite knockdown (average 77.07% percent decrease), and the Varrox seemed to be the hardest on colony strength with the greatest average decrease in cluster size (38.67% decrease) and greatest number of queens lost (4/10). As noted above the conditions present this spring did not support colony growth so it is worth mentioning that results may have been less drastic provided better weather conditions were present, this may be taken into considerations in future years with stronger spring growth.

Acknowledgements

The TAT would like to acknowledge and sincerely thank Chris Warriner and his crew at West Cowan Apiaries for providing us the opportunity to run this project, and for their help and support throughout its duration. The Government of Saskatchewan Ministry of Agriculture is also acknowledged for the funding provided under the Agricultural Demonstration of Practices and Technologies program through Growing Forward II.

References

Bogdanov S, Charrière JD, Imdorf A, Kilchenmann V, Fluri P. 2002. Determination of residues in honey after treatments with formic and oxalic acid under field conditions. Apidologie, Springer Verlag, 33 (4):399-409. <10.1051/apido:2002029>. <hal-00891665>

Rademacher E, Harz M. 2006. Oxalic acid for the control of varroosis in honey bee colonies- a review. Apidologie, 37: 98-1201

Toufailia H, Scandian L, Ratnieks F. 2015. Towards integrated control of varroa: comparing application methods and doses of oxalic acid on the mortality of phoretic Varroa destructor mites and their honey bee hosts. Journal of Apicultural Research 54 (2)

CO-OP®

Ridgedale

Box 39
Ridgedale, SK
S0E 1L0

306.277.2048 Fax
ridgedale.coop@staffcomm.com

2018 WAX RENDERING PRICES

27¢ / pound – For Capping

70¢ / pound – Combs

70¢ / pound – For Frames

Contact:
Dorian
306.873.0557
Ridgedale Co-op
306.277.2042

Regina & District Bee Club

Spring is the Regina and District Bee Club's busiest season.

The Regina Club currently has a record 156 members, of which 98 members and guests attended our Club's Annual General Meeting on Saturday, March 10th at the Regina Travelodge. The highlight of the day was a presentation about stinging insects and allergies provided by Dr. Andrea Fong, Allergy Specialist and Clinical Assistant Professor at the University of Saskatchewan. Geoff Wilson, Provincial Apiculturist informed members about changing antibiotic rules to control American Foulbrood disease. Club president and lawyer, Yens Pedersen explained the legal requirements for honey producers. Copies of their presentations are available on the Club web site. Lawrence Laxdal explained changes to the Club's web site. And, Louise Yates facilitated an expert panel including Andrew Hamilton, Gil Pedersen, Karen Pedersen, Yens Pedersen, Colette Stushnoff and Geoff Wilson who answered questions about neonicotinoids, municipal by-laws mite treatments, home food processor provincial laws and deformed wings/wasp attacks and honey bees working with native and mason bees for orchard pollination. Julie-Anne Howe and Celine Holoway were nominated then appointed to the board by acclamation for the two two-year vacant positions. They join Lawrence Laxdal, Yens Pedersen, and Louise Yates who are serving their second year of their two-year terms.

Regina & District Bee Club's AGM @ the Travel Lodge

The Club hosted the Introductory Beekeeping Course: What to Expect on April 21, 2018. The course is designed to help people decide if they want honey bees or not and provides basic information for those starting with bees in the coming year.

Many thanks to the Saskatchewan Beekeepers' Development Commission who partnered with us and Ministry of Agriculture to present the 7th Annual two day Beginning Beekeepers Course at St. Joseph's Colony on May 12 and 13th. As always, it was a resounding success and ensures that our newest members have the information they need to succeed.

The Club hosted an education booth at the Cathedral Village Arts Festival in Regina on May 26th. As usual, everyone was excited to see the observation hive.

At the November SBDC Convention, researcher Alessia Guthrie indicated that first-year beekeepers are at the greatest risk to lose one or more hives during their first season. To help resolve that problem and because not everyone who wants bees can, will or has access to take a class, the Regina Club has been focusing on creating and publishing more localized, self-serve beginner beekeeping content online on our web site, in e-books and on our Regina Bee TV YouTube channel.

We completed a complete overhaul of our web site. The old version served its purpose well, but much of the content was out of date and it had not kept up with the latest technology. Our new and improved site is current and much more focused, and it's mobile friendly so it's very easy for smart phone users to navigate and use. Two new free e-books are now available on our club's web site:

Book 1: ***A Hobbyist's Photo Guide*** provides photos about important aspects of honey bee beekeeping. It is used as a glossary to learn basic beekeeping terminology and as a reference when doing hive inspections.

Book 2: ***A Planning Guide for Regina Hobbyists*** coaches individuals to make informed decisions to set up and move through their first year. It is used to purchase materials for and establish a new hive.

The books were written by Louise Yates and foreword by Karen Pedersen with contributions from Karen Pedersen, Andrew Hamilton, Colette Stushnoff, Graham Parsons, Doreen Bradshaw, Yens Pedersen, Lawrence Laxdal and Ray Morgan. They're great resources for bee-curious people and for experienced beekeepers to provide to their protégés.

We continue to add more "how to" videos to our Regina Bee TV YouTube channel. Our current 36 videos cover topics ranging from set-up to testing/treating to assessing brood frames to dealing with dead-outs. A link to our YouTube channel can be found on our web site programs and services page.

Canadian Honey Council Report *by Jake Berg*

The SBDC held their Annual Field Day June 16 in Big River, SK. The SBDC's Technical Adaptations Team (TAT) was there to demonstrate some of the research they've been working on this year like the application of oxalic and formic acid. The demonstrations and information provided were presented very well and useful to all in attendance. Thank you to Christopher & Lorie Warriner for hosting this year's event. Everyone had an enjoyable weekend and the kids are still talking about the delicious donuts! Thanks!

CHC has continued to be very involved and busy with labour programs such as TFW and SAWP. CHC continues to work very closely with the Canadian Agriculture Human Resource Council (CAHRC) to deal with labour issues as they arise. Employment and Social Development Canada (ESDC) is reviewing the Temporary Foreign Worker agriculture stream. Both the SBDC and CHC have been active participants in this review and will continue to work with the ESDC on this review.

This year's winter loss has been higher than normal in the province. This is due to colder than normal temperatures in early April. It was definitely the year to winter bees inside as most loss reports from beekeepers who winter indoors is low to mid teens. This is much lower than the provincial average loss of 28% and some areas of the province reporting numbers as high as 70% loss. This will defiantly be a re-building year for some and most beekeepers are reporting that the bees have bounced back and the colonies have grown steadily from late April.

Here's to wishing everyone a safe & prosperous honey flow!!

Veterinary Oversight of Antimicrobial Use in Canada

CONTAINS ANTIMICROBIAL USE RESPONSIBLY

CONTIENT UN ANTIMICROBIEN UTILISEZ DE FAÇON RESPONSABLE

From December 1, 2018 onwards, a valid prescription will be needed from a veterinarian before an individual can purchase any medically important antimicrobial, including any to be administered in animal feed.

The following considerations should be addressed by a veterinarian before prescribing a drug:

1. **Establishment of a Valid Veterinarian-Client-Patient-Relationship**

   Veterinarians should establish a valid Veterinarian-Client-Patient-Relationship (VCPR) prior to the provision of veterinary medical services, including ordering treatment by virtue of issuing a prescription. A legitimate VCPR is considered to exist only if medical records of the practice contain sufficient evidence of relevant and timely interaction between the veterinarian, animal owner and animal patients.

   The VCPR is not a signed contractual agreement but rather a working connection and interaction between veterinarian, client and specific animal patient or group of animals. The VCPR is not in and of itself an entitlement to prescribe and subsequently dispense.

   Each provincial and territorial veterinary statutory body has their own definition of VCPR in provincial legislation.

2. **Make an Evidence-Based Determination of Medical Need**

   It is the responsibility of the registered veterinarian to make an informed decision that a particular drug will be prescribed. This may require a change in the culture of use of antimicrobials where animal owners or producers may be accustomed to requesting a particular antimicrobial for prevention, control or treatment of disease.

3. **Complete Appropriate Documentation in the Medical Record**

   Medical records created and maintained by veterinarians for all practice types shall contain sufficient information entered into the record regarding the history, consultations, laboratory investigations and physical examination findings to justify the prescription and use of the antimicrobial. A precise diagnosis or purpose for use of the antimicrobial must be recorded.

4. **Provide Oversight of Use and Follow Up**

   The accepted definition of VCPR specifically dictates that the veterinarian who is responsible for making medical decisions with regards to an animal or group of animals must be available for follow-up or have arranged a designated alternate. This obligation extends to the prescription of any pharmaceuticals including antimicrobials.

For more information on Prescribing and Dispensing and VCPR, read *Veterinary Oversight of Antimicrobial Use – A Pan-Canadian Framework for Professional Standards for Veterinarians.* The document was created by the CVMA's Veterinary Pharmaceutical Stewardship Advisory Group and the Canadian Council of Veterinary Registrars (CCVR) to help guide veterinary professionals as they assume greater responsibility.

December 13th, 2017

Classified Section

NOW STOCKING ASSEMBLED SUPERS & FRAMES IN SK: Assembled/dipped supers $18.00 ea. if 140, $17.50 ea. if 350, or $17.00 ea. if 630. Assembled frames ready for your foundation ($1.70 ea. if 1,000, $1.60 ea. if 2,500, or $1.50 ea. if 5,000) - or - assembled frames with Pierco foundation ($2.90 ea. if 1,000, $2.80 ea. if 2,500, or $2.65 ea. if 5,000). Also, pleased to quote on unassembled supers and frames. Api-Quip Canada, 44 Dutch St., Bedford, QC J0J 1A0, (450) 248-3325 (office), 450-521-8628 (John's cell) or info@api-quip.ca

LOOKING FOR COMMERCIAL BEEKEEPERS who faced greater than average to significant loss this winter. Our operation believes a significant loss may represent a fantastic survivorship breeding opportunity. We believe it is in the best interest of beekeeping in the province that the genetics of these survivors are tested, shared, diversified and distributed. We are looking for partners in this breeding endeavour and/or operations willing to queen swap.

If you know a beekeeper that is doing great things in his operation we would like to feature them in our newsletter. Just submit your article and we will print it.

Electric Bear Fence Rebate Form

This program is administered by Saskatchewan Crop Insurance Corporation (SCIC)

Business name and /orbusiness representative	
Phone number:	
E-mail address	
Address:	
Fence Location:(nearest town)	
Total number of colonies in operation	

Each year, the Saskatchewan Crop Insurance Corporation (SCIC) agrees to reimburse beekeeper for 80% of the cost of electric fencing equipment, to a maximum of $3000, for the purchase of materials to construct and power electric bee yard fences.

Terms and Conditions:

SCIC **will NOT** reimburse for GST, Labour costs, Travel, Tools (including voltage testers) or replacement batteries for existing fencers. Recipts must be from within the past year.

SCIC **Will** reimburse for the cost of posts, wire, insulators, connectors, and gate handle insulators and will reimburse for the purchase of new fencers with batteries. The equipment must have a life expectancy of five years or more. Valid original receipts must be provided for all reimbursable costs. Original receipts will be returned to the beekeeper/business prior to reimbursement of funds. Please include a sheet summerizing the totals of each recipt. You may be required to submit a photo of the yard if request by the Bear Fence Director.

Note: If there is no electric fence around the bee colonies, compensation will be paid for bear damage to bee hives only on the first occurrence per bee yard. Subsequent claims on the same bee yard will not be paid if no fence has been erected.

For Bear damage claims please call SCIC at 1-888-935-000. For more information contact your local crop insurance office.

Total Expenditures including PST (must attach original receipts)	
Signature of Beekeeper (affirming calculations are honest and correct)	
Total amount to be reimbursed by SCIC (80% of allowable costs up to $3000)	
Reviewed and Approved by SBDC Director **Date:**	
Reviewed and Approved by SCIC rep. **Date:**	

Please return completed form with original receipts to:

Nathan Wendell, SBDC Bear Fence Director
P.O. Box 199
Inglis, MB, R0J 0X0

Value of Membership

We offer our members:

- Volunteer Board of Directors dedicated to promoting the beekeeping industry and honeybee health with integrity and leadersip.
- Your voice is heard in the industry, in government and associations throughout Canada.
- Participation in a Convention with featured seminars, speakers and industry exhibits; the opportunity to network with other stakeholders in the industry.
- Field trips to meet fellow beekeepers with informative speakers and updates on Board activities.
- Reports on research in honeybee health and hive sustainability that benefit Saskatchewan beekeepers.
- Representation at provincial and world events promoting Saskatchewan honey as the best in the world.
- Be part of an organization that puts the spotlight on events and developments by beekeepers in their operations.
- Updates on information relative to the industry such as a Temporary Foreign Workers Program, bear fence programs and insurance.

saskbeekeepers.com