

# The BUZZ

in the NSBA



SUMMER

2020

## From the Board Room

Alex Crouse, NSBA President

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As the summer draws to a close, I was reminded yesterday as I passed a couple of trucks loaded with full honey boxes, that fall is on its way and the harvest has begun. I cannot recall a season with such hot temperature for such an extended period of time. I hope that all of our keepers were able to accomplish their work, stay safe and fill their boxes with honey and healthy colonies.

Your NSBA board of directors has continued to meet every month via Zoom to ensure that work focused around our key priorities continues to progress.

You may recall that we sent out a survey to the membership regarding pollination and bringing new keepers into this business. We are happy to report that we are now working with ATTTA to drive this project forward. Andrew Byers has reached out to the other beekeeping and wild blueberry associations across the Atlantic region and there is an overwhelming level of support for the project in all provinces. ATTTA will be coordinating the training modules to assist in the project, while the NSBA will provide continuous input on the work as it moves forward. The current conditions that continue to exist with COVID-19 add an extra level of complexity to the work. We are aiming to provide further updates at the Fall Tech Session in October.

Ben Little and Ben Cornect are working on a survey to better understand the needs of our commercial members. The NSBA does represent all keepers in the province and we need to ensure that all voices are heard and that we are doing our best to support all sizes of operations within the province. If you are a commercial keeper, please watch for this survey in the next month. Your input is needed, so please complete it honestly and provide suggestions. Members often ask what the association offers its members, and we respond with the obvious list. If there are things that you would like to see more focus placed on, please tell us.

Duncan Wentzel has been working with his media contacts to get the NSBA's work featured in some local papers and TV spots. The goal of this work is to continue to share the positive story of our industry here in Nova Scotia.

The board is currently working through the second reading of the Bee Industry Act with the NSDA and trying to ensure that the industry is positively impacted by any changes or upgrades. We have also engaged the Department of Natural Resources on looking for solutions to the ongoing issues with bears. Incidents

## From the Board Room, Continued

with bears have been increasing and have become more widespread in the past couple of years. There is no easy solution, but we have opened the channels of communication.

Our board as always is open to feedback and suggestions. If you have an idea or concern, please reach out to us.

Stay safe and successful harvest.

# What's all the Buzz with ATTTA?

*Andrew Byers, Atlantic Tech Transfer Team for Apiculture*

Hot and dry is how the summer of 2020 will be described! While in our apiaries, beekeepers have toiled in the heat and humidity this season with the extreme weather noticeably affecting the bees and the beekeepers alike. At the time of writing, the northwest and southeast of New Brunswick, as well as western Prince Edward Island, are in severe drought conditions. The rest of our region is abnormally dry and these extreme conditions are impacting bee and honey production. Moving into autumn the nutritional needs of the bees will be a concern with careful thought needed regarding feeding in readiness for winter. As always, monitoring and treating for varroa will be important. In preparation, we have updated our fact sheet on Varroa Mite Management and this refreshed version will be available on our website in time to plan fall treatments.

While in the bee yard, the COVID-19 crisis can be momentarily forgotten but the overall impact on our region's beekeepers needs to be mentioned. Most of the workshops, annual general meetings and gatherings of our beekeeping community this spring and summer have been cancelled or restricted. But the optimism of beekeepers remains and work to provide service to our beekeepers continues. Beekeeping associations have risen to the challenge with meetings held virtually and boards continuing their work via videotelephony under COVID-19 restrictions. In consideration of the global pandemic, ATTTA's direct work with beekeepers has been limited but our contact by virtual means has increased. We are glad to be able to continue our extension work in this way and have actually been out to a few local apiaries to talk to beekeepers at a distance!

Despite COVID-19, the team at ATTTA has had a busy summer. Our Program Lead, Robyn McCallum is currently on maternity leave and both mother and baby are thriving. Jillian Shaw continues as a summer student for the second year. Her nosema research has already provided new insights and will no doubt be useful for our beekeepers in managing nosema in the future. Jennifer Harrison, as our apiculturist, has been very busy as well. Having to redirect the planned queen research program for this summer, Jennifer has been undertaking some more local work to examine both home-grown and imported queens by evaluating their performance over this season and into next. There will be interesting results to follow. Year two of our research into the effects of feeding pollen substitute during blueberry pollination has been completed and this year's data will now be analysed with an up to date facts sheet to be made available to beekeepers.

The beekeeping community in our region has responded with great enthusiasm to our new blog: What's the Buzz with ATTTA. This is published weekly and can be found at <https://www.atttabuzz.com/>. Be sure to check it out, subscribe, tell your friends!

New fact sheets and papers this summer include:

- Tick Safety in the Bee Yard 2020
- How Drought Conditions in the Maritimes can Impact Honey Bees
- Honey Bee Queen Production: Canadian Costing Case Study and Profitability Analysis
- What's the Buzz about the Asian Hornet?
- Nosema News from the Atlantic Tech Transfer Team for Apiculture

These and others can be found on our website: <https://www.perennia.ca/portfolio-items/honey-bees/>.

Please contact us with your questions or comments by phone (902 324-1832) or email ([abyers@perennia.ca](mailto:abyers@perennia.ca))

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# Pitfalls of New Beekeepers

Jason Sproule, Provincial Apiculturist, NSDA

This summer there were 204 newly registered beekeepers (945 beekeepers total) in Nova Scotia. The previous year there were 202 first-time beekeepers, and 171 the year before that. With so many new entrants, it is a challenge to ensure they have the information they need to be successful. If you are a new beekeeper, you have probably learned much this season, but this article is for you and I hope it helps you to avoid some of the common challenges that befall new beekeepers.

Firstly, anyone keeping honey bees in Nova Scotia needs to register annually with the NS Department of Agriculture. There is no fee, and several benefits. When you register for the first time you will be issued an information package and a unique beekeeper ID code that is to be displayed in your bee yards and referenced in your communication with yours truly, the Provincial Apiculturist. To register as a beekeeper please visit <http://www.novascotia.ca/bee-industry>.

Honey Bees are Managed - Many new entrants begin with altruistic goals of helping our native honey bee population. However, there is not a native population and colonies that become feral typically do not survive for long. Honey bees are a domesticated species (selectively bred over centuries), not naturally endemic to this part of the world. Therefore, they need regular care and intervention. In my opinion the “the bees know best” philosophy is self-defeating and will inevitably do more harm than good to our bee population. Think of your hive(s) similar to a pet or livestock. You would not leave a puppy to fend for itself. Bees are marvellously fascinating creatures and the simple joy of working with them is enough reason to get involved.

Biosecurity - There are numerous pests and diseases that bees must contend with. Continuing education, routine monitoring and therapeutic intervention needs to become second nature. Managing your Varroa mite levels will be of utmost importance. Varroa mites (*Varroa destructor*) are small parasites that attach to bees and feed on their blood and fat reserves and exacerbate viral diseases. Without proper management, colonies can be expected to fail within 2 years. Moreover, those mites then spread quickly to neighboring operations. A beekeeper should employ standardized monitoring techniques such as: alcohol wash, ether roll, or sticky boards to quantify Varroa infestations multiple times per year. As a minimum I suggest, spring, late summer, and fall monitoring. There are numerous prevention and treatment options. In the beginning, I suggest avoiding the “all-natural” or “pesticide-free” mentality. This is a lofty goal, but you probably do not yet have the expertise to successfully implement it. This may ruffle feathers, but you should avoid any mite control program that hinges on powdered sugar. I frequently encounter this, but the science does not support its efficacy. Homemade essential oil cocktails also carry their own risks. All mite control products must be registered with the Pest Management & Regulatory Agency branch of Health Canada, and label directions must be followed to the letter (this is law). In short, you cannot manage bees without learning how to manage mites.

The Right Size - It is tough to know how many colonies to start with. This is, of course, a personal choice and will vary depending on your financial means, physical ability, and the time you intend to devote to beekeeping. In your first few years, despite your best efforts, you should expect to lose several colonies. Failure is an excellent learning opportunity for those not easily discouraged – so forgive yourself. Beekeeping lends itself well to gradual expansion; adding more hives as you develop expertise. Without previous experience, I propose 10 as a reasonable maximum level for your first or second year. Otherwise, you may quickly be left with some very expensive and empty hives. Conversely, starting with just one colony may be too few. By starting with at least 2 colonies, a beekeeper will gain experience at least twice as fast. You will be able to compare colonies, more easily diagnose issues and use one to bolster the other (e.g. transfer a frame of brood or a queen cell).

Obtaining Hives – Often, new entrants wait too long to arrange to buy bees. There are a limited number of nucs prepared each year and they are spoken for early. Purchasers should be aware that sellers are required to pass an NS Department of Agriculture inspection. This verifies the pest and disease status at the time of the inspection. Inspection certificates are typically valid for the season. I highly recommend purchasers ask the seller to produce a copy of the inspection certificate so you can note the health status (also read the comments) and make an informed decision.

## **Pitfalls of New Beekeepers, Continued**

**Location** - You don't have to look hard to find information on what makes a good bee yard: southern exposure, source of water, wind breaks, accessibility, etc., so I won't expound on this other than to say my first apiary location was excellent, except when the fall floods came. It's worth considering how the landscape changes over the course of the year. One important consideration is your neighbours. There is a widely accepted courtesy that you do not set up a bee yard within a few km distance of an existing operation. It creates unfair competition for forage, and how you manage/mismanage your bees' health directly impacts neighboring beekeepers. In more residential areas, you should consider discussing your intentions with neighbours because bees can quickly become a nuisance. Even if allergies are not a concern, bee poop can be like yellow rain staining your neighbours' cars and laundry. I prefer beekeeping to keep a low profile to not incite new municipal bylaws with far-reaching consequences.

**Overspending** - I think this is a very common pitfall for beginners. We have excellent and responsible local bee supply companies, but they are also not in the business of turning away overly enthusiastic buyers. It's up to you to determine what you want to start. However, most beginners need only basic hivegear, jacket or veil, a smoker, hive tool, something for monitoring and controlling Varroa mites, and minimal extraction equipment. You likely will not have a large honey harvest right away and lots can be done with an ordinary kitchen knife, a bucket, and some sieves. A few years down the road (if you are still beekeeping) you may need to make a bigger investment. Also, avoid things that seem like gimmicks. A more experienced beekeeper can help guide you. Once you have some basic experience, you will be better able to judge the practicality of clever technologies.

**Experimenting** - One of the exciting aspects of beekeeping is experimentation; fine-tuning your management or adopting novel practices and seeing the effects on colony vigour and honey production. However, I advise spending your first few years mastering the basics and then introduce changes slowly, altering one variable at a time. For example, a beekeeper might say, "this year I want to go all-natural (pesticide-free), rent for crop pollination, and overwinter in singles". If the bees do not winter well, how would you decipher which variable most influenced their survival? I think you need a few years to establish what a baseline normal is before you can even notice a change that led to improvements. Again, master the basics for a few years, then have some fun experimenting.

**Sourcing Information** - Beekeeping is influenced heavily by climate, environment, cultural practices (e.g. agriculture), pest and disease pressures, regulations, and philosophy. These elements are highly linked to region, and so regional sources of information are often best. We are extremely fortunate to have an Atlantic Technology Team for Apiculture (ATTTA) that provides research and extension services pertinent to beekeeping in Atlantic Canada. I also frequently refer to expert publications from Ontario such as instructional videos from the University of Guelph Honey Bee Research Centre. Online videos from outside of Canada may not be coming from experts, may not be relevant to our region, and may be promoting practices that are illegal in Nova Scotia. Most years, Nova Scotia has some excellent beekeeping courses offered by our post-secondary institutions and private companies or beekeepers.

As always when you do inevitably lose a hive, forgive yourself, try to figure out where it went awry and move forward. This is tough and even very experienced beekeepers will lose a percentage of hives each year.

As always – keep up the super work!

# Safe Honey Production

Duncan Wetzel, NSBA Director

The experience of having your own beehive in your backyard can be absolutely thrilling. Producing your own honey can create an accomplished feeling, knowing that you are providing your family, friends and neighbours a wholesome local product. In addition to dealing with the management of your hive(s) and the expected stings, swarms and the occasional bee droppings left on your car, there are also risks when it comes to that sweet golden reward at the end of good summer. Yes, there can be a dark side to that golden sweet bounty.

Large commercial operators are frequently inspected and their product is tested and graded by the Canadian Food Inspection Agency (CFIA). They are required to maintain detailed records to allow them to meet the traceability requirements set out by the CFIA.

This article is the first in a short series on food safety for the small operator, as Raw Honey is one of the main products produced by these beekeepers. Raw Honey is described “as it exists in the Hive” and is usually bottled directly from the hive or packaged as cut-comb. We all know the health benefits that Raw Honey can provide; Amino acids, vitamins and enzymes, polyphenols as antioxidants, and bee pollen which can provide essential fatty acids, micro-nutrients and even more antioxidants.

Some of what Raw Honey contains however, may be harmful. Honey contamination is one of the Food Safety issues with Honey. Contaminants can be introduced by your bees, by you, or by your equipment. This can include bacteria, moulds and yeast microbes, antibiotics, and pesticides. Pesticide use is common practice in many areas of agriculture as a means of loss reduction, but there are instances where the application is performed without using proper protocols.

We won't be getting into all of what was just listed, but it is something to think about when considering both bee health and food safety. This series will be focusing on the more common areas of risk when working with your bees and bottling your honey. The CFIA and the Nova Scotia Department of Agriculture provide in-depth resources, referenced below. Over the next few issues, we will break down a few of the facts related to Safe Honey Production.

The CFIA outlines three key areas when talking about Food Safety, the first is your establishment, or the “Kitchen”. This is the bottling and prep area and includes how you store your product, your equipment, and your “cleanliness” practices.

The second, and arguably the largest area of concern is “people”. This is you, and anyone else that comes in contact with your product or process. We will outline some food handling standards, good hygiene practices and cover the wearing of proper protective clothing. We will also discuss the common contaminants and the potential risks they may present. Such as, *Clostridium botulinum*, commonly used pesticides, and even pollen itself.

The third key area this series will cover will include methods to ensure the traceability of your product and what procedures you should have in place, should you have a food related problem with your product. Although the CFIA doesn't inspect small producers, they do investigate food related illness reports and complaints no matter how small your operation is.

It may seem like overkill for a backyard beekeeper, but it is your responsibility, as Food Product Producers of any size, to educate yourself and your customers to preserve relationships and ensure safety. We will start the series by breaking down the “Kitchen” and what is considered to be an Approved Kitchen. We will identify some risks and explore some simple measures that you can put in place to reduce or eliminate those risks in the next issue.

With this series we hope to reach the smaller operators and if you have any questions or comments, please contact me directly via email at [greenhives@outlook.com](mailto:greenhives@outlook.com) using the subject line “Food Safety”.

For more information please refer to the following resources:

- Canadian Food Inspection Agency: <https://www.inspection.gc.ca/>
- Nova Scotia Department of Agriculture: <https://novascotia.ca/agri/programs-and-services/food-protection/>

# Joint Pollination Meeting

*Jason Sproule, JPC Secretary, Provincial Apiculturist, NSDA*

The Joint Pollination Committee last met on April 15, 2020.

The lack of representation from the Wild Blueberry Producers' Association of Nova Scotia (WBPANS) has been an issue during recent meetings. Both WBPANS and the Nova Scotia Beekeepers Association (NSBA) made a commitment to have 3 industry reps from both sectors attend future meetings.

COVID-19 presents some unique challenges for the bee industry. Nevertheless, queen shipments are expected to arrive on schedule and present minimal risk (as any imported goods) for vectoring COVID-19.

The Atlantic Technology Transfer Team for Apiculture (ATTTA) is facing the challenges of their lead Apiculturist taking a leave of absence, another Apiculturist accepting a new job with the Department of Agriculture, as well as travel limitations, and physical distancing requirements from COVID-19. Nevertheless, Nosema and Pollen Sub/Pollination projects will proceed this season. Some studies will be delayed until next year and focus will be on completing studies that are nearing completion and preparing publication and extension materials.

The NSBA is working to create value for Commercial Beekeepers to build NS's capacity for pollination. Realizing demand could fluctuate (likely increase), it is important to satisfy demand from within, to ensure the border can remain closed to minimize the inherent biosecurity risks of importing hives. Work will focus on identifying barriers for beekeepers at different levels that are not already renting hives. There are commercial beekeepers and several just under the 50-hive threshold that could do more. Financial Programming to support equipment purchase/upgrade may be needed. Communication between growers and beekeepers is critical and needs to occur far enough in advance for beekeepers to build colony numbers as needed.

Colony losses over winter are reportedly low by this date. Blueberry growers are cautiously optimistic about a good year, with a decent price, plants wintering well and a reduction in frozen storage. However, COVID-19 creates uncertainty and concern for processing of the 2020 berry crop. Demand for pollination service is expected to increase this year and provided queens are imported on time for splits, beekeepers expect to be able to satisfy demand. Queen prices are higher this year and some beekeepers are planning on returning hive rental prices to what they charged a few years ago.

The next meeting will either be held in early November or as an evening meeting attached to the Blueberry AGM, depending on social distancing requirements at the time.

## Fall Tech Session Update

*Alex Crouse, NSBA President*

The board has made the decision to go ahead with the Fall Technical Session. This event will look different than sessions we have had in the past as it will come to you via a Zoom conference that will allow up to 100 people to join in. Our plan is to have a keynote speaker engaged for 2 hours on October 17. The board is currently selecting the speaker for this event and is working towards honoring the scheduled date of October 17, however securing a quality speaker may require some accommodation on the date/time. Please stay tuned for further announcements once we have confirmed the speaker and content to be covered in the Fall Tech Session.

# Getting Involved in Pollination

*Kori MacCara (NSBA Secretary) and Andrew Byers (Atlantic Tech Transfer Team for Apiculture)*

In May 2020, we put out a survey for beekeepers who are not yet involved in pollination but have interest in becoming involved or learning more. The survey yielded 18 such beekeepers that represent nearly 200 hives! Here is a short summary of what we learned about these beekeepers:

- 13 have been keeping bees 2-4 years and account for 163 of the hives potentially available.
- The distances beekeepers were willing to travel varied with the majority (56%) willing to travel 50-100km for pollination. Given that the majority of these hives are located in Colchester, Cumberland, Hantz, and Lunenburg counties it is possible that the shorter distances reflected by respondents is reflective of their proximity to blueberry fields.
- Mentorship was desirable: 12 responding that they would like to have a mentor and 5 would consider having a mentor.
- Formal training was highly desirable: 15 responding that they would like to receive training in topics relevant to pollination and 2 responding that they would consider training if it was available.
- Most respondents indicated that they had no preference when given the choice of online vs in-person training.
- Of the concerns listed by these beekeepers, not knowing growers or how to meet growers tops the list. The remaining concerns were fairly evenly distributed and all were concerns around the lack of pollination specific knowledge, skills, or equipment.

After reviewing the survey results, we were able to confirm that there is sufficient desire among beekeepers to learn more about pollination. We also determined that a course designed to address many of the gaps in knowledge and skills with respect to pollination would facilitate a beekeeper's entry into the pollination industry. The wider pollination industry would also benefit from having more beekeepers from whom hives are available and improve Nova Scotia's ability to meet its own pollination demands.

The NSBA board has engaged ATTTA, as a regional provider of beekeeping extension services, to determine if there is a broader need for pollination education in Atlantic Canada. A consultation process, led by ATTTA, has been underway during the summer with stakeholders from both the blueberry and beekeeping industries. These discussions have identified a common desire to grow honey bee colony numbers in order to increase the pollination capacity across all four Atlantic Canadian provinces. Along with the desire to increase hive numbers, a clear need to provide education and training for both beekeepers and fruit producers, as providers and users of pollination services, has been identified. The consultation process will continue into the fall and the feedback from the region's industry partners, beekeeping associations, blueberry associations, and other stakeholders will be reviewed and used to determine the next step in the process. The overall format and composition of the training program will then be established to identify the resources required to undertake the curriculum development. Once resources are in place, an industry driven process to create and ultimately deliver the pollination education will be facilitated by ATTTA.