



Since the last newsletter edition, Alex Crouse, NSBA Past-President, tragically passed away. Alex was an inspiration, mentor, leader, educator and most of all respected friend to many of the beekeeping community. Well wishes of peace and comfort are extended to his family during this time. He will be greatly missed.

Alex's obituary is available [here](#).

Family and friends of Alex are invited to attend a Celebration of Life Service occurring Wednesday, April 20th at 4:00 pm at the Port Williams United Baptist Church.

One of the listed donation options within Alex's obituary is the Nova Scotia Beekeepers Association Education/Research Fund. If you would like to make a donation to this, please send:

- Cash or cheque to the NSBA office (7 Atlantic Central Drive, East Mountain, NS, B6L 2Z2), or
- E-transfer to ksaville@agricommodity.ca
- Phone 902-893-7455 with a credit card number (a 3.5 processing fee will be applied)

Please include a note/comment identifying that this is for a donation in Alex's memory.

Alex's below report was submitted prior to his passing.

From the Board Room

Alex Crouse, NSBA Past-President

It would appear as though the long winter is now behind us, and beekeepers have been completing mite treatments, adding pollen patties, and getting those colonies in need of food looked after. This is the most critical time of year as the new brood is hatching and the colonies will quickly consume the remaining food stores.

Our annual symposium is now behind us and we are more than pleased with the attendance. We will be the first to agree that an online meeting is not the best venue, but for each day we did have 75 lines connected. The focus of the conference was primarily focused on pests and diseases as we see more and more incidences of AFB and mite loads that are very concerning. Managing these, along with everything else, is critical, if not for your own sake, maybe for the sake of the commercial beekeeper down the road who derives his living from honeybees. As we move into the summer and fall season, you will see similar topics and workshops centered around disease and pest monitoring and treatment, at events such as the Atlantic Bee Tour and our annual Fall Tech session.

During our latest Board meeting, we elected the new executive for the upcoming year. Your officers for the 2022-23 season are as follows:

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President: Tyler Hobbs
 Vice President: Duncan Wetzel
 Secretary: Sawyer Olmstead
 Corporate Treasurer: David MacPherson

I would personally like to thank all those Board members who let their names stand for the executive positions. Bringing new faces and new ideas to these critical roles will assist the Board with advancing many of the projects that are associated with our 5-year strategy. As a member of the NSBA, your input and comments are always welcome. The contact information for all Board members, as well as the strategy document, is available on the NSBA website.

Save the Date!
 August 19-20, 2022
 Atlantic Bee Tour

NOVA SCOTIA BEEKEEPERS' ASSOCIATION

Occurring in-person, on a Nova Scotian honeybee operation

Additional information to follow shortly!

During the March meeting, we appointed our representatives to the Joint Pollination Committee, the NSDA/NSBA working group, the commercial beekeeper committee, the Atlantic Beekeepers Association, and the ATTA steering committee.

Mark your calendars for the Atlantic Bee Tour: August 19th-20th, 2022. It is our great pleasure to be hosting this event this summer. Plans are underway to fill two days with tours, speakers, and workshops that will cover a wide range of topics. We do expect to have beekeepers from all over Atlantic Canada in attendance.

Our partnership with Compass Distillery continues. Please take the time to read the details of the press release from Compass in the newsletter (located on page 3). Gin Royal is their #1 selling brand and the NSBA receives \$1.00 from every bottle sold, which is used to further local research and education of Nova Scotia beekeepers.

Just a reminder that Maritime Label offers a 20% discount to NSBA members. When placing your order, send them a copy of your NSBA membership card for the current season, and you will receive the discount if your invoice is paid in 30 days.

In closing, I would like to thank all our sponsors once again. Their support helps cover costs associated with meetings and tours. Please show your thanks by supporting them whenever possible:

- Golden Green (Silver),
- Farm Credit Canada (Silver),
- Dancing Bee (Bronze),
- Dalhousie University Extended Learning (Bronze), and
- Perennia (Bronze)

Thank you as well to all those companies that supported our Joint Symposium and AGM with the donation of door prizes:

- Country Fields Beekeeping Supplies
- Dancing Bee
- Fundy Textiles
- Golden Green Beekeeping
- Stanabbey

It has been my pleasure to serve as your President for the past three years. I wish you all a safe and productive beekeeping season.

CONTACT: SARAH HALL
MARKETING, EVENTS & SALES
SARAH@COMPASSDISTILLERS.CA



www.compassdistillers.ca

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PRESS RELEASE

Thursday, March 24th, 2022: Compass Distillers today announce their largest donation to date of \$10,000 CAD to the Nova Scotia Beekeepers Association (NSBA), in the form of a cheque.

Compass Distillers continue to donate \$1 from every bottle of Gin Royal sold, to the NSBA. The provided amount today is an accumulation of sales spanning from September of 2020 to February 28th, 2022.

The NSBA will be investing the donation into local research and beekeeper education; with their number one strategic goal of the industry being honey bee health. They look to further their current research projects, increasing their over-wintering capacity of locally-raised queens and being part of a national research effort. The donation will help them to invest in a project with the Atlantic Tech Team for Apiculture to create an infrastructure that helps educate and support smaller beekeepers who wish to expand their operations.

Gin Royal itself is a tribute to the bees and pollinators whose work allows us to create beautiful spirits. More than half of the botanicals used in gin are pollinated by bees, and without them, there would be no gin.

Compass Distillers would like to thank their customers and supporters for making this donation possible, while also making Gin Royal an award-winning and best selling Nova Scotian fermented and distilled gin.



Compass Distillers presenting Alex Crouse, NSBA President, with the NSBA donation cheque, at Wood'n'Hive Honey in Port Williams, NS

For release 2PM AST, Thursday, March 24th, 2022

Administrator Update

Ashley Anderson, Agri-Commodity Management Association

Membership and queen receipts, as well as membership cards, will be emailed to everyone within the next couple of weeks.

[Presentations from the Beekeeper Symposium and NSBA Annual Meeting](#) which occurred February 25th-26th are available for viewing on the NSBA website.

NSBA is again offering queens for sale this year. The [Queen Order form](#) can be found on the NSBA website. A reminder that **orders and payments must be received by April 18th**. Order forms can be sent to coordinator@agricommodity.ca, with e-transfer payments sent to ksaville@agricommodity.ca. To pay via credit card, please phone Ashley directly at 902-893-7455.

Useful Links:

- [NSBA 2022 Membership Application Form](#)
- [New Brunswick Beekeepers Association](#)
- [Prince Edward Island Beekeepers Association](#)

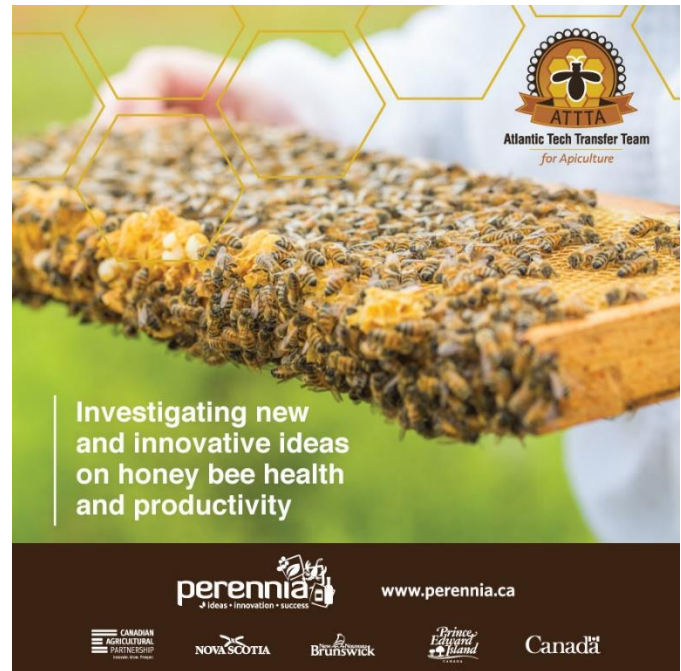
If you would like to get involved with, or contribute to, the newsletter, please contact Ashley Anderson via email: coordinator@agricommodity.ca

ATTTA Update

Andrew Byers, Atlantic Tech Transfer Team for Apiculture

As the Tech Transfer Team works to provide extension to beekeepers and support the building of the pollination capacity of honeybees for lowbush blueberries, winter can be a busy time. In the past weeks, the team has been participating in winter meetings, workshops, and other training events. It is always encouraging to see that these events are well attended by local beekeepers' keen to develop their skills and knowledge.

In the past few months, the team has been developing additional learning resources for our region's beekeepers. Some examples of recent facts sheets include information on purchasing new equipment and nucleus colonies. Also, there are new videos on our YouTube channel through two playlists: *Pollination Education* & *Canadian Beekeeping Minutes*. Further details can be found through the links provided below.



Although traveling has been difficult during the ongoing pandemic, ATTTA still managed to virtually attend meetings with beekeepers across the Atlantic region and beyond. Presentations have been given for Maritime beekeeping associations as well as blueberry groups in Nova Scotia and New Brunswick. We have been doing a series of workshops in PEI through the winter as well. With restrictions lifting, the hope is that beekeepers will once again be able to meet in person and there are already events planned for the summer.

To provide continued, professional training opportunities for our region's beekeepers, ATTTA will once again be teaming with Dalhousie University Extended Learning to offer the Fundamentals of Beekeeping program. The program consists of four courses and leads to a beekeeping certificate awarded by Dalhousie University. The first of four courses will begin in March with the other three courses across the beekeeping season. The courses can be attended remotely but there is an opportunity to attend sessions in person.

As we approach the beekeeping season, we hope for low winter losses after what has, so far been a winter of great variability in weather. So, we remain optimistic for an early spring and will look forward to working with beekeepers through this upcoming season.

ATTTA Links:

- ATTTA website - <https://www.perennia.ca/portfolio-items/honey-bees/>
- Bee Atlantic – ATTTA YouTube: <https://www.youtube.com/channel/UCZr9bwkQdarX5GFttcRdMVA>
- What's the Buzz with ATTTA blog: <https://www.atttabuzz.com/>
- What's the Buzz with ATTTA podcast: <https://www.perennia.ca/learning/podcast/whats-the-buzz-with-attta-beekeeping/>
- ATTTA@beatlantic Twitter: <https://twitter.com/beatlantic>



Provincial Apiculturist Update

Jason Sproule, Nova Scotia Department of Agriculture

Hopefully your hives have fared well over winter, and you are now starting to take stock of your winter survival. Most hives can make it to February, but March and April can be tough months as brood rearing puts substantial strain on colonies and taxes remaining food stores. Even amongst the most experienced beekeepers, some losses are expected, and dealing with deadouts in spring is as common as monitoring varroa mite loads, ordering queens, feeding light sugar syrup, applying pollen patties, and complaining about the weather.

Nova Scotia beekeepers have a recent history of wintering well, with colony loss estimates ranging between 12.2 to 19.8% over the past 10 years. 10-15% losses are considered sustainable. In other words, beekeepers can replace lost colonies by splitting those remaining, without suffering significant loss of honey production, rental income, etc.

Commercial beekeepers (those with 50+ hives) are asked to participate in a spring Winterloss Survey. The results of this survey are reported in the Annual CAPA Winterloss Statement, published in early July. This report presents loss estimates across Canada and helps to identify issues and practices that may have contributed to winter mortality. Past reports are available at: Colony Loss Reports – CAPA (www.capabees.com). Among the most common factors thought to be responsible for winter mortality are poor queens, weak colonies in the fall, ineffective varroa control, starvation, and “Don’t know”.

While it is not always possible to identify the cause of mortality, examination of deadouts (dead colonies) can provide several clues, helping you to learn from mistakes, up your apicultural acumen and determine whether it is safe to reuse hives. Here is a description of several common causes of winter hive death to keep in mind as you begin working through your bee yards this spring.

Starvation:

Once March and April come along, the demand for remaining food stores increases dramatically as brood rearing begins and larval worker bees need to be fed (a lot). The absence of honey and bee bread (processed pollen) stores is an obvious indication of starvation. However, it is possible for bees to die of starvation even when ample food stores remain. Some honeys, depending on floral sources, are more prone to crystallizing and bees will have a tough time using crystallized honey or sugar syrup. Hive size may also be a factor. A hive body that is too big for the size of the colony within, will be difficult for bees to warm. Food stores that cannot be sufficiently warmed will not be consumed; a phenomenon often referred to as “cold starvation”. Cold starvation often presents with large groups of workers having died head-first in cells. It is common for beekeepers to apply light sugar syrup and/or protein supplement patties in spring. This can help prevent instances of starvation that occur at the tail end of winter but is a balancing act. Too much feed, or given too early, can cause brood rearing to ramp up substantially, which then increases feed demands.

Excessive Moisture:

Wet soggy bees clumped between frames and piled along the bottom board, as if the bees died all at once, as well as thick mats of mold, are telling symptoms of moisture-related deaths. Top ventilation (i.e. an upper entrance) is very important in winter as condensation that forms on the underside of the cover, will rain back down. Once wet, bees will struggle to dry and warm themselves. If this seems to be a recurring issue after you have provided top ventilation, you may need to consider relocating your bee yard away from where cold damp collects.

Mites:

Varroa mites are a common cause of winter mortality. I observed a higher than usual mite population last season and expect this may be a major contributor for winter losses this year. As ever, it will be important for beekeepers to monitor and treat for mites accordingly. Many are putting mite treatments in their hives now. If you are a new beekeeper, you should know mite management is unavoidable – if you don’t make mite monitoring and treatments a routine practice, you will not have bees for long. A winter deadout that died from mites usually exhibits symptoms including dead workers on the bottom board with mites still attached, also unattached mites on the bottom board, and white crystals of mite faeces on the sides of many brood cells. Varroa mites are about the size of a pinhead and are of a deep reddish-brown colour. You may also observe many dead workers with deformed wings, which is an indication of a viral disease that is common in the presence of high mite loads.

Dysentery:

Many believe that dysentery or faecal staining on tops of frames and sides of the hives is indicative of Nosema, a microsporidian disease. Faecal stains appear as several reddish-brown drips. This link with Nosema is questionable. It may be a factor, but more often the cause of dysentery is consumption of something that doesn't agree with them (e.g. certain pollens, chemical irritants, fermented feed, bad syrup feeds, etc.). There's not much you can do about what bees gather and store for themselves, but beekeepers should ensure they are only feeding syrups prepared from refined white sugar. Never use molasses, icing sugar, raw sugar, brown sugar or otherwise, to prepare syrup feed as these can certainly lead to dysentery. Because there is a chance the dysentery is caused by pathogens, it's advisable to cull badly stained frames, wash the stains off the outside of hive bodies, and flame the interior of hive supers before reusing the deadout.

Shrews:

In the past several years I have observed and had reports of shrews wiping out entire bee yards. Shrews have a voracious appetite and consume worker bees throughout the winter. The problem tends to come to light when the damage is so extensive that other winter mortality causes can be ruled out. I postulate that shrew damage is occurring to a lesser extent in other bee yards but goes undiagnosed. Some telling signs of shrews are, piles of dismembered bee parts on the bottom board, large holes (to extract meaty flight muscles) in the thoraces (the middle body segment where wings and legs attach) and symptoms of cold starvation. The absence of a shrew nest in the hive does not rule out shrews. Mice nest in hives, shrews typically do not. Shrews will be a recurring problem and the beekeeper must either relocate the bee yard or apply ¼" wire screens to the entrances in late fall – just make sure to remove these in spring before bees start foraging for pollen.

Failing Queen:

There are many factors that impact queen fecundity. Imported queens are often stressed during long transits and may experience drastic temperature fluctuations that decrease sperm viability inside a mated queen's spermatheca. Locally reared queens are often preferable, but not always available, and there too, weather, genetics, method of rearing (i.e. purpose bred, supercedure or emergency cells), drone availability, and introduction method all influence a queen's success. There is a degree of luck inherent with queens and is part of the reason we need to tolerate some winter mortality. Deadouts from poor queens may exhibit signs of cold starvation, erratic brood patterns, or a high proportion of drone cells interspersed among worker cells.

American foulbrood:

American foulbrood (AFB) is a topic covered at length at our Winter Beekeeper Symposium by Dr. Elemir Simko. While AFB reports are not common, I am increasingly concerned due to the proximity of apiaries in some regions. This can lead to the rapid spread of this disease between bee yards. As the name suggests, AFB is a disease of developing brood. It inevitably leads to colony death, so beekeepers are usually instructed to euthanize infected colonies and burn or dispose of infected equipment. Bacterial spores remain viable for decades and can rapidly re-initiate disease if the equipment is put to use again. In late winter, diseased colonies will struggle to successfully rear brood. With few or no new worker bees being produced and the previous year's "winter bees" expiring from age, the stress on the colony becomes too great.

The most obvious signs in deadouts will be hatched cappings that conceal rotting larvae beneath. Similar holes can be observed during the normal capping process, but a keen eye will differentiate the whitish larvae/prepupae underneath of a healthy developing bee versus the slightly more angular holes (absent a healthy larva beneath) that are found in AFB diseased cells. In some instances, the developing bee extends its proboscis (bee tongue) upward to the top of the cell. Eventually, the rest of the body decays but the tongue may remain. This may only be observable in one or two of dozens of diseased brood cells but is quite a definitive symptom.

AFB winter deadouts will likely have lots of scales but to see them requires good lighting and holding the frame at just the right angle. Scales are the dehydrated puddle of goo that remains at the bottom of an AFB infected brood cell. Hold the frame so that the bottom of the cells are quite visible from above at a slight angle. Scales are very dark brown, and difficult to see on old dark comb, but are extremely visible on new lighter comb. A little-known trick is to shine a UV blacklight, inexpensively obtained from Amazon or Canadian Tire, which causes AFB scales to fluoresce. Pollens, molds, and crystallized sugars may also fluoresce, but these materials do not lie flat only on the bottom of cells, as do AFB scales.

Where AFB is identified or strongly suspected, the beekeeper must notify the Provincial Apiculturist (jason.sproule@novascotia.ca; 902 890-1565).

It should be said that a hive can succumb to the combined stress of several factors and the deadout may exhibit a multitude of symptoms. Where multiple causes are in play, the final blow is usually the inability to regulate hive temperature. In most cases, except for AFB, or evidence of high pathogen load, it is safe to reuse deadout equipment. Still, it is an opportunity to cull some of your oldest darkest comb. It is recommended to cull 20% of combs every year, to remove background levels of pathogens, pesticide residues, and wonky comb. Bees will clean up frames with mold, and workers that have died head first in cells. However, this is a time-consuming task that is best saved for later in the season, once colony survival is more certain, and there is a larger population of workers to complete the job. Bottom boards receive all the of the detritus that falls in a hive. I recommend scraping and flaming deadout bottom boards before reusing them.

Keep up the *super* work!



Tips & Tricks

Alex Crouse, NSBA Past-President

As I was doing my winter equipment construction and reading comments on Facebook, I thought there may be room in the newsletter for people to share tips and tricks that make their beekeeping operation or beekeeping experience better. If you have tricks that you use, please share them with us for inclusion in the next newsletter.

Tips and Tricks for brood and honey box construction:

- Use 2 ½" Ardox nails driven into each finger on each side of the box. These spiral nails will hold the joints tight
- Use a square or a jig to ensure the box is square before driving home the final few nails
- In addition to the nails, use a waterproof outdoor glue such as Titebond 3 on the finger joints
- The addition of a metal frame rest will make it easier to scrape wax and propolis that normally builds up on the ends of boxes
- Consider using an acrylic deck stain rather than paint. Penetrating stains make easy work of finishing wooden ware as no priming is required
- Did you know that there are 2 types of deck stain, one for vertical and one for horizontal surfaces?
- Build a relationship with your paint store and ask them to save you mis-tinted cans of stain. They usually come at a reduced cost which is always a positive.
- When staining our boxes, we stack them upside down, so that the underside of the handle is exposed and gets a coat of stain. Typically, the top of the handle is square and is often missed. Our process is to bush stain into the handle areas and then use a roller to apply the stain over the entire box. Allow the box to dry for 12 hours and apply the second coat. When rolling stacks of multiple boxes, stain will bleed into the cracks between the boxes. We do make it a habit of wiping up the edges after each coat to remove the excess. This will ensure that boxes will fit tight together when they go to the bee yards.

Everyone has their own way of doing things, and this is what seems to work best for us!