

FROM THE PROVINCE

INVESTING IN YOUR BEEKEEPING OPERATION

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Beekeeping, like any other venture, has its challenges. Beekeepers must balance production while ensuring their honey bee colonies are healthy. Not only do beekeepers have to address pest and disease issues that may currently be in their colonies (e.g., varroa), but they have to anticipate new pests and diseases that are at immediate risk of entering their operation (e.g., American Foulbrood or Small Hive Beetle). And added to all this, beekeepers have a business to run (i.e., marketing, managing clients and customers, and diversifying their operation).

If you are a beekeeper and are reading this article, you are likely right in the thick of it and putting in long days as the field season is in full swing. However, planning for the beekeeping season can take place anytime and beekeepers should be managing their operation with a plan for the future – whether that's next month, next season, or five years from now.

In this article, I will highlight the different areas where investments can be made by a beekeeper as well as what the short- or long-term goals of the investments are for an operation that is either large or small. Some endeavours are free and some will require funds from the beekeeper.

INFORMATION

No man – or beekeeper – is an island. Even the most independent beekeeper needs to rely on others, directly or indirectly, for information, knowledge, or resources. We are very fortunate in Ontario to have a lot of credible information and valuable resources that are relevant and specific to Ontario beekeeping practices and responsive to conditions and emerging issues in the province. Beekeepers should invest some time to read up on or review information that is relevant to Ontario's unique geography, climate, and pest status or take a course or workshop to gain knowledge on hive health management practices.

EDUCATION AND WORKSHOPS

Ontario is well serviced with credible courses through the Ontario Beekeepers' Association Technology Transfer Program (www.ontariobee.com/outreach/ttp) and the University of Guelph's Honey Bee Research Centre (www.uoguelph.ca/honeybee). The former hosts specific workshops (online and in the field) on queen rearing and integrated pest management (essential for the survival of your colonies). The latter offers university courses to students and posts easy to follow and fun to watch videos hosted by Paul Kelly (www.uoguelph.ca/honeybee/videos.shtml).

TREATMENT INFORMATION AND BEST MANAGEMENT PRACTICES

Both the TTP and the University of Guelph HBRC conduct research on a variety of economically important diseases (e.g., varroa, nosema, SHB) and deliver results (such as established thresholds for varroa in Ontario) for beekeepers for managing honey bee health (www.omafra.gov.on.ca/english/food/inspection/bees/2017-treatment.htm). Take the time to keep abreast of ongoing research and how the results may apply to your beekeeping operation.

Many Ontario beekeepers deserve credit as participants in applied research involving varroa management, resistance testing of the susceptibility of varroa to miticides, and many other types of projects. Consider taking advantage of these opportunities and participating when they arise.

All beekeepers should be planning for what they will do when (not if) SHB arrives in their operation. The bad news is that it is another pest to deal with. The good news is that the pest is manageable, not as serious as some others (i.e., varroa and AFB) and most of what you need to do for SHB overlaps with the general principals of colony management. Ontario has published best management practices for SHB (www.omafra.gov.on.ca/english/food/inspection/bees/shb-bmp.htm).

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ONTARIO BEES AND ASSOCIATED SERVICES

There are lots of Ontario beekeepers producing locally bred and raised queens, nucs, or colonies for sale. These beekeepers are required to be inspected for pests and diseases by the Ontario Apiary Program. Furthermore, there are beekeepers who are participants in the Ontario Bee Breeders' Association (www.ontariobee.com/OBBA) who are taking advantage of breeding programs – namely the Ontario Resistant Honey Bee Selection Program (ORHBS) – and coordinating efforts to improve the stock of honey bees in the province. Breeders work on a suite of traits including hygienic behaviour, tolerance to pests, gentleness, honey production, etc. These beekeepers work closely with the Ontario Beekeepers' Association Technology Transfer Program on assessment and improvement of stock, and many have been plugged into recent research programs (provincial and national) for breeding of bees and improvement of stock. These efforts have been in place for decades and the stock is recognized by other regions of Canada and customers in the USA. Ontario beekeepers can invest in their operation by buying from local producers producing this stock or by getting involved with ORHBS and diversifying their operation into queen production (www.ontariobee.com/ORHBS).

EQUIPMENT

If it ain't broke, don't fix it? Beekeepers buy equipment as they need it. However, equipment should be seen as a way of investing in improving your operation and mitigating potential issues.

Here are a few examples:

Replacing old brood comb:

Some beekeepers may wait until the frame breaks until it is replaced, but it is important to proactively replace frames in the brood chamber on a regular basis. This is because biological (bacterial and fungal spores) and abiotic (pesticides from the environment and used in varroa control) “garbage” accumulates in the “nursery” of the colony, where the queen resides and brood is reared. Additionally, as comb is turned into drone comb, these brood frames become little varroa factories where a higher proportion of varroa reproduction is seen. The treatment recommendations for Ontario advise replacing two to three frames from the brood chamber every year (www.omafra.gov.on.ca/english/food/inspection/bees/2017-treatment.htm#GBMP).

Equipment to address SHB:

The honey house is the main point in a beekeeping operation where equipment may be considered as an investment for managing SHB. To manage this pest, beekeepers need to keep the

honey house clean, with excess honey and wax cappings washed and stored in a timely manner. Any materials that would make the surfaces (floors, walls) easier to clean will streamline these activities. Beekeepers will also have to plan how many honey supers are brought into the honey house at a time – and more so, how long these supers are stored (ideally less than 48 hours). A dehumidifier, if not already used in the hot room of a honey house, is an important investment in mitigating SHB development in honey supers and potential spoilage of some of the honey crop.

Incorporating the ability to freeze full honey supers and freshly extracted supers may provide further flexibility in the scheduling of honey extraction during an already very busy time at the end of the beekeeping season. Freezing units may be installed in existing space in a honey house, added by an addition to the building, or may be a standalone freezing unit (such as a reefer trailer with a refrigeration unit). While this may not be a necessity for all beekeepers, the investment in a freezing facility may have additional value as a way to store valuable brood comb from dead-outs, improving biosecurity and protecting from wax moth damage (www.omafra.gov.on.ca/english/food/inspection/bees/shb-bmp.htm).

INVESTING IN SUSTAINABILITY

With any new investments or upgrades, one mustn't lose focus on completing already existing essential tasks (i.e., timely varroa control, production of honey, nucleus colonies, pollination contracts, or honey sales) to keep the bees alive and the business afloat. There are many types of investments for a beekeeping operation available (free or paid; short or long term) and many beyond the scope of this piece. However, all investments must be seen as a way of moving forward in the direction of a more sustainable operation.