



Beekeeping Calendar for Toronto & GTA

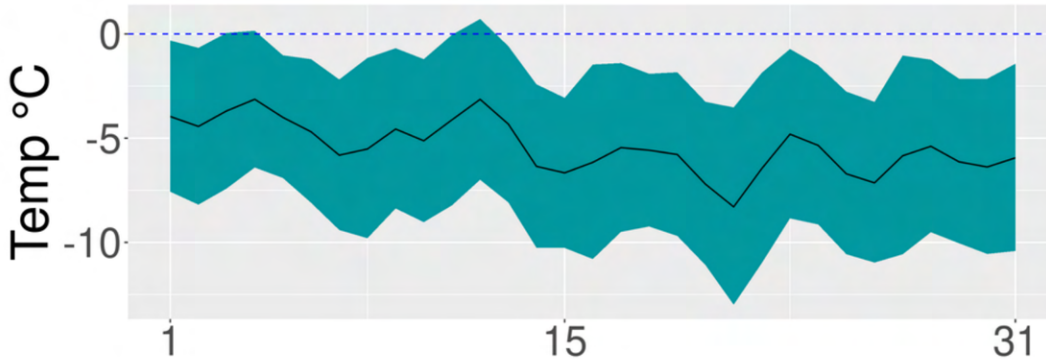
www.urbantorontobeekeepers.org



January



Climate



In the Apiary

Average temperature is well below 0. Nothing is blooming. Bees are tightly clustered and broodless. On warmer days bees may perform cleansing flights. It is normal to see a few (~100 or less) dead bees outside the hive.

External inspections only this month, as it is too cold to open the hives. Use visual and auditory clues to confirm hive health. Resist the urge to clean the snow off of your hives, as snow provides excellent insulation.

- Lift one side of the hive to gauge the weight. Add fondant or dry sugar if the hive is underweight.



January



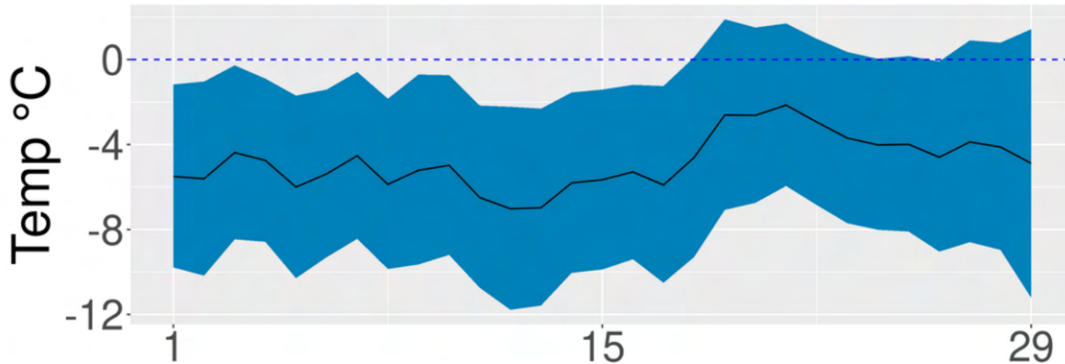
Indoors

- Register membership with UTBA, OBA and OMAFRA .
- Read books and articles about bees, take courses or webinars, attend UTBA meeting.
- Clean, repair and paint equipment.
- Set apiary goals.
- Order supplies.

February



Climate



In the Apiary

Average temperatures remain well below zero for the month. Bees are tightly clustered and broodless at the start of the month. By the end of the month bees may start rearing some brood. Consumption of honey increases with the increase in bee activity. Little is in bloom except perhaps witch hazel.

- See January inspection guidelines



Indoors

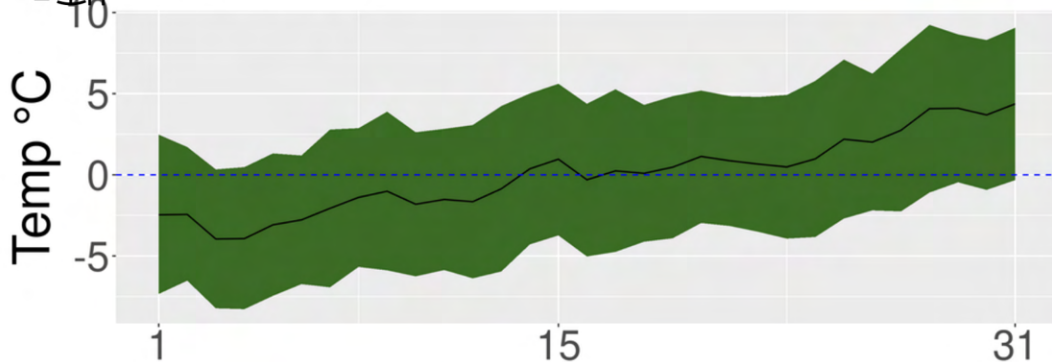
- Register membership with UTBA, OBA and OMAFRA.
- Read books and articles about bees, take courses or webinars, attend UTBA meeting.
- Finish repairs, take inventory, order and prepare new equipment.
- Order replacement bees.



March



Climate



In the Apiary

Average temperatures in the beginning of March remain below freezing, though the latter half of the month begins to offer warmer temperatures.

With this temperature increase, more bees will take flight outside the hive, and the queen's laying ramps up.

As brood production increases, the risk of starvation increases too. Willows and maples provide an early pollen source. Sugar maples bloom at the end of the month, providing a nectar source.

- See January inspection guidelines.
- Brood rearing can be artificially stimulated by feeding pollen patties.
- Underweight colonies can be fed fondant or dry sugar, and honey frames can be quickly moved closer to the cluster.
- Clean up and seal dead colonies to prevent robbing and the spread of pathogens.
- Check electric fencing (if installed).



March

Indoors

- Equipment should be ready for action.
- Attend UTBA meeting.

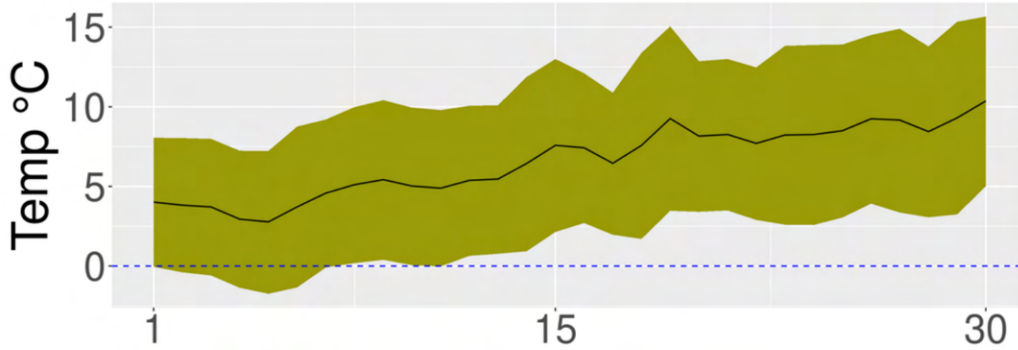
Flowers of the Month

- Eastern Redbud
- Red chokeberry
- Silver Maple
- European Pear
- Box Elder
- Willows

April



Climate



In the Apiary

Temperatures continue to increase. Bees remain clustered on cold days, but on warm sunny days they will be bringing in lots of pollen and nectar. Colonies should have a few frames of brood by now. Maples, willows, crocuses, and dandelions are sources of pollen and nectar.

- Inspect brood and honey stores on warmer days.
- Bottom boxes, which may be empty of stores, can be moved on top to allow for expansion of the brood nest.
- Underweight colonies can be fed fondant or dry sugar, or if daytime temperatures are above 15C you can feed 1:1 sugar syrup.
- Honey frames can be moved closer to the brood nest.
- Brood rearing can be artificially stimulated by feeding pollen patties.
- Help establish bee packages or splits by feeding.



April

- Clean bottom boards of dead bees, wax cappings, and other residue when inspecting colonies.
- Mark the strong colonies and watch for queen cells. By the end of April strong colonies will start swarm preparations.
- Colony populations can be balanced by moving frames from stronger to weaker colonies.
- Check electric fencing (if installed).
- Attend UTBA meeting.



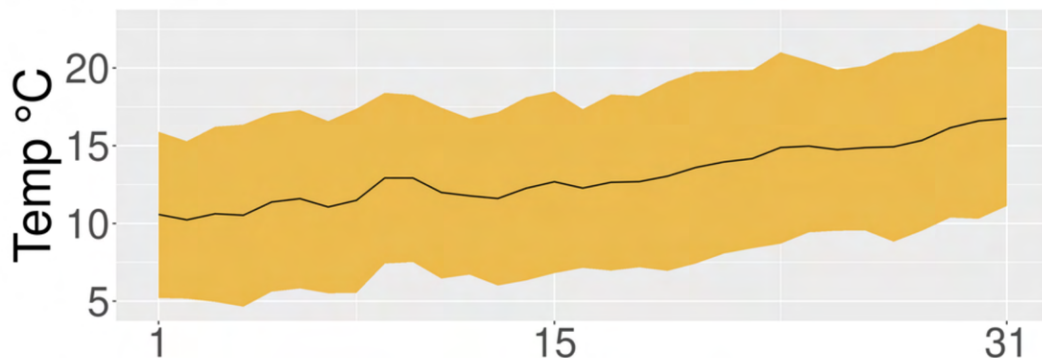
Flowers of the Month

- Eastern Redbud
- Red Chokeberry
- Silver Maple
- European Pear
- Box Elder
- Willows
- Elms
- Serviceberry
- Cherry
- Sugar Maple
- Crabapple
- Black Hawthorn
- Aspens
- Sandcherry
- Tulip Tree

May



Climate



In the Apiary

The brood area is expanding rapidly as egg laying and brood rearing increase. Swarm season is beginning. The drone population is growing, as is the varroa mite population.

Spring is in full bloom: dandelions, elderberry, elms, poplar, crabapple, black locust, hawthorn, tulip, poplar, clover.

- Inspect every 2 weeks. Look for evidence of queen; evaluate quantity of brood and brood pattern; evaluate room to expand; check for disease (chalk brood, AFB, EFB, etc.); look for presence of queen cells; evaluate food reserves (move frames or feed if needed).
- Swap top and bottom box if needed.
- Monitor for Varroa. Record the counts, and treat if it is above threshold (2 mites per 100 bees).
- Rotate old comb out of the hive, and replace with new frames.



May

- Swarm season has started; mitigation strategies include: providing space for the colony to grow and removing frames of brood if the population is growing too fast.
- Make splits. Have a plan to deal with swarm cells that you might find
- Have equipment ready, if you are going to catch swarms.
- Remove wraps and pillows towards the end of the month.
- Add honey supers to provide space; consider using queen excluders.
- Pollen traps can be set and used on a schedule that would allow bees to keep feeding the brood and store some of the pollen.
- Clear paths around the hives to ensure easy access and reduce risk of accidents while working nearby. Remove temporary windbreaks installed for the winter.
- Check electric fencing (if installed).
- Provide water for the bees if needed.
- Attend UTBA meeting.



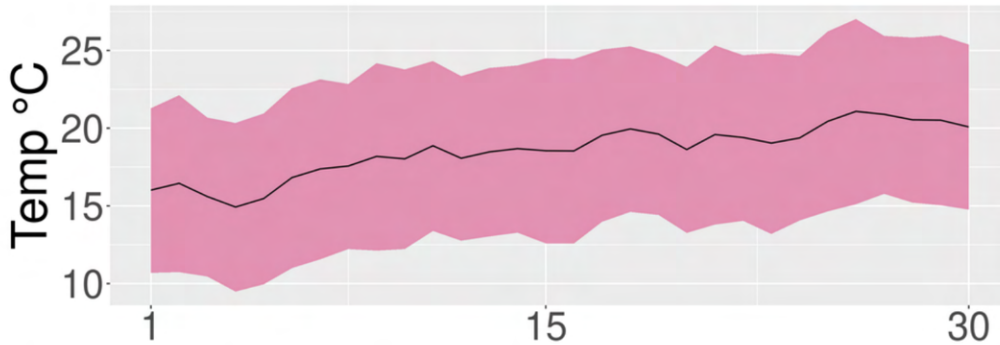
Flowers of the Month

- | | | |
|------------------|-----------------|------------------|
| • Eastern Redbud | • Sandcherry | • Mountain Maple |
| • Red chokeberry | • Tulip Tree | • Bugleweed |
| • Silver Maple | • Buckthorn | • Milk Vetch |
| • European Pear | • Hackberry | • Sumac |
| • Box Elder | • Blueberry | • Yellow Willow |
| • Willows | • Chokeberry | • Rapeseed |
| • Serviceberry | • Cherry | • Chives |
| • Cherry | • Blackberry | • Mustard |
| • Sugar Maple | • Locusts | • Butterfllyweed |
| • Crabapple | • Catalpa | • Marigold |
| • Black Hawthorn | • Raspberry | |
| • Aspens | • Striped Maple | |

June



Climate



In the Apiary

- Colony population reaches its maximum. Swarm season continues. Varroa mite population continues to build. We are well into summer. May blooms continue. Catalpa, Milkweed, Vetch, Grape and Sumac begin to bloom.
- Inspect every 2 weeks: check for evidence of queen, evaluate quantity of brood and brood pattern, evaluate room to expand, check for disease (chalk brood, AFB, EFB, etc.), look for presence of queen cells and evaluate food reserves (move frames or feed if needed)
- Add supers on the hives as the population grows and the frames fill with nectar. Consider using a queen excluder.
- Comb is most quickly drawn during the honey flow; add new frames or replace old ones.
- Remove entrance reducers to allow for ventilation and circulation.



June

- Pollen traps can be used, see May's instructions.
- Practice swarm mitigation strategies (see May); you can also move honey frames up to supers to prevent the brood nest from becoming honeybound.
- Yard maintenance as needed: mowing, trimming, pruning, check electric fencing (if installed).
- Continue to monitor for Varroa: as the bee population explodes, so does the Varroa population. Treat if above threshold (2 mites per 100 bees). Record the count before and after the treatment to verify efficacy.
- Provide water for the bees if needed.
- Attend UTBA meeting.



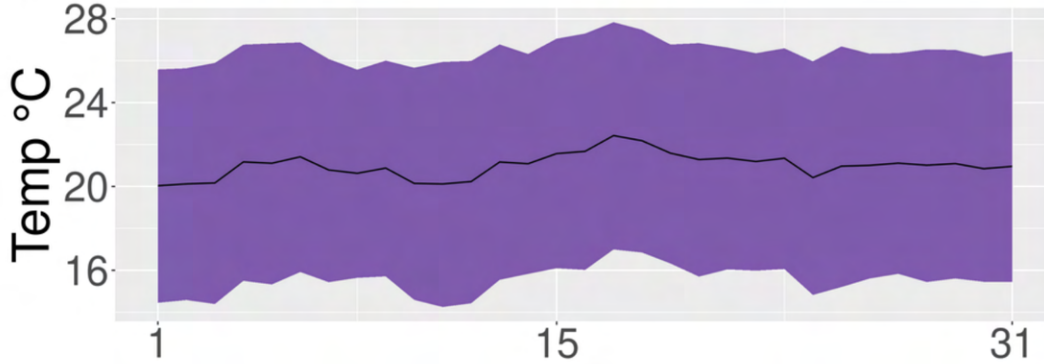
Flowers of the Month

- Willows
- Tulip Tree
- Buckthorn
- Blueberry
- Chokeberry
- Cherry
- Blackberry
- Locusts
- Catalpa
- Raspberry
- Striped Maple
- Mountain Maple
- Bugleweed
- Milk Vetch
- Honeysuckle
- Cloudberry
- Sumac
- Yellow Willow
- Rapeseed
- Chives
- Mustard
- Butterflyweed
- Marigold
- Basswood (Linden)
- Indigo Bush
- Milkweed
- Viper's Bugloss
- Russian Thistle
- Cucumber
- Fireweed
- Hyssop
- Borage
- Cantaloupe
- Thistle
- Hyssop

July



Climate



In the Apiary

Average temperatures are in the 20s. Bearding and ventilating can be seen during this hot season.

Swarms are still possible. Varroa mite population continues to build.

Ongoing summer sees blooms of purple loosestrife, vetch, tulip, poplar, grape, viper's bugloss and Japanese knotweed. Linden/Basswood blooms. Linden are a native tree, have few pests, and are found all over Toronto. Linden nectar makes a distinct, prized honey with a minty aftertaste.

- Inspect at least monthly; check for evidence of queen, evaluate quantity of brood and brood pattern, evaluate room to expand, check for disease (chalk brood, AFB, EFB, etc.), look for presence of queen cells, evaluate food reserves. Continue to add supers on the hives as the population grows and the frames are filled with nectar.
- Comb is most quickly drawn during the honey flow; add new frames or replace old ones.



July

- Honey can be harvested now if enough stores remain in the hive. If producing specialty/variety honey, remove capped honey frames.
- Plan and prepare for honey harvest by purchasing bottles and creating labels following OMAFRA regulatory requirements for honey in Ontario. Arrange for equipment including; extractor, uncappers, filters and pails.
- Practice swarm mitigation strategies (see May).
- Continue to monitor for Varroa. As the bee population explodes, so does the Varroa population. Treat if above threshold (2 mites per 100 bees). Record the count before and after the treatment to verify efficacy.
- Yard maintenance as needed: mowing, trimming, pruning, checking electric fencing (if installed).
- Provide water for the bees if needed.
- No UTBA meeting.



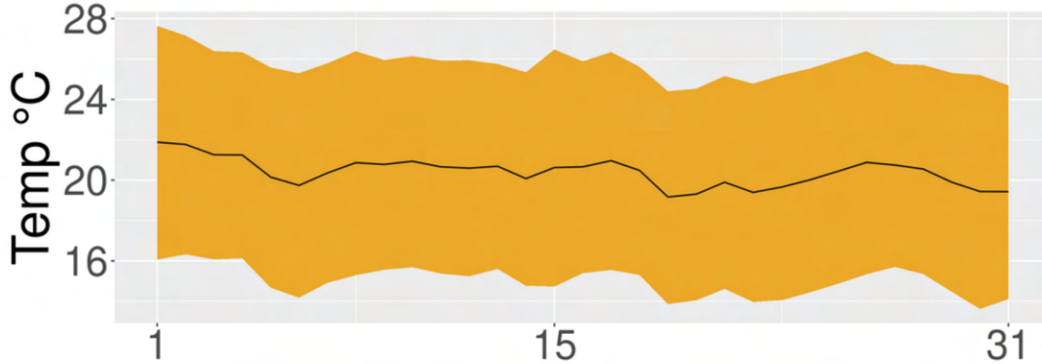
Flowers of the Month

- Honeysuckle
- Cloudberry
- Sumac
- Yellow Willow
- Rapeseed
- Chives
- Mustard
- Butterflyweed
- Marigold
- Linden (Basswood)
- Indigo Bush
- Milkweed
- Viper's Bugloss
- Russian Thistle
- Cucumber
- Fireweed
- Hyssop
- Borage
- Cantaloupe
- Thistle
- Buttonbush
- Hyssop

August



Climate



In the Apiary

Laying begins to slow. Untreated varroa populations can peak in this month and next. Bearding may be observed on hotter days. There are both summer and winter bees present in the hive. Soon the population will contract as the summer bees die off. Ongoing summer blooms; now the Goldenrod flow may start. Goldenrod honey may smell of dirty socks, despite having a buttery and caramel-like flavor profile.

- Inspect at least monthly; check for evidence of queen, evaluate quantity of brood and brood pattern, evaluate room, check for disease (chalk brood, AFB, EFB, etc.). Especially now that the population is at its peak, look for presence of queen cells; evaluate food reserves.
- Practice swarm mitigation strategies (see May). Late summer swarms are possible.
- Combine strong and weak colonies to equalize populations.



August

- Add supers on the hives as the population grows and the frames are filled with nectar.
- If you are considering re-queening, now is the time to do it. August queens are the best because they have been raised in luxury along with the drones. An overwintered young queen will start laying early in the spring.
- Honey can be harvested now if enough stores remain in the hive. Colony needs 70 to 90 lbs by the beginning of October.
- Continue to monitor for Varroa: as the bee population explodes, so does the Varroa population. Treat if above threshold (3 mites per 100 bees). Record the count before and after the treatment to verify efficacy. This is especially important as we approach the period where bees start raising the winter bees.
- Yard maintenance as needed: mowing, trimming, pruning, checking electric fencing (if installed).
- Provide water for the bees if needed, and monitor incoming pollen as some areas may experience dearth during the month of August.
- Watch for robbing signs on weaker colonies. To prevent robbing, reduce the entrance, or mitigate robbing by placing a wet sheet over the hive.
- No UTBA meeting.



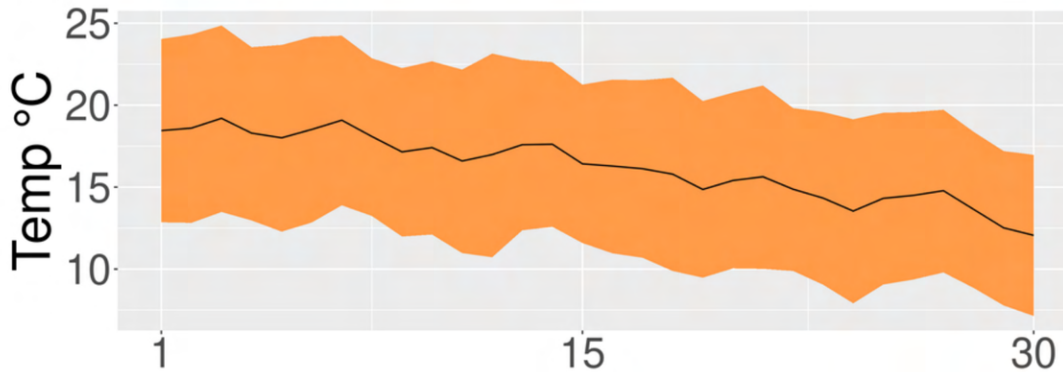
Flowers of the Month

- | | | |
|-----------------|-------------------|--------------|
| • Sumac | • Milkweed | • Cantaloupe |
| • Yellow Willow | • Viper's Bugloss | • Thistle |
| • Rapeseed | • Russian Thistle | • Buttonbush |
| • Chives | • Cucumber | • Hyssop |
| • Mustard | • Fireweed | • Aster |
| • Butterflyweed | • Hyssop | • Goldenrod |
| • Marigold | • Borage | |

September



Climate



In the Apiary

Temperatures are cooling. Some areas may experience colder weather by the end of the month. The queen slows her laying, causing the brood area to contract. Very little drone brood is laid. Bees may be more defensive as they are protective of their honey stores against robbers. Nectar and pollen sources include goldenrod, asters, thistles, clovers, purple loosestrife and Japanese knotweed.

- Inspect every 2 weeks; check for evidence of queen, evaluate quantity of brood and brood pattern as the brood nest begins to contract, check for disease (chalk brood, AFB, EFB, etc.), look for presence of queen cells, evaluate food reserves.
- Practice swarm mitigation strategies (see May).
- Add supers on the hives if you are planning to collect goldenrod honey.
- Honey can be harvested now if enough stores remain in the hive. Colony needs 70 to 90 lbs by the beginning of October.



September

- If producing specialty/variety honey, remove capped honey frames.
- If needed, feed sugar syrup at a ratio of 2 parts sugar to 1 part water to supplement stores in lighter hives.
- Continue to monitor for Varroa as the bee population declines and the Varroa to bee ratio increases. Treat if above threshold (3 mites per 100 bees). Record the count before and after the treatment to verify efficacy. This is especially important as we approach the period where bees are raising the winter bees.
- Yard maintenance as needed: mowing, trimming, pruning, checking electric fencing (if installed).
- Add entrance reducers or mouse guards in cooler areas to prevent mice from nesting in the warm hive.
- Swap the screen bottom board with a solid bottom board if this is your preference.
- Provide water for the bees if needed.
- Attend UTBA meeting.



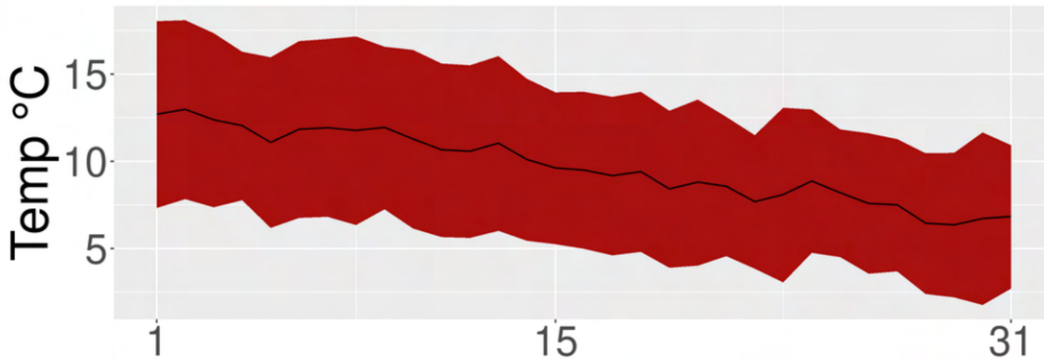
Flowers of the Month

- | | |
|-----------------|--------------|
| • Rapeseed | • Hyssop |
| • Mustard | • Borage |
| • Butterflyweed | • Cantaloupe |
| • Marigold | • Thistle |
| • Cucumber | • Aster |
| • Fireweed | • Goldenrod |

October



Climate



In the Apiary

Temperatures continue to fall. The queen will stop laying eggs, and drones may be kicked out of the hive to preserve resources for the winter. Unprotected hives can be robbed. A few asters may be in bloom.

- Inspections should only be done if it's above 15°C.
- Remove any honey supers still on the hive, and then check the weight of the colony. A full-sized colony should have between 70-90 pounds of honey by the end of October and will weigh 135 lbs including the equipment.
- Store extracted frames in a safe place, and make sure insects (moth, wasps) and mice can't get in.
- If feeding, use 2 parts sugar to 1 part water to supplement stores in lighter hives. This is your last chance to feed liquid to the bees. Daytime temperatures need to be above 15°C to use liquid feed.



October

- Continue to monitor for Varroa. Treat if above threshold (3 mites per 100 bees). Record the count before and after the treatment to verify efficacy. These are winter bees. Remove drone comb that may have been added as cultural varroa control.
- Tilt hives forward a few degrees so that any accumulated moisture can drain out.
- Remove miticides as indicated on their labels.
- Yard maintenance as needed: mowing, trimming, pruning, checking electric fence (if installed).
- Add entrance reducers or mouse guards, as mice start migrating to cozier homes; secure the top of the hive either by strapping it or adding a rock. Also consider raising the hive off the ground.
- By the end of the month: wrap the hives, and provide top insulation as well. Quilt box or insulating pillows are good top insulation.
- Consider setting up a windbreak near the hives.
- Connect with the UTBA to learn about winterizing practices.



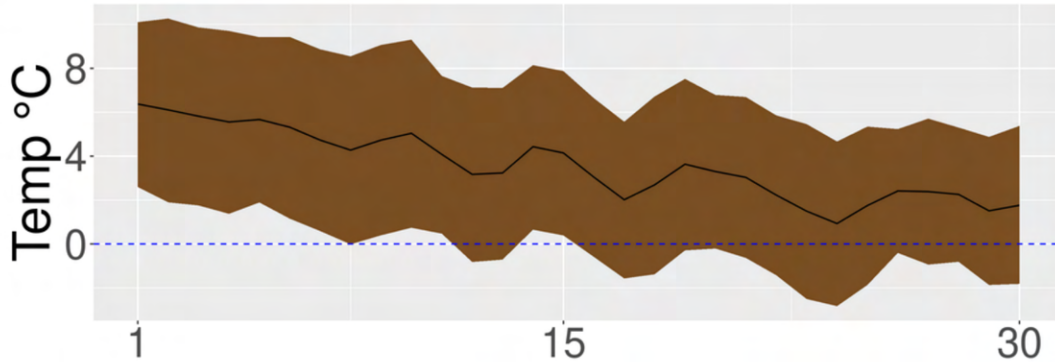
Flowers of the Month

- Mustard
- Borage
- Cantaloupe
- Aster
- Goldenrod

November



Climate



In the Apiary

The weather is too cold for regular inspections as the likelihood of freezing temperature increases. The bees have formed their winter cluster, and the queen has stopped laying completely. Most of the winter bees have emerged. Nothing is in bloom.

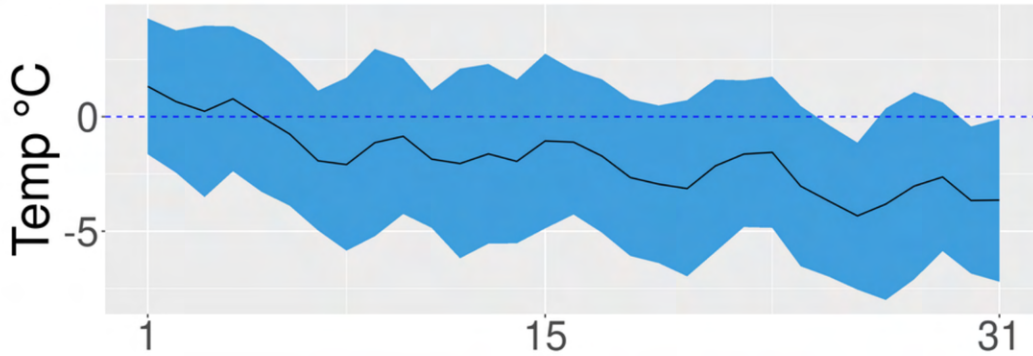
- If not enough stores, add fondant/sugar/sugar bricks.
- Check electric fence.
- Entrance reducers or mouse guards should be on by now.
- Wrap the hives and provide top insulation as well: quilt box or insulating pillows.
- Consider setting up a windbreak near the hives.
- Attend UTBA meeting.



December



Climate



In the Apiary

Bees are tightly clustered and broodless.

Temperatures are regularly below zero. It is too cold to open the hives; external inspections only. On warm days bees may be out for cleansing flights. Expect to see some (100 or less) dead bees outside of the hive. Nothing is in bloom.

- Leave the snow on the hives for better insulation.
- Heft hive to gauge the weight; add fondant or dry sugar if hive is underweight.



Indoors

- Read books and articles about bees, take courses or webinars.
- Attend UTBA meeting.
- Clean, repair and paint equipment.
- Enjoy your time off!





www.urbantorontobeekeepers.org

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What do you need to be an urban beekeeper?

You'll need to:

- Have a place to keep your bees and understand how to choose a good spot
- Learn about beekeeping equipment, different hives styles and protective equipment
- Understand how to protect yourself from stings through the use of protective equipment, smoke, timing and gentle frame handling technique
- Learn about the roles and functions of the queen, workers and drones
- Understand the honeybee lifecycle and how it impacts colony population management
- Interpret colony health through frame inspection
- Learn how to protect honeybee health by identifying pests and recognizing symptoms of disease and creating an integrated pest management plan
- Recognize the value of inspection goals and good record keeping
- Understand the process of nectar collection, ripening and honey extraction
- Be able to prepare your colonies for winter
- Be aware of Ontario legislation that covers beekeeping.
- The Ontario Bees Act

<https://www.ontario.ca/laws/statute/90b06>

Essential Books for the Beekeeper

Every beekeeper should have a basic book or two to give them essential background on the art and science of beekeeping, and to consult when questions come up. Some of the best we have found, especially for the beginner beekeeper, include:

- **Natural Beekeeping: Organic Approaches to Modern Apiculture**, 2nd Edition by Ross Conrad (2013)
- **The Backyard Beekeeper**, 4th Edition by Kim Flottum (2018)
- **Beekeeping for Dummies**, 4th Edition by Howland Blackiston (2019)
- **The Beekeepers' Handbook**, 4th Edition by Diana Sammataro and Alphonse Avitabile (2011)

For a more in-depth look at bee biology, consider a book that is widely used as a textbook in North American beekeeping courses, and keep it as a reference guide:

- **Honey Bee Biology and Beekeeping**, by Dewey M. Caron with Lawrence John Connor (2013)

Videos

• **"How to" Beekeeping Videos by the University of Guelph Honey Bee Research Centre.** 32 excellent short videos that provide essential information for beginners and demonstrate basic beekeeping techniques. Includes videos on Hive Equipment; Hive Location and Setup; Introducing a Nucleus Colony; Opening Hives; Colony Inspection; Smoke Use; Finding Queens; Abnormal Conditions; Harvesting Honey; and many more.

https://www.youtube.com/channel/UC3mjpM6Av4bxbxps_Gh5YPw

Websites, Blogs and on-line Newsletters

Almost all of the websites we include below have practical information on-line. Several also have periodic newsletters or blogs which you can sign up for and receive by email.

- **Ontario Beekeepers' Association.** The OBA website is an important resource for all Ontario beekeepers. It has information for new beekeepers including a "Getting Started" section; fact sheets from the OBA's Tech Transfer group with info on honeybee pests and how to manage them; links to suppliers of bees and beekeeping equipment; and more. The website has a regular news section and announces upcoming events and meetings of interest to Ontario beekeepers. The OBA also hosts two conferences a year and posts many of the presentations on their website. <https://www.ontariobee.com/>
- **Honey Bee Suite: The Science of Bees.** Rusty Bulew, a Master Beekeeper in Washington State, posts regular blogs on a broad range of beekeeping topics, based on "peer-reviewed science, logical thinking, experimentation, discussion, and experience". Her website includes a useful section for "Beginners", including advice for hive management throughout the beekeeping season, hive inspection, feeding bees, swarming, robbing, diseases and pests, diagnosing dead-outs and many more topics. She provides a searchable index to easily find topics of interest. <https://www.honeybeesuite.com/>
- **Scientific Beekeeping: Beekeeping through the Eyes of a Biologist.** Randy Oliver is a commercial beekeeper and citizen scientist in California, who conducts and reports on ongoing, practical experiments in beekeeping, providing "evidence-based and scientifically-verified explanations of the biological processes occurring in the hive, as well as the effects of various management options." Randy is particularly well-known for his practical study of methods to control Varroa mites in beehives. <http://scientificbeekeeping.com/>
- **Beverly Bees.** Anita Deeley is an organic beekeeper, biologist and former state bee inspector in Massachusetts. Her website contains useful information for beginner beekeepers on assembling all the components for a beehive and making a candyboard to help bees survive in winter. <https://www.beverlybees.com/beekeeping/>
- **Ontario Ministry of Agriculture, Food and Rural Affairs – Apiculture.** This website has an overview of beekeeping regulations for the province, including regs for packaging and labelling honey. OMAFRA has also made available a variety of info sheets about identifying and managing honeybee pests, essential reading for beekeepers. <http://www.omafra.gov.on.ca/english/food/inspection/bees/apicultu.html>