

# Beekeeping Calendar for Northwest Kentucky

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# January

The bees are in their winter cluster, except for warm, sunny days (roughly 50°F and above), when they might leave the hive for a cleansing flight. You may see them out around the entrance at 45° F when it's sunny.

Queens may lay a few eggs, in which case the cluster will need to keep the brood warm. The cluster may be in to top box, depending on the number of days they broke cluster in December. You can check for live bees by placing your ear flat against the south side of the box...listen for the buzzing sound.

## **Environmental Conditions**

May be our coldest or second coldest month, changes from year to year. Usually very little snow or ice to block entrance.



# Beekeeping Activities



Check entrance for ice blocking air movement, no need to remove snow, it allows enough air flow.



Check the hives for live bees about every ten days. There will be several days this month in which the bees will break cluster and can be seen at the entrance.



When you see bees at the entrance, check the sugar boards for amount remaining. You can use a spray bottle to wet remaining sugar on top. (helps prevent dehydration and aids in digestion)



If sugar board is depleted, add mush bag of sugar to sugar board. Gallon ziploc with 8 cups of sugar & 1 cup of water, lay bag flat and cut 3 slits on upper surface for access.

# February

The bees are in and out of their cluster, especially toward the end of the month. On sunny days when it's warm enough they will break away for brief cleansing flights and to gambol in the sunshine. The cluster is most likely moved up to the top brood box.

The queen begins to ramp up egg laying. Nutritional needs increase and the risk of starvation rises.

## **Environmental Conditions**

May be our coldest or second coldest month. May have some ice to clear from entrances.



# Beekeeping Activities

Continue to check hives for live bees at least 3 times this month.

Monitor amount of food in sugar boards, add more if necessary. Spray any remaining sugar with water. When you can see bees at the entrance, it's okay to lift the inner cover for a short time.

Last week of month, if you want an early build-up add about a half a cup of 18% protein supplement. (weather dependent)

This is a good month to check for continuing beekeeping educational opportunities in your area.

With major fluctuations in weather patterns there may be some forage available this month such as red maple(5), purple dead-nettle(5) and some dandelion(4)

# March

Spring build-up has begun, the queen should be laying near full capacity. This requires a lot of resources.

There is still a risk of starvation, so this is a good time to feed sugar water before you add any supers.

## Environmental Conditions

There will be a big variation in day/night time temp this month. Some days up to 70, some will be in the 30's. Nights will be cold

- ❖ Forage plants are ranked from 1-5 for use based on several years of observation with 5 being the most attractive.
- ❖ See notes at the end for information on some additional plants.



# Beekeeping Activities

- Continue to check sugar boards, provides food when bees can't get out to forage
- Feed heavy sugar water out away from hives, 2:1
- Coat all hives/woodware with weather protectant
- On a suitable day, inspect the hives, place all brood frames in the center of the bottom box, if there are more than 6 brood, center the rest of them in the top box, as there will still be some nights below freezing.
- You may administer low dose mite treatment
- Add first honey super and you may need to use queen excluders with early suppering
- Red maple(5) will bloom in the first week of march, followed by purple dead-nettle(4), dandelion(4), and hybrid pear trees(5) all which are important early forage for bees, henbit(1) Elm and weeping willow(2) also bloom in March (there's not a much of either) but bees prefer red maple.

# April

The weather this month is highly variable. There will be cold days when the bees are still clustered, but there will also be warm sunny days, when they should be bringing in lots of pollen and nectar. If their flights are limited by cold or inclement weather it will slow the spring build-up.

Queen cups are being built along the lower edges of brood frames. If the hive is crowded, some cups will likely be laid in. The colony, if big enough, begins to rear drones in greater numbers.

You may want to replace two of your oldest frames in each hive body to reduce the accumulation of pesticides and other chemicals.

## Environmental Conditions

Weather is very unpredictable, some very warm days, some days are cold, many nights still in the 30's/low 40's, weekly rain, sometimes several days a week





# Beekeeping Activities

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- Remove sugar boards, remove hive top insulation (temp. dependent, last half of month)
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- Check supers for brood, add queen excluders if necessary
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- Check brood pattern's which indicates the viability of the queen
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- Colonies will begin swarming, may set out swarm boxes, be prepared to catch clustered swarms
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- Keep an eye out for swarm cells. You may consider splitting the strongest colonies, particularly if you are looking to increase the number of hives or make a nuc(s) to keep in reserve. Cutting out swarm cells can prevent swarming as well, but needs to be done thoroughly and often (every few days)
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- Cut out queen cells for extra queens if you have a means of incubating them
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- Feed swarms sugar water to increase wax production if they have foundations to draw out, as they draw out the foundations in the center move them to the outside if they brood in them, move outside frames toward the middle
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- Make nucs, monitor and feed nucs and swarms, feed sugar water & 18% protein supplement for faster build-up
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- Bee will be foraging on fruit trees were available, apple(5), peach(5), cherry(5), other forage plants, flowering crabapple(4), autumn olive(3), black willow(4), eastern cottonwood (4), early wintercress(2), wintercress(2), redbud(3), serviceberry(3), henbit(1)

# May

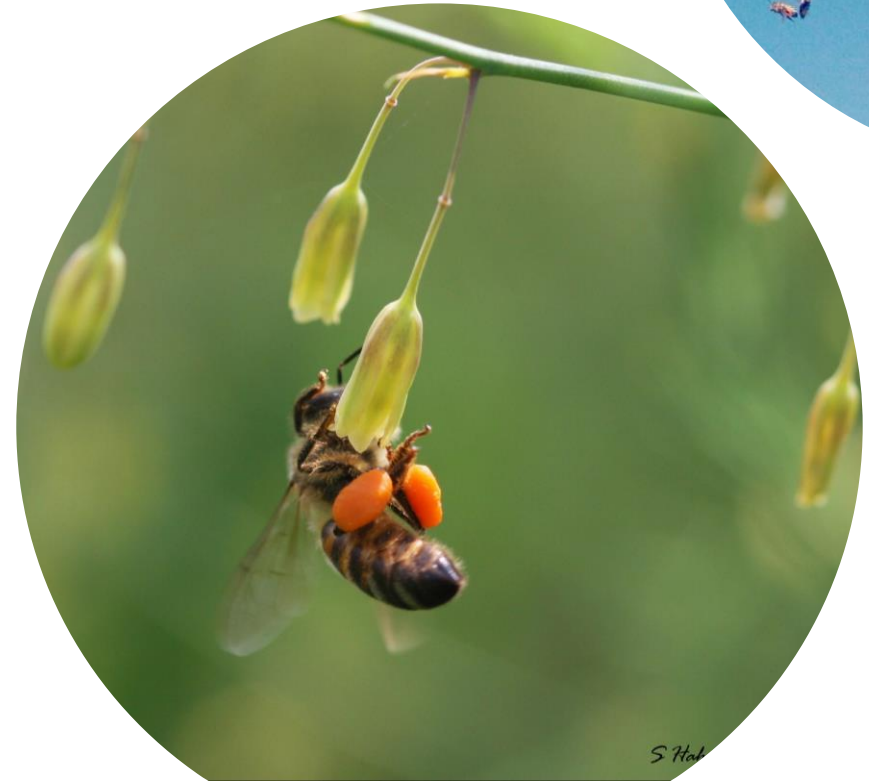
This is the peak of the spring nectar and pollen availability. The bees should bring in lots of pollen and nectar if their foraging flights aren't limited by inclement weather.

With the growing population, this is the peak of swarm season here in our region

This population growth underpins four colony-level changes that have been hypothesized to trigger swarming preparation: increasing colony size (in terms of both number of workers and amount of comb), congestion of the brood nest, skewing of worker age distribution toward younger individuals, and reduced transmission of queen-produced substances/pheromone.

## Environmental Conditions

More consistent foraging weather improves with most days in 70's/80's, nights in the 50's/60's, usually with numerous days of rain.



# Beekeeping Activities

- Colonies will continue to swarm, catching swarm will continue
- If you don't want to increase the number of hives, paper swarms into existing colonies to increase population, continue to cut out queen cells for extra queens
- Remove entrance reducers
- Continue to feed nucs and swarms until all new foundations are drawn out
- Using swarms short term to draw out numerous new foundations is an efficient use of swarms
- Check supers for brood, add queen excluder if needed
- Add second super, move full super frames from middle to outside
- Check for signs that colony is queenright, (eggs, very young larva) especially if it has swarmed
- Forage plants in bloom, black locust(1), wild blackberry(3), southern dewberry(3), white clover(5), bush honeysuckle(4), holly trees & shrubs(5), hops clover(2), persimmon(5), tulip poplar(5), yellow sweet clover(3), wild asparagus(4), royal paulownia(3), hairy vetch(3), white oak(3), black gum(3), Japanese honeysuckle(2)

# June

June is one of the two months of maximum population in the colony. Depending on your management style, the population will vary. Most estimates are in the range of 40-60,000 but some will be higher.

The Varroa mite population will be increasing

## Environmental Conditions

Generally good forage weather with warm/hot days, some days of high humidity, comfortable nights, sufficient rain to keep plants healthy and growing. You can expect 10-15 degree warmer temp. from the beginning of the month to the end of the month.



# Beekeeping Activities

There will be a few late swarming colonies

On hot evenings bees will ventilate and may beard, prop up outer cover for added ventilation, this also aids in drying honey

Check hives for pest such as hive beetles, treat if necessary

If you cannot inspect every one of your colonies, inspect those that are showing as much activity around the entrance

Check hive for signs of queen and acceptable brood pattern

If you want to do 2 honey extractions, you should probably make the first extraction by mid June

Available forage: white sweet clover(4), slender mountain mint(3), red clover(1), purple milkweed(2), carolina rose(3), butterfly weed(4), birdfoot trefoil(2), buckhorn(5), Indian hemp(2), white clover(5), chicory(2), yellow sweet clover(3), honeysuckle(2), smooth sumac(4), trumpet Creeper(2) narrow-leaved plaintain,(pollen 4), common milkweed(1)

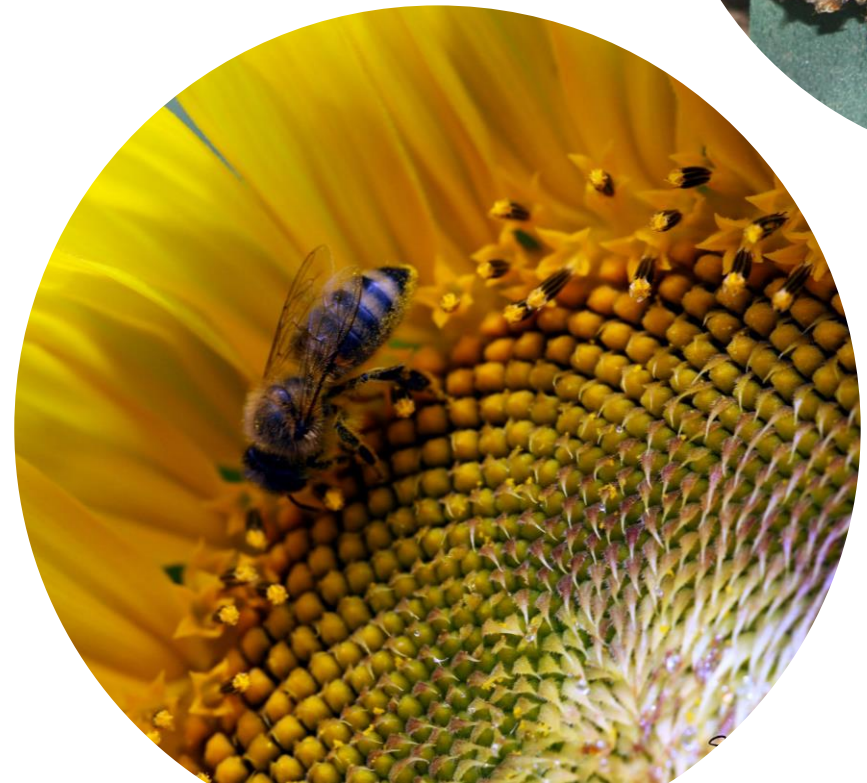
# July

One of the two months of maximum population.  
The summer heat requires the bees to ventilate and perhaps beard outside the hive on the hottest evenings.

Varroa mite population continues to build.

## Environmental Conditions

Expect this month to be the hottest of the year, hot days with very high humidity, warm nights, usually sufficient rain to prevent plants from suffering water related stress



# Beekeeping Activities

- Prop up outer cover for added ventilation to help prevent bearding and aid in drying honey
- Monitor hives for pest such as small hive beetles, wax moths. Yellow jackets and giant or European hornets may be seen around hives, set out trap if they become a problem, make sure late swarming hive are queenright, don't assume everything is okay just because you see a few bees around entrance or going in and out, open the hive
- If populations decrease to low, wax moths will move in and destroy all your drawn comb
- Bees should have a close water source
- Cultivated sweet corn provides pollen(4),sunflowers(3), catalpa(1) extrafloral nectaries on back of leaf<sup>1</sup>, soybeans(2-3-4, depending on the variety & environmental conditions)

# August

Bee will ventilate and may beard outside the hive during the evening when all the foragers return.

Lack of rainfall may effect the availability of pollen and nectar.

Varroa mite population usually peaks in August or September.

Remember that Varroa is tough to manage because the mites thrive in healthy, populous colonies

## **Environmental Conditions**

This is the second hottest month, hot days, high humidity, warm night, expect a decrease in rainfall.





# Beekeeping Activities

- Keep outer cover propped up for added ventilation
- Inspect hives a couple times this month
- Monitor pest such as SHB, wax moths,
- Rotate full super frames from middle to outside, if the super on the top deep is full, add super under the full one, (under super)
- If you have a couple of nucs, you may combine nucs in a deep box, although they can be over wintered  
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- Begin treating for Varroa mites if it fits the timing of your management practices, monitor mite drop or conduct mite check after treatment period
- Available forage: winged sumac(5), partridge pea floral & extrafloral nectaries on stem(4), devils walkingstick(5), chicory(2), joe-pye-weed(2)

# September



Egg laying slows down and the brood area continues to contract.

The Varroa mite population usually peaks in August or September and left untreated, they may spread viruses through the colony and cause it to die.

The bees may be more defensive, protecting their hive and robbing should be a real concern toward the end of the month.

Early September will have some very hot days, cooler toward the end of the month, rainfall average 2.5 in. likely to have extended dry period that will affect pollen and nectar availability



# Beekeeping Activities

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Treat for varroa mites by the end of the first week, monitor mite drop or conduct mite check after treatment period, (don't assume the treatment was effective)

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Remove honey supers first or second week and extract honey. To remove bees from supers, use a fume board with bee-gone, a leaf blower and a bee escape

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Set supers out to have remaining honey cleaned by bees

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Place supers or super frames in freezer for 48 hrs. and store for winter, be sure to protect comb from wax moths

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Combine weak colonies if you want to ensure strong populations going into winter or paper weak colonies into stronger colonies

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Forage available: yellow wingstem(5), white crownbeard(5), virgins bower(4), tall, common and grass-leaved goldenrod(5), spottedjewelweed(2), small white, frostweed, and calico aster(5), sericea lespedeza(2), pennsylvania smartweed(3), American burnweed(5),jerusalem artichoke(2), duck-leaved smartweed(3), sticktight(2), white snakeroot(2), sweet autumn clamatis(4)

# October



There will be very little to no forage as time passes toward the end of the month. Robbing is a concern so you should not feed on the hive entrance or leave frames with honey setting out by the hive unattended. Opening hives should be kept short to prevent outside bees from swarming the hive.

## **Environmental Conditions**

Cooler this month but not cold, nights may be in mid to low 40's, average rainfall is 3 in.



# Beekeeping Activities

- You can conduct mite alcohol wash on some of the hives to check for mite treatment efficacy, retreat if necessary
- Put entrance reducers on
- Feed 2:1 sugar water in feeders the first half of month. If feeding outside the hive place the feeder some distance from hive as possible with no straight line of site to any hives
- Put a mush bag of sugar in each hive last half of month, requires a shim on top of brood box
- Make or purchase 3% winter protein supplement, estimate  $\frac{3}{4}$  lb/hive
- May be some straggling asters, white snakeroot and goldenrod to forage on early in the month

# November

In general, the bees will still be active on a number of days which requires energy. They will not be clustered for any period of time so they will be going in and out of cluster which requires a lot of energy. There's no pollen or nectar going into the hive so the bees are feeding on their winter stores.

## Environmental Conditions

A lot of variation in daytime temperature range this month, the nights will be very cool to cold. The month will begin with an average daytime temperatures in the mid 60's and end with an average in the low 50's.



# Beekeeping Activities

Place 1 inch styrofoam insulation on top of inner cover inside the rim of inner cover. A large majority of the heat is lost through the top of the hive. If you use proper insulation on the inner cover, you do not have to vent the hive at the top to prevent condensation above the cluster. If you use solid bottom boards, tilt the hive forward a few degrees so any moisture that condenses on the inner sides will drain out the bottom entrance.

Put on sugar boards with protein supplement last week of month

No natural forage available

# December

There is very little egg laying during this month but probably not a complete brood break.

We don't normally see the bees bring in any pollen or nectar, there's usually not any wild growing plants in bloom.

## Environmental Conditions

A lot of variation in daytime temp. this month also, nights will be below clustering temp but there will be many days when the bees are not clustered and can be seen at the entrance.





# Beekeeping Activities

- Bees will be in and out of cluster which requires a lot of energy, more than if they were clustered up for days or weeks at a time
- Monitor sugar boards every couple of weeks
- Remove ice blocking the hive entrances to give the colonies better ventilation. Don't worry about snow around the entrance or hive body; it allows enough airflow
- If you build any of your hive parts, this is a good time of year to work on those projects
- You may want to subscribe or renew your subscription to American Bee Journal or Bee Culture magazine
- Spend some time reflecting on what went well and what you might change next year. Plan for your upcoming year: do you want to downsize or scale up. Develop a tentative plan, and manage your bees accordingly
- If you haven't tracked it in the past, you may want to record your financial activity for your beekeeping, the upcoming year would be a good time to begin

## Notes on some blooming plants.

Elm trees bloom the same time as the red maple, the maple is much more abundant. I have checked several years and have not seen any honey bee on the elm. Apparently the bees prefer red maple.

<sup>1</sup>The catalpa flower is not used because its nectar is toxic to honey bees. This is a protective mechanism to prevent insects from stealing the nectar without pollinating the flower.

There are a lot of plants that are used for landscaping around homes and buildings that honey bees forage on, these plants are not concentrated so they can be a hit and miss forage source. It was reported to me by a beekeeper that they have seen a large number of bees foraging on the mimosa tree. I have checked mimosa trees a number of times with no sightings, but local foraging episodes like this do occur under certain conditions.

Forage distance and area: The most productive forage is found within an half mile of the hive and consists of 502 acres. If bees forage 1 mile from the hive, that will include 2,009 acres. Lastly, if bees forage 2 miles from the hive, that will cover 8,042 acres.

