

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan



January in the Hive: Blooms

- Some pollen available in January
 - Dandelion
 - Honeysuckle
 - Rosemary
 - Cabbage/Mustard
 - Holly
 - Elm
 - -Ash
 - Many others



Examples of incoming pollen (Spring photo)

- Pollen & longer days alerts the queen to ramp up brood production
- Beekeepers watch for pollen going in, to be aware of the health & strength of the hive

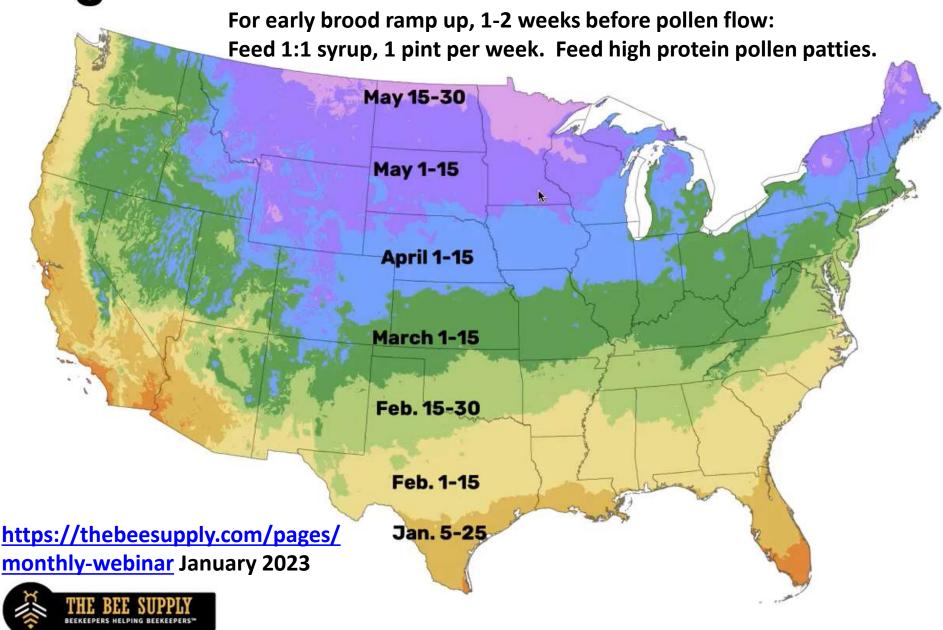
January in Hive: Bees & Beeks

Bees	Beekeeper
When cold, Bees cluster & be active to keep brood ~93° temperature	Don't chill the brood. Minimize time opening hive if below ~60°F, cloudy, windy.
Cluster may have eaten its way up to	Check food supply by hefting the back of hive. If temp < 50°, feed fondant or sugar brick, which also absorbs moisture (good). If > 50° can feed 2 parts sugar to 1 part water (+vinegar). Feed small amounts (1 pint/wk) to not overdo ramp up.
Depending on weather & pollen, Queens start laying in Jan.	Can feed pollen, but might not be used & may attract pests. Take care to not push early ramp up in eggs.
Winter bees are dying off	Don't be surprised to see a few dozen dead bees. If colony is too weak (<2 frames of bees), combine
On warm days, may go for water or pollen. Cleansing flights.	Watch for activity on warm days, to judge colony health
Mites survive winter with bees	If mite load high, treatments very effective, low brood
Potential for dysentery or Nosema	Watch for signs. Maintain good strength & nutrition.
Few guard bees; potential for pests	Keep entrance very small
Bees give Beekeepers "free time" in Winter.	Order bees/queens for Spring. Maintain/replace equipment. Join local bee club. Invite friends to join.

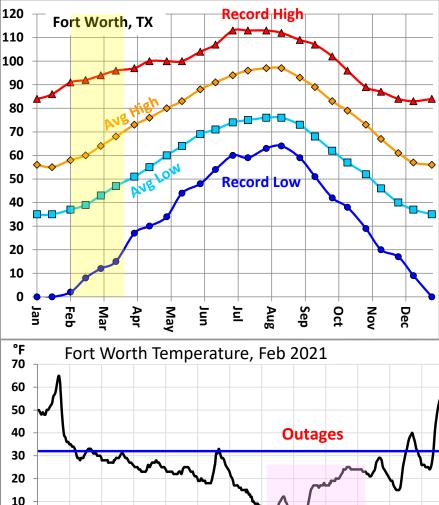
· All year: Queenright, Nutrition, Pests & Diseases



Significant Pollen Flow Start Dates



February in the Hive: Weather



Mon 2/15

Wed 2/17

Thu 2/18

Tue 2/16

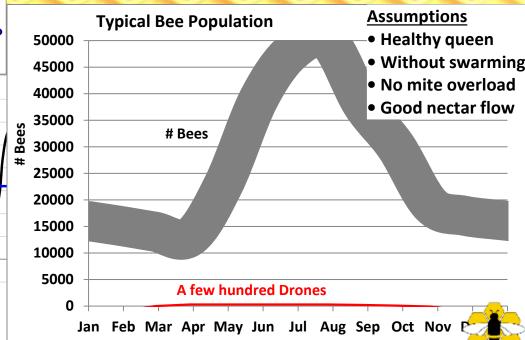
Sun 2/14

Fri 2/19

-10

Wed 2/10

- Temperatures
 between 0° & 95°
- If ice & snow, clear entrances for ventilation



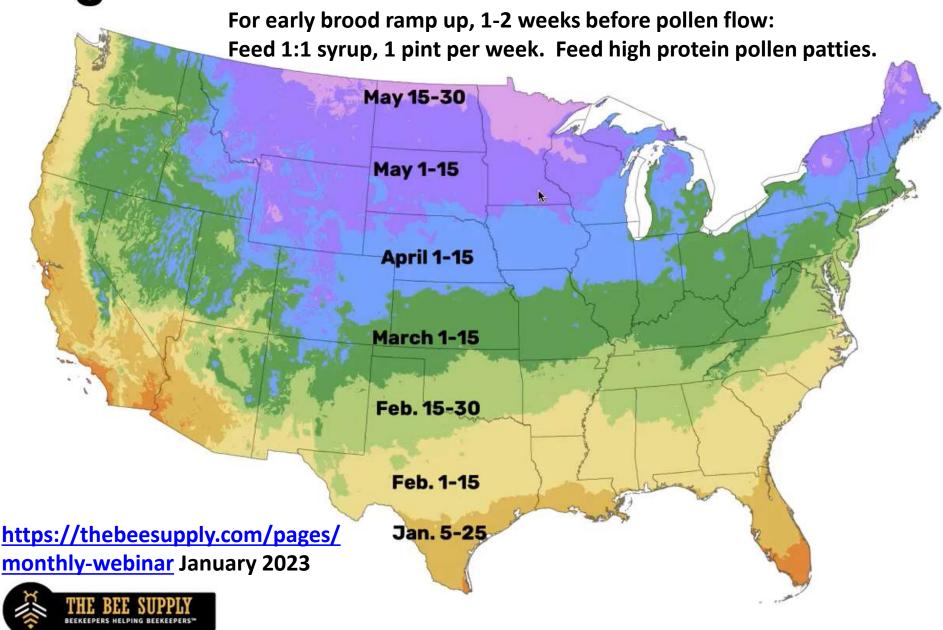
February in Hive: Bees & Beeks

Bees	Beekeeper
Colony is launching a new year.	Inspect on a warm day. Check for queen, syrup, pollen,
Pollen alerts queen to ramp up.	pests. Test for Varroa.
When cold, bees cluster & are	Don't chill the brood. Minimize opening below ~60°F.
active to keep brood ~93° F	If long very cold wave, consider wind breaks, insulation.
Maximum chance of starvation.	Check food supply at least every 2 weeks (heft or visual).
They can't forage below ~50° F.	If low on honey/nectar, feed (syrup, brick, fondant).
Feb 2021 had 14 days below 50° F.	1:1 syrup stimulates raising brood & building wax comb.
If hive runs out of stores, they stop	If low on pollen (or long cold forecast), add pollen patty.
rearing brood, & eat existing brood.	When it's warm again, remove remaining patty.
Varroa mite levels increase with	If more than 2 mites per 100 bees, implement Varroa
brood	controls. If treat, be finished before adding honey supers.
Bees may be in top box, above	Consider reversing boxes, but don't divide the brood
empty box	
Strong hives may fill >80% of space	Add a box to reduce swarming pressure. Prep for split.
Potential for pests & robbers	Keep entrance small, appropriate for activity level
Prepare for Spring	Order bees, queens, equipment for Spring.
	Maintain/replace equipment.

 All year: Queenright, Nutrition, Pests, Diseases, Housing

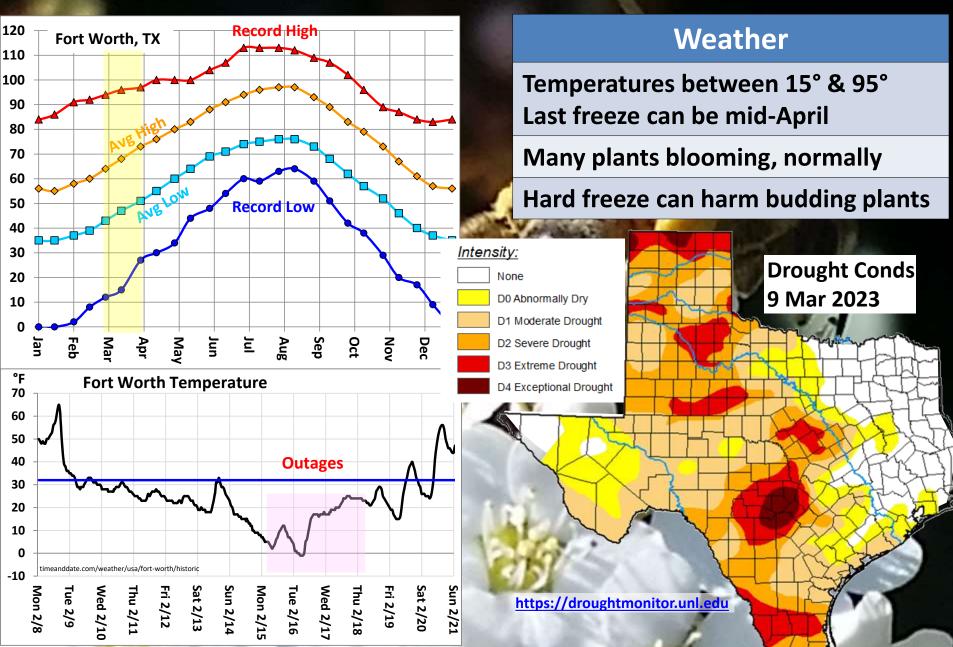


Significant Pollen Flow Start Dates





March in the Hive: Weather



March in Hive: Bees & Beeks

METRI REKEEPERS IVIAI COM IN G	live: Dees & Deeks
Bees	Beekeeper
 Brood production increases with pollen, up to 2000 eggs/day Queen is starting a new year! Bees know if she is productive. Bees build queen cells (if eggs), if failing queen or prep to swarm 	 Inspect (queen, food, pests). Don't chill brood. Is queen productive? Capped brood, larva, eggs, # of bees. Replace queen if needed. Or let bees replace her. Remove queen cells only if you have a queen. When top box 75% full, reduce swarming by adding a box (air-out 1st?), rotate boxes (don't divide brood), or split.
 Still feeding on stored honey & pollen, esp on cold days. 	 Several frames honey? If not, feed 1:1 syrup. Inside feeders don't invite robbing like front feeders do. If cold stretch, consider feeding pollen substitute.
 More bees are eating. More food is coming in. Honey storage starts w/ nectar flow. 	 Feeding can increase brood buildup, where needed. Feeding can increase swarming pressure. Add honey supers when needed. Don't feed w/ supers. Checkerboard honey to reduce swarming pressure.
Building comb	 Spray sugar water on empty frames. Delay excluder.
 Varroa mite levels increasing. Strong hives begin rearing drones. Varroa love drone brood. 	 Keep colony strong. Monitor for Varroa. Implement your Integrated Pest Management plan. Follow treatment instructions; it's the law & for safety. Can switch to screened bottom boards.

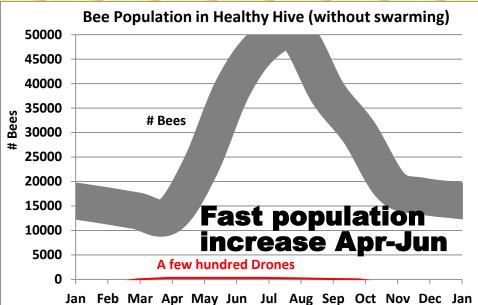
· Queenright, Nutrition, Pests, Diseases, Housing

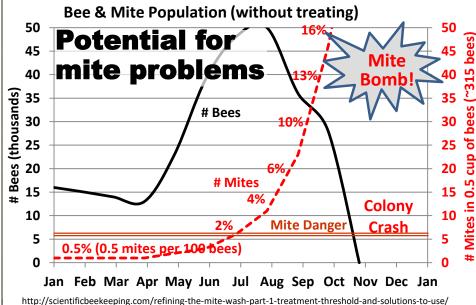
Maintain entrance for activity level & temperature.

Potential for robbing.

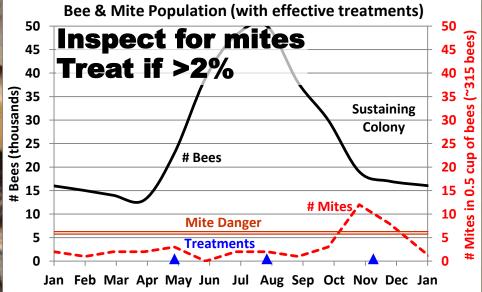


Bee Population by Month









http://scientificbeekeeping.com/refining-the-mite-wash-part-1-treatment-threshold-and-solutions-to-use/

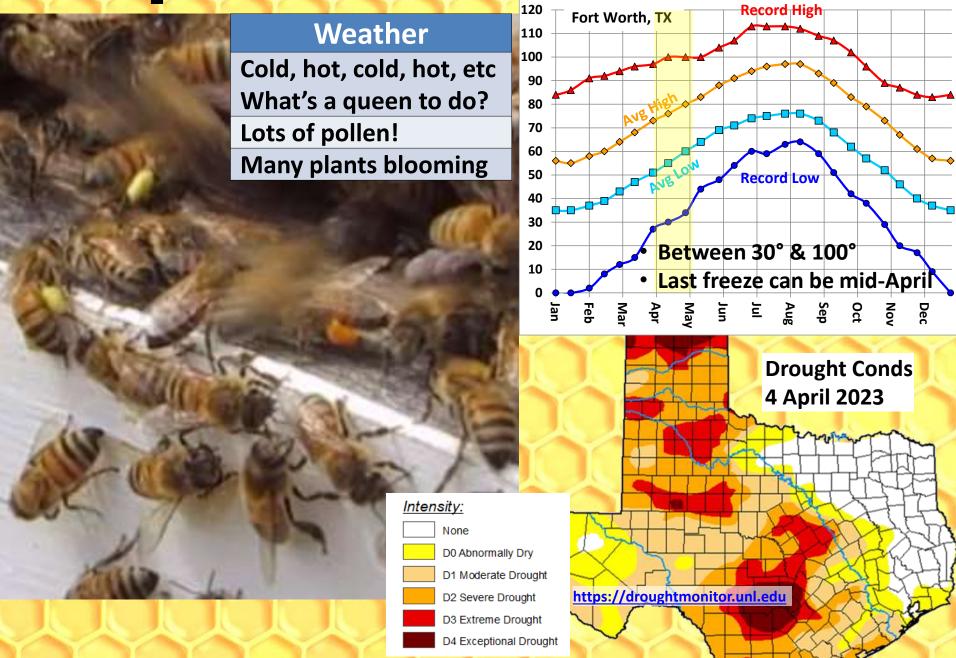
Mite Testing?

- Before varroa (1986), losses 10% to 15%/yr
- Now 30% to 50% of colonies are lost/yr
- Mites feed on bees & spread viruses
- 40% of hobby beeks don't test for mites
- Do you want to know?



April in the Hive: Weather

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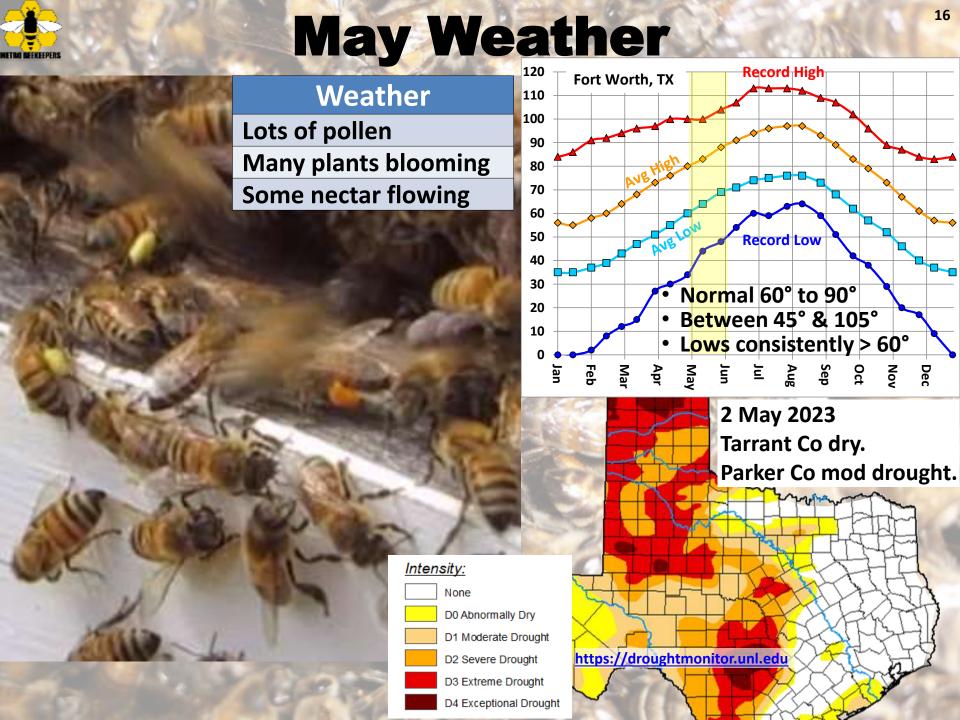
April in Hive: Bees & Beeks

Bees	Beekeeper
 Brood production booming with pollen, up to 2000 eggs/day Bees know if queen is productive. If queen failing or prep to swarm, bees build queen cells (if eggs) 	 Inspect (queen, food, pests, disease, housing) Don't chill brood Is queen productive? Capped brood, larva, eggs, # of bees. Replace queen if needed. Or let bees replace her Remove queen cells only if you have a queen
 On cold days (weeks), still eating stored honey & pollen 	 Several frames honey? If not, feed 1:1 syrup. Inside feeders don't invite robbing like front feeders do If cold week & low on pollen stores, consider supplement
More bees are eatingMore food is coming in	 Feeding can increase brood buildup, where needed Over-feeding can increase swarming pressure
Strong hives ready to swarm	 Add box when 75% full, (air-out 1st) Rotate boxes (don't divide brood) Checkerboard honey to reduce swarming pressure Split the colony
 Varroa mite levels increasing Strong hives begin rearing drones Varroa love drone brood 	 Keep colony strong. Monitor for Varroa. Implement your Integrated Pest Management plan Follow treatment instructions; it's the law & for safety Can switch to screened bottom boards Think ahead about honey supers, limits treatments
 Potential for robbing 	Maintain entrance for activity level & temperature.



If You Have a New Colony

- A new colony includes Nucs, Packages, Captured Swarm, New Queen, Splits
- Feed 1:1 syrup for at least 3 weeks, which strengthens the hive & makes it a place they want to stay
- If you do a split (or any new colony), give each colony at least 3 frames of brood, & 3 frames of honey & pollen, if available
- Confirm that the queen is laying eggs
- Add another box when the 1st box is 75% full of bees, or they will want to swarm
- If you have a captured swarm, you could use a queen excluder for a couple weeks

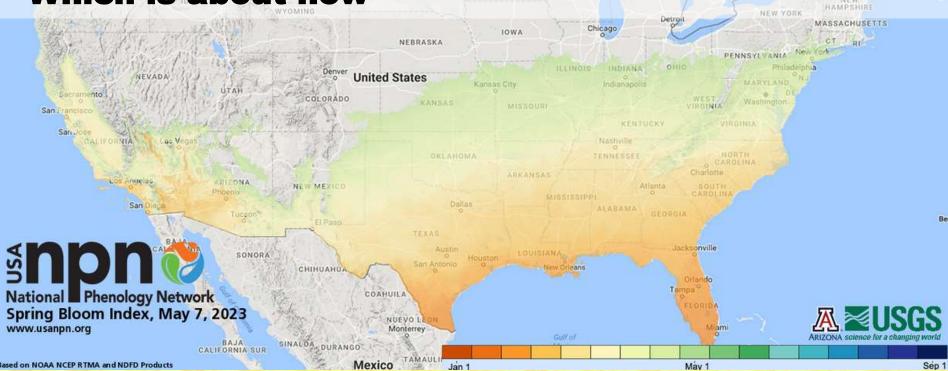


Spring Bloom 2023

- 1st blooms in North TX in early March 2023
- About 2 weeks earlier than normal
- Significant nectar flow occurs 2 to 3 months later

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- www.usanpn.org shows when plants leaf & bloom
- And compares to average



nectar flow

May in Hi	ve: Bees	& Beeks
·		

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Bees	Beekeeper
• New colonies?	• Feed 1:1 (1 part water, 1 part sugar), all they take

- Brood production booming with
 - pollen, up to 2000 eggs/day
- If queen failing, build queen cells (if eggs)
 - New box E H E H E H E H E H
- Orig box H E H E H E H E H E Split the colony Significant honey storage, if good
- Varroa mite levels increasing
- a concern Disease? Larvae should be pearl
- white, curved, glistening wet.

Potential for robbing

- It's hot, lots of bees, bearding

- Strong hives may want to swarm

- Rotate boxes (don't divide brood), esp if lower box empty
- Checkerboard honey to reduce swarming pressure

Requeen, or let bees replace queen

Remove queen cells only if you have a queen

Add brood box when frames are 70% full of bees

- If low on wax comb, feed bees until they build comb
- Prime foundation with wax to encourage drawing comb
- No queen excluder until ~6" comb drawn on 4+ frames
- Add honey supers when boxes are ~70% full.
- Keep colony strong. Monitor for Varroa. Implement IPM.

Inspect ~weekly (queen, food, pests, disease, housing)

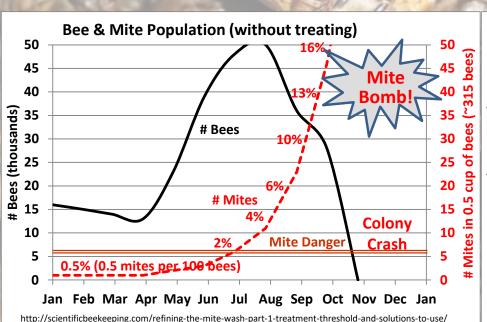
• Is queen productive? Capped brood, larva, eggs, # of bees.

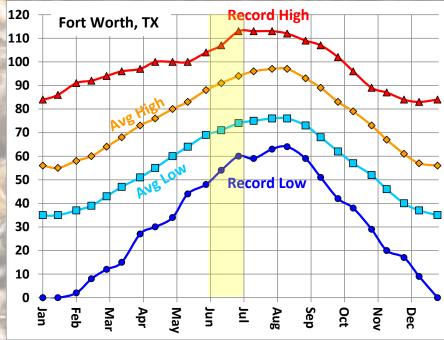
- More than 3 mites per 100 bees is |• Think ahead about honey supers, limits treatments
 - Mechanical steps during honey flow: drone brood frame removal, screened bottom board, powdered sugar dusting
 - Address if larvae are dark, chalky, or distorted
 - Address if brood caps sunken, perforated, spotty
 - Bearding is normal. Provide ventilation. Not full shade.
 - Maintain entrance for activity level & temperature.

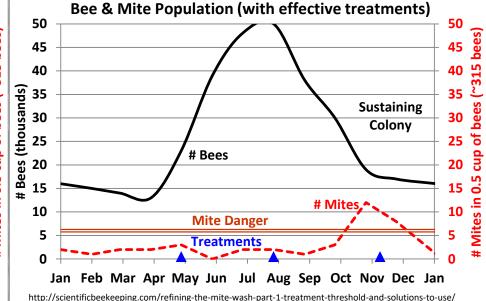


June in the Hive

- Temp, Avg 70° to 95°
 Record 50° to 110°F
- Nectar flow continues another week or two
- Bee growth slows if temp
 ~90° &/or less rainfall
- Mite count likely growing if not treated

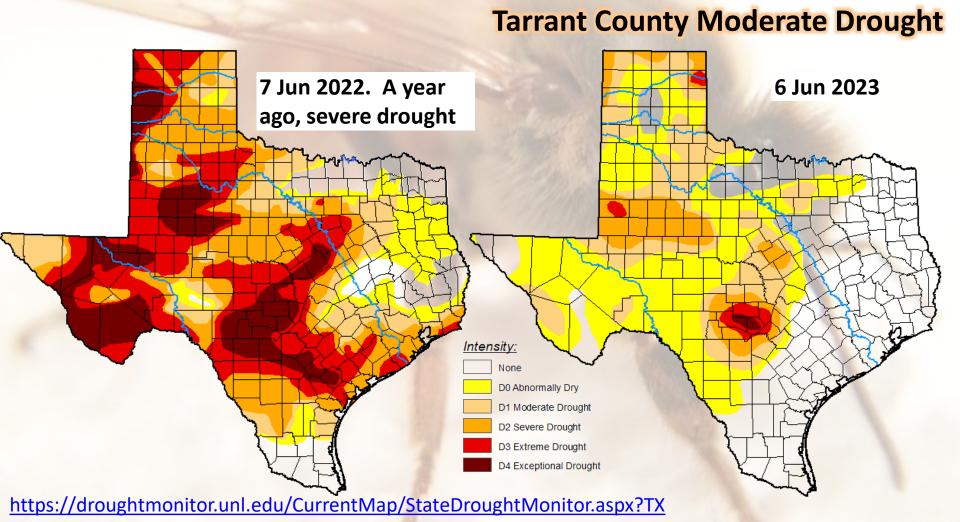






Drought Conditions Improved

- Make sure bees have water
- New colonies need nectar or syrup sub
- Consider feeding after harvest, to build winter stores





June in H	ive: Bees & Beeks
Bees	Beekeeper
• New colonies?	• Feed 1:1 (1 part water, 1 part sugar), all they take
Brood production going strong	 Inspect ~weekly (queen, food, pests, disease, housing) Is queen productive? Capped brood, larva, eggs, # of bees.
• If queen failing, build queen cells	• Requeen, or let bees replace queen

- (it eggs) Strong hives may want to swarm New box E H E H E H E
- Orig box H E H E H E H E H E Split the colony Significant honey storage, if good
- nectar flow, usually May thru June Prime foundation with wax to encourage drawing comb After nectar flow, bees eat honey, so supply goes down
- Varroa mite levels increasing • More than 3 mites per 100 bees is | • Think ahead: honey supers & temperature limit treatment

Potential for robbing

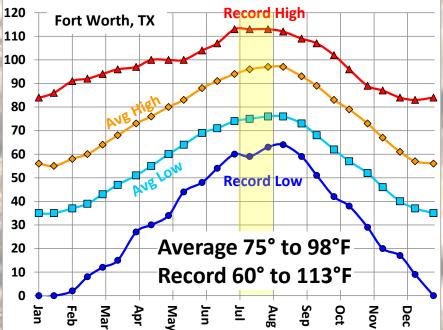
- a concern Disease? Larvae should be pearl
 - white, curved, glistening wet.
- Bees beard to control heat

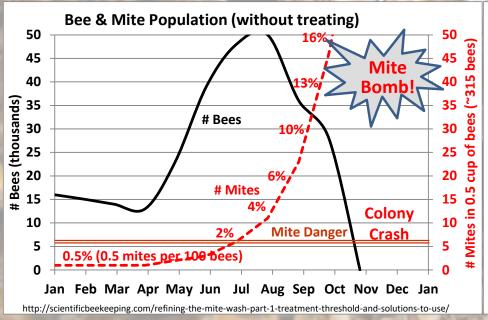
- Remove queen cells only if you have a queen Add brood box when frames are 70% full of bees
- Rotate boxes (don't divide brood), esp if lower box empty • Checkerboard honey to reduce swarming pressure
- If low on wax comb, feed bees until they build comb
- No queen excluder until ~6" comb drawn on 4+ frames
 - Add honey supers when boxes are ~70% full Keep colony strong. Monitor for Varroa. Implement IPM.
- Mechanical steps during honey flow: drone brood frame removal, screened bottom board, powdered sugar dusting
- Address if larvae are dark, chalky, distorted, or dry Address if brood caps sunken, perforated, spotty
- Bearding is normal. Provide ventilation. Not full shade.
 - Maintain entrance for activity level & temperature.

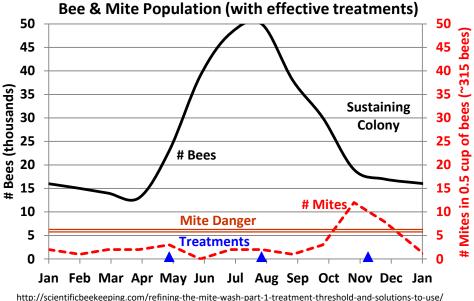


July in the Hive

- Hot & dry
- Nectar flow May thru June
- Bee growth slows
- Mite count likely growing
- July may be the most important month to check for varroa
 - Help bees survive winter

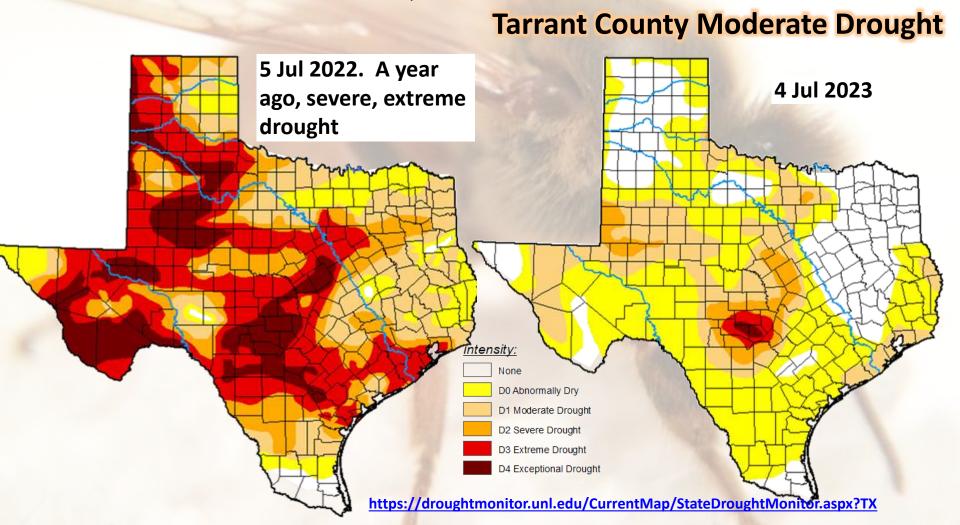






Drought Conditions

- Make sure bees have water
- New colonies need nectar or syrup sub
- Feed after final harvest, to build winter stores





shading hives in full sun in peak temps.

METER BETTER JULY IN F	live: Bees & Beeks
Bees	Beekeeper
• HOT & DRY!	 Make sure bees have reliable water supply. If excessive bearding, consider adding ventilation &/or

- Brood production past peak
- Not bringing in nectar
- Bees preparing for winter
- Varroa mite levels increasing
- 3+ mites per 100 bees is threat
- Strong hives may swarm

Disease? Larvae should be

- Rotate boxes (don't divide brood), esp if lower box empty

- After harvest, put supers back on for 24 hrs & bees will clean comb, & limit entrance to prevent robbing.
 - After harvest, freeze frames for 3 days, store with PDB.
 - Can open store frames outside, watch for wax moths & pests.
 - Feed after honey harvest. Build to 30 lbs honey before Oct.
 - Feeding builds comb now, instead of in nectar flow.

Lower brood might not indicate problem with queen

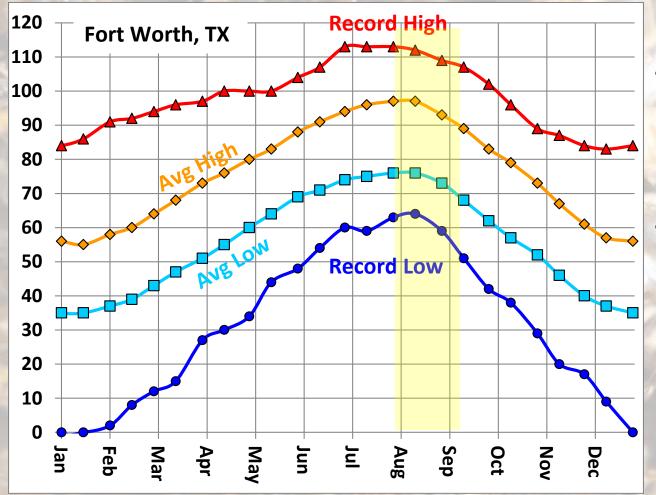
Harvest honey after nectar flow. If delay, bees eat honey.

- Keep colony strong. Monitor for Varroa. Implement IPM.
- Think ahead: honey supers & temperature limit treatments
- Drone brood removal, screen bottom board, powdered sugar Add box when frames are 70% full (brood, honey, nectar)
- Checkerboard honey. Don't checkerboard brood. Split the colony
- Address if larvae are dark, chalky, distorted, or dry
- Address if brood caps sunken, perforated, spotty white, curved, glistening wet. **Queenright, Nutrition, Pests, Diseases, Housing**



August in the Hive: Weather

- Temperature: Record low of 65° to high of 112°F
- We are passing the peak temperature (statistically)
- Beehives in full sun may need ventilation &/or shade



- Nectar flow was May thru June-ish
- Another nectar flow in late Aug, early Sep (we hope)

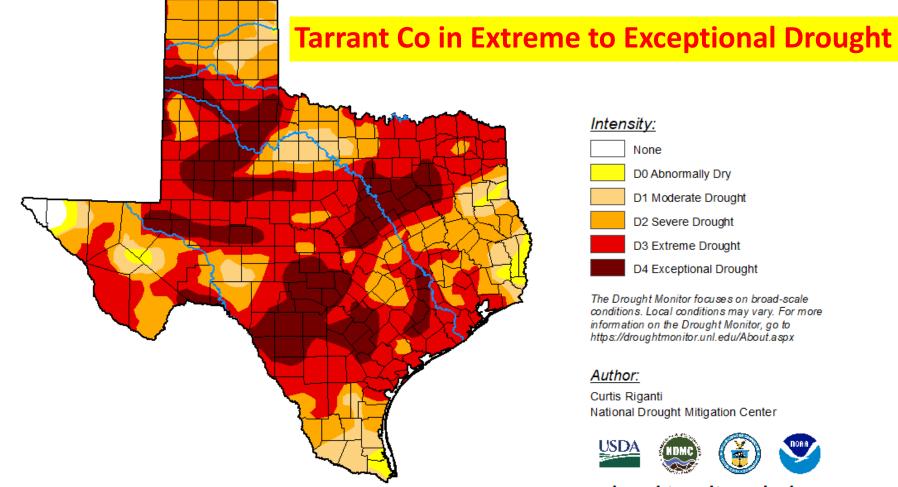
Drought Conditions

Make sure bees have water.

Mosquito dunks are safe for bees.

Consider ventilation & shade when very hot.

August 2, 2022 (Released Thursday, Aug. 4, 2022) Valid 8 a.m. EDT

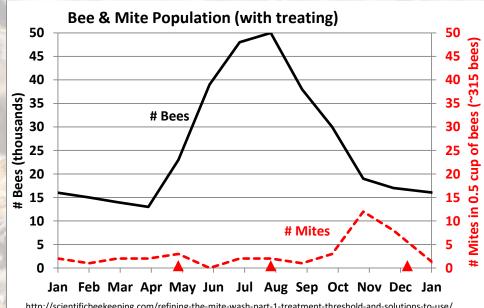


https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?TX

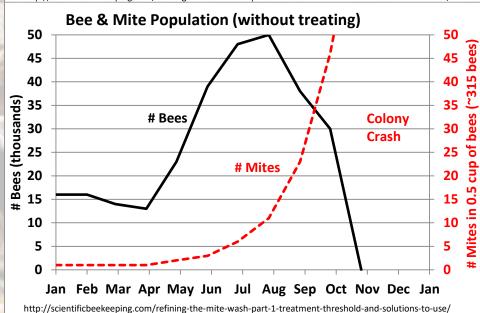


August in the Hive: Population

- Bees population likely past the peak
- Mite population can still be increasing
- Important to check for Varroa
 - -Sticky board
 - -Alcohol wash
 - -Sugar roll
- Act if more than 3 mites per 100 bees (9 mites in half cup)



http://scientificbeekeeping.com/refining-the-mite-wash-part-1-treatment-threshold-and-solutions-to-use/



August in Hive: Bees & Beeks

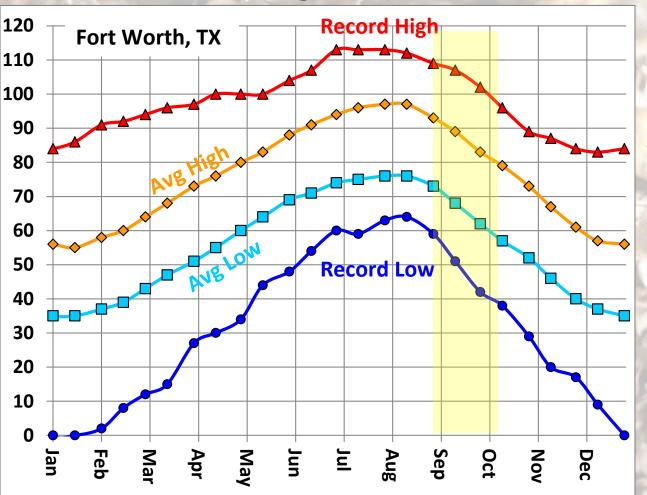
Bees	Beekeeper
Brood production	Inspect regularly (queen, food, pests).
likely past peak	Still need good brood patterns, or investigate problems.
HOT & DRY!	Make sure bees have reliable water supply.
	Signs of being too hot: excessive bearding, bees not working
	Options to lower temperature in hive: Shade hives, add
	ventilation, &/or, add empty box on top
	Work bees early morning. Avoid overheating. Ventilated suits.
Not bringing in nectar.	Feed to build 30 lbs honey storage before Oct.
Bees are preparing for	1 med frame of honey both sides is ~3 lbs.
winter now.	1 deep frame of honey both sides is ~4 lbs.
	Trickle feed helps avoid too fast growth, not sustainable.
	Feeding can build comb now, instead of during nectar flow.
Likely low on pollen	If less than a half frame of pollen, add pollen sub to strengthen
	winter bees. How do we know if they are low on pollen?
Varroa mite levels	Monitor for Varroa. Keep colony strong.
at/near peak	Implement your Integrated Pest Management plan.
	Some treatments are limited with supers or high temps.

Queenright, Nutrition, Pests, Diseases, Housing



September in the Hive: Weather

- Temperature: Record low of 40° to high of 108°F
- We survived the peak temperatures
- · Can still be very hot, or can be too cold to forage



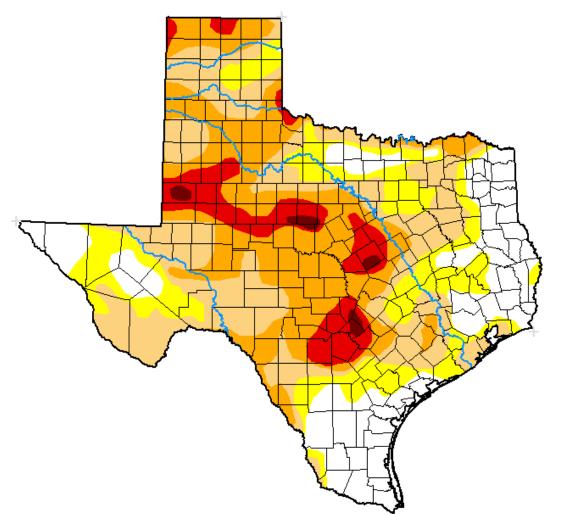
- Plants came alive after rain of Aug 22nd
- Did you see lots more brood?
- How much pollen is going into your hives?
- Is the pollen nearly all one or 2 colors?

Drought Conditions

Tarrant Co <u>three</u> levels better after Aug 22nd! Mosquito dunks are safe for bees & environ.

September 6, 2022

(Released Thursday, Sep. 8, 2022) Valid 8 a.m. EDT



Intensity:

None

D0 Abnormally Dry

D1 Moderate Drought

D2 Severe Drought

D3 Extreme Drought

D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx

Author:

David Simeral
Western Regional Climate Center









https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?TX



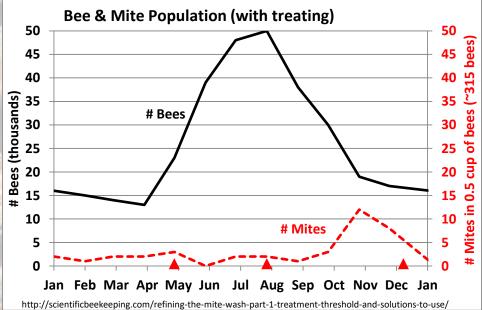
Mosquito dunks are safe for bees & environment

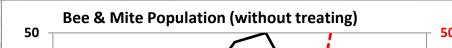
We put them in French drains, rain gutters, etc.

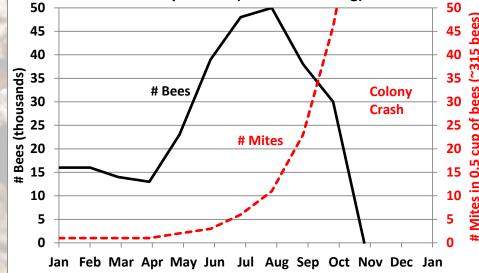


September in the Hive: Population

- Rain brought increase in brood
- Mite population may still be increasing
- Important to check for Varroa
 - -Sticky board
 - -Alcohol wash
 - -Sugar roll
- Act if more than 3 mites per 100 bees (9 mites in half cup)







http://scientificbeekeeping.com/refining-the-mite-wash-part-1-treatment-threshold-and-solutions-to-use/



September: Bees & Beeks

Bees	Beekeeper
Bee population	Inspect regularly (queen, food, pests, housing).
declining.	Look for good brood patterns, or investigate problems.
Brood begins to	Still time to re-queen & be strong for winter.
include winter bees.	Queens still available, but soon no more.
Bees are preparing for	Make sure bees have reliable water supply.
winter now.	Feed to build honey storage, 10 frames, both sides.
Foraging can include	1 med frame of honey both sides is ~3 lbs.
some nectar, pollen,	1 deep frame of honey both sides is ~4 lbs.
water, or a dearth.	Trickle feed helps avoid too fast growth, not sustainable.
	Feeding can build comb now, instead of during nectar flow.
	Remove queen excluders a month ago.
Maybe low on pollen,	If less than a half frame of pollen per hive, or pollen all one or
or low-quality pollen	two colors, adding pollen sub will strengthen winter bees.
Varroa mite levels	Monitor for Varroa. Keep colony strong. Combine weak hives.
at/near peak	Implement your Integrated Pest Management plan.
May have diseases	Inspect. Terramycin for Foulbrood. Fumidil-B for Nosema.
	Store empty boxes w/ PDB (not naphthalene moth balls!)
	Order bees for Spring?

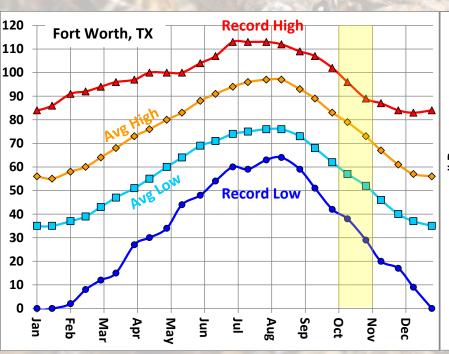
Queenright, Nutrition, Pests, Diseases, Housing

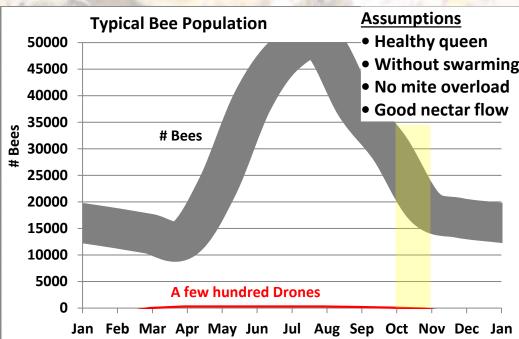


October in the Hive: Weather & Colony Population

- Temperature
 - Record 25° to 100°F
 - -Avg 50° to 80°
 - 1st freeze Oct to Jan (avg Nov 22)
- Nectar flow low/none

- Bee population is decreasing for winter
- Oct is a good month to treat for mites



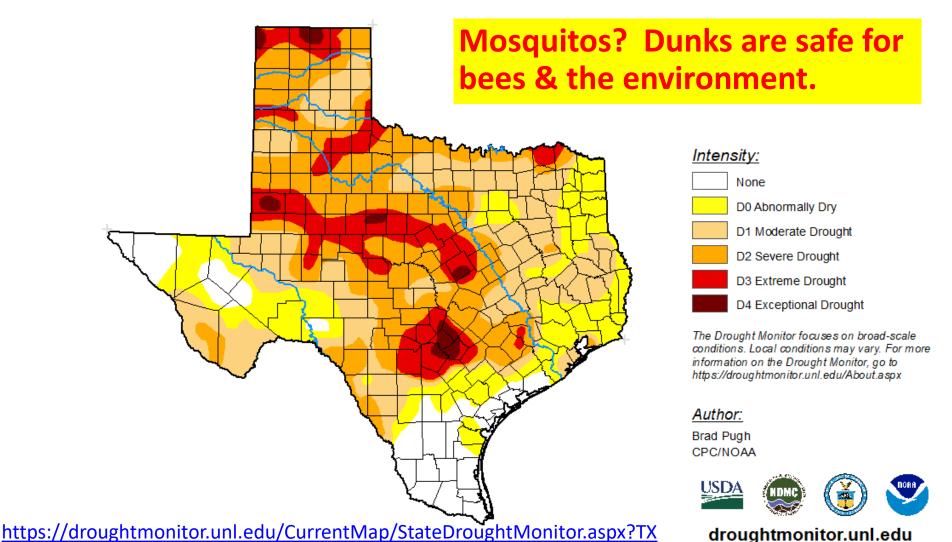


Drought Conditions

Western Tarrant Co is back to Severe Drought. Make sure bees have water.

October 4, 2022
Released Thursday, Oct. 6, 2022)

Valid 8 a.m. EDT



October in Hive: Bees & Beeks

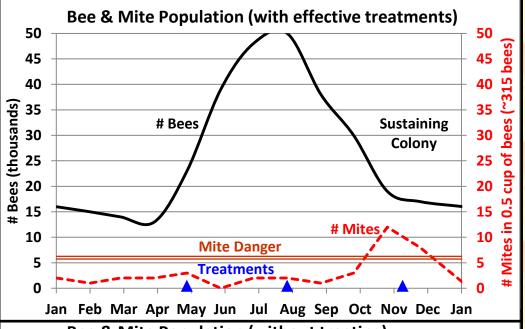
Bees	Beekeeper
Some hives are queenright.	Inspect (on warm dry day) & find out if queenright.
Some are not.	If weak (less than 4 frames covered w/ bees on both sides),
	newspaper combine into stronger hives.
	Too late to re-queen.
No/low nectar coming in.	Consider feeding sugar (2:1 syrup, fondant, brick).
Bees are preparing for winter.	2:1 = 2 parts sugar to 1 part water. Why 2:1 in Autumn?
	Build to ~30 lbs honey storage well before first freeze.
	Don't overfeed. Leave room for brood.
	Consider feeding pollen sub to strengthen winter bees.
Bee population is decreasing.	Bring hive boxes down to winter size. No queen excluders.
Workers emerging now should	Use entrance reducers. Cover bottom screens.
live through winter (less flying).	To store, freeze frames for >2 days, & store with PDB moth
	crystals (not moth balls), or whatever your storage choice.
Varroa mite levels may still need	Monitor for Varroa. Keep colony strong.
attention	Implement your Integrated Pest Management plan.
	Some treatments have minimum temp 50°F. Follow labels.
Drones are dismissed	Don't be concerned to see drones pushed out.
Likely end of fall swarming	Worry less. Be happy more. Make candles.

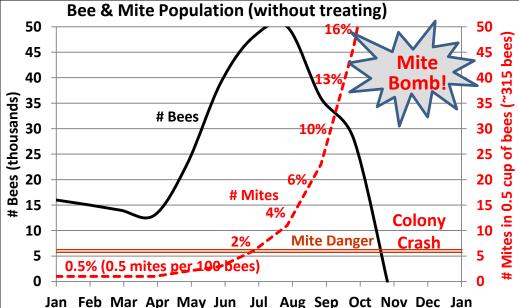
Queenright, Nutrition, Pests & Diseases, Housing





Varroa Mite Management





- Typical scenario with effective inspections
 & treatments
- More than 3 mites in 100 bees is a real threat to winter survival

- Worst case scenario
- Please monitor for varroa & take appropriate action

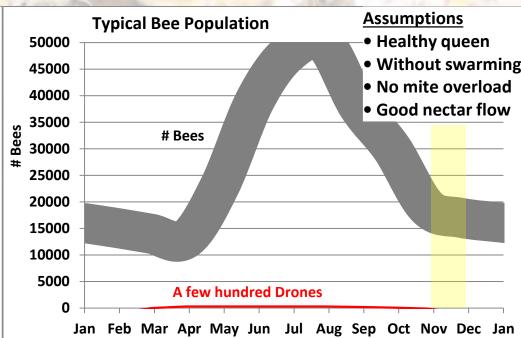


November in the Hive: Weather & Colony Population

- Temperature
 - Record 15° to 88°F
 - -Avg 40° to 70°
 - 1st freeze Oct to Jan (avg Nov 22)
- Nectar flow low/none

- Bee population is decreasing for winter
- Mite load may warrant attention





November in Hive: Bees & Beeks · All year: Queenright, Nutrition, Pests & Diseases

Bees	Beekeeper
Queen health	Eggs & larvae are good sign. Brood patch decreasing is fine.
Some hives are too weak to survive winter	Count frames of bees. Can be done with quick check. Combine weak hive, < 5 frames of bees on both sides.
Prepare for cold weather: • Slower brood production • Seal cracks • Cluster when it's cold	 Beekeepers prepare for cold weather: Feed if needed for 30-40 lbs of nectar/hive. Full deep=10 lbs. Check pollen stores. Can supplement if low. Provide wind break. Use entrance reducer. May want to close screened bottom. Keep ventilation.
Bees keep eating to have energy to generate heat by constantly moving muscles	 Check if they have enough food stores. Bees won't take syrup below ~50°, but will take fondant or a sugar brick, which will also absorb moisture (good). If you put syrup in inside feeder, add about a teaspoon of vinegar per gallon of 2:1 syrup (2 parts sugar to 1 part water for winter), or else syrup can spoil. Also helps pH. Check pollen stores. Can supplement if low.
Varroa mite levels may still need attention	Monitor for Varroa. Use IPM to keep < 2 mites/100 bees. Treatments can be especially effective when no/low brood.

Hopguard, OA fume, Apivar. If 50 to 85° for a week, then MAQS

available. If temp 60 to 105°, then Thymol available.

Treatments have limits. Follow the labels.

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Bees	Beekeeper
Bees keep eatingNo nectar & not much pollen coming in	 Check if 30 to 40 lbs (10 frames) honey Bees won't take syrup below ~50°, but will take sugar brick on top bars in shallow box, will also absorb moisture (good). Bees may eat neighbor's chicken feed. Feed open pollen.
 Maybe no brood or eggs 	 That's ok until late Jan or Feb, depending on weather
Clustering when cold	 Provide wind break. Use entrance reducer. Close screened bottom. Keep ventilation.
 Wintering bees have die-off 	 If box nearly empty, you can remove box, but not necessary
• 40% to 50% hives may die	 React quickly. Freeze frames for 2+ days to kill pests. To protect from pest damage, store in plastic bags with PDB moth crystals. In Spring, air-out & give to bees.
 Cleansing flights, warm day 	Tolerate little yellow spots on car
Need clean comb	Rotate old or dirty comb, replace with new frames
Need nice neighborhood	Repair boxes, re-paint boxes, repair stands, prepare ground
Need to relocate	Easy to move hives on cold days
Need more neighbors	Order bees / queens for Spring, provided in sequence of order

