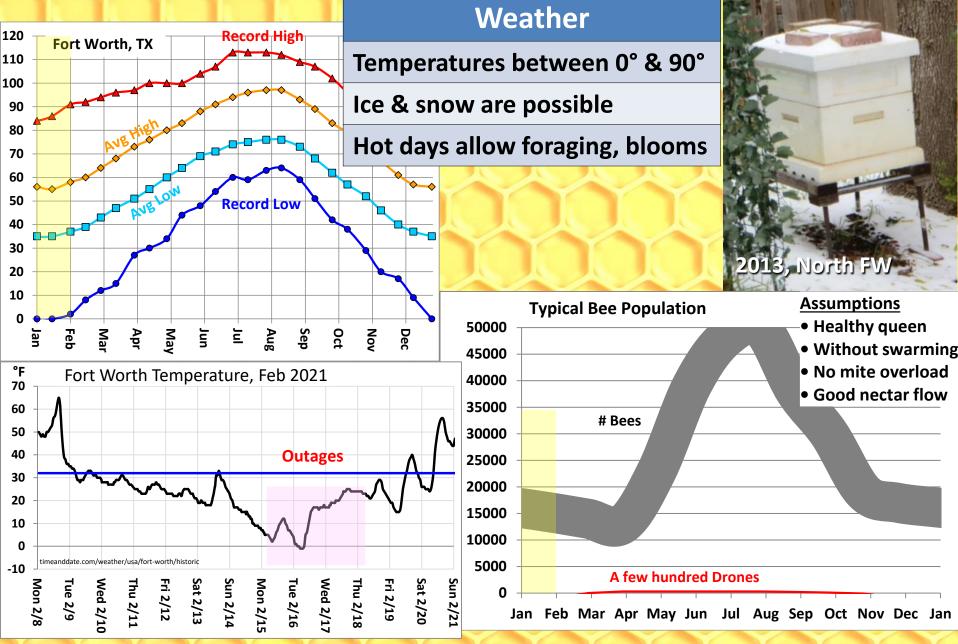
# This Month in the Hive



# January in the Hive: Weather



# 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

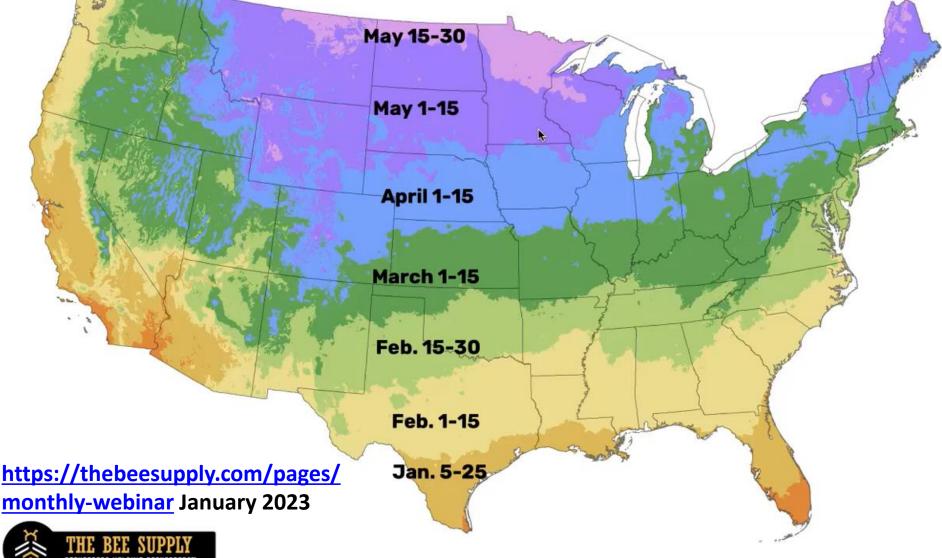
# **January in Hive: Bees & Beeks**

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.
Bees eat lots of honey between workouts. Colonies can starve. Cluster may have eaten its way up to the top box.	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.

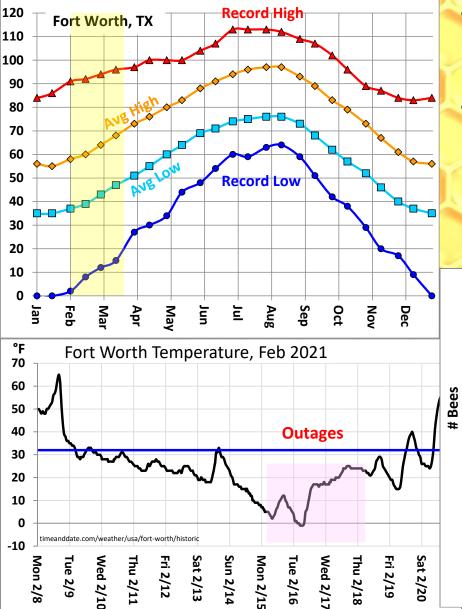
### All year: Queenright, Nutrition, Pests & Diseases

# **Significant Pollen Flow Start Dates**

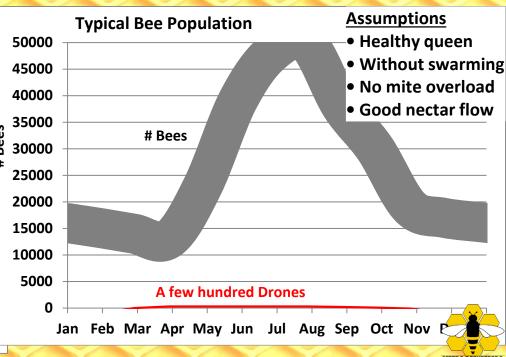
For early brood ramp up, 1-2 weeks before pollen flow: Feed 1:1 syrup, 1 pint per week. Feed high protein pollen patties.



## **February in the Hive: Weather**



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



# **February in Hive: Bees & Beeks**<sup>'</sup>

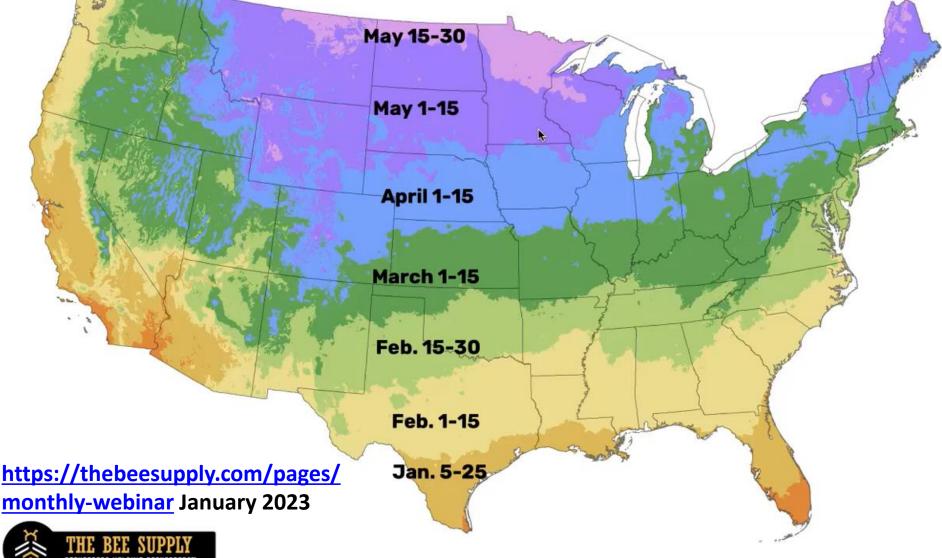
Bees	Beekeeper
Colony is launching a new year.	Inspect on a warm day. Check for queen, syrup, pollen,
Pollen alerts queen to ramp up.	pests. Test for Varroa.
When cold, bees cluster & are	Don't chill the brood. Minimize opening below ~60°F.
active to keep brood ~93° F	If long very cold wave, consider 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

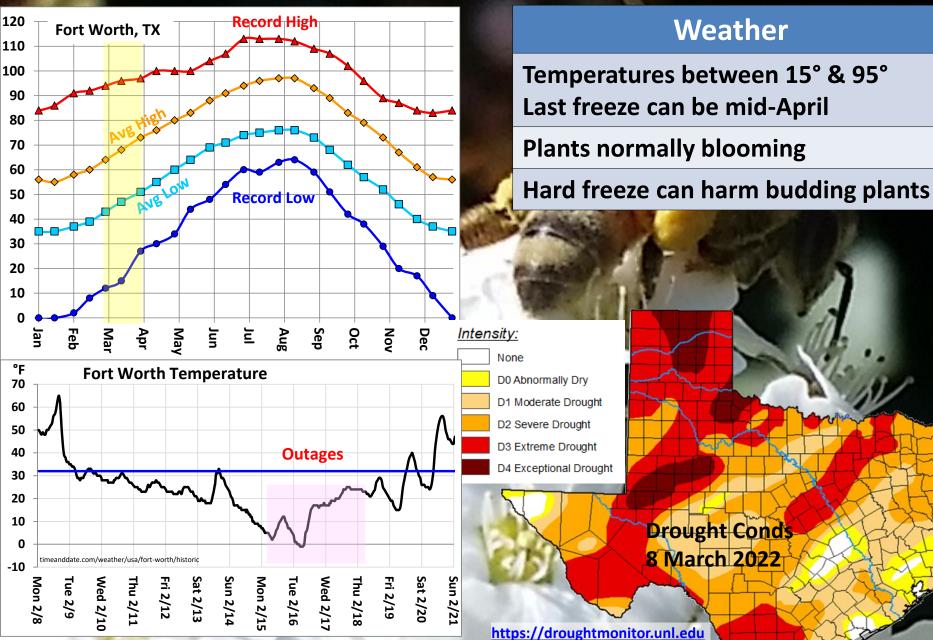


# **Significant Pollen Flow Start Dates**

For early brood ramp up, 1-2 weeks before pollen flow: Feed 1:1 syrup, 1 pint per week. Feed high protein pollen patties.

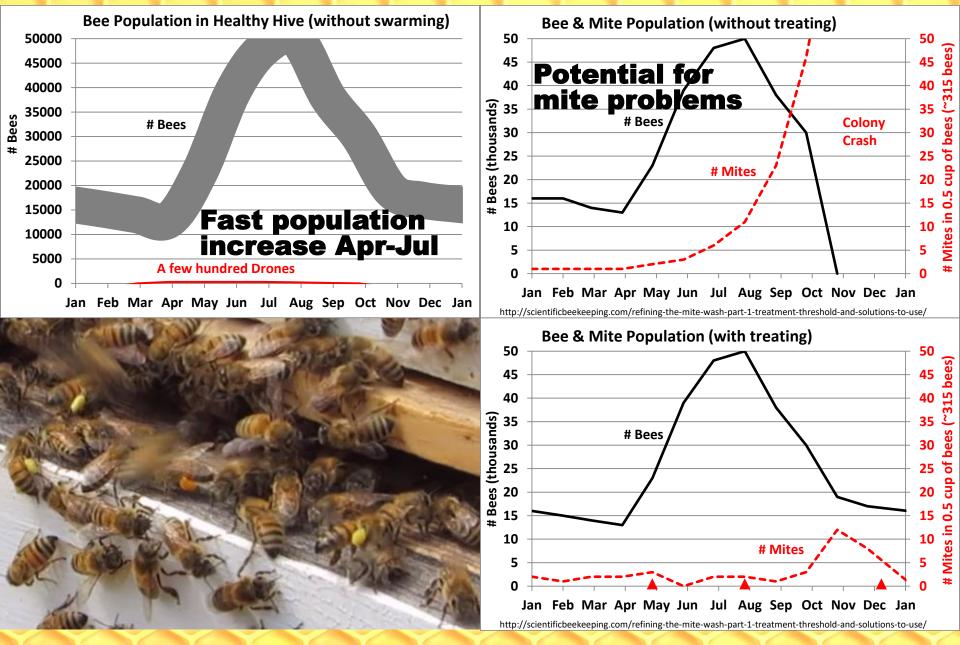


# March in the Hive: Weather



# **Bee Population by Month**

BEEKEEPERS



# March in Hive: Bees & Beeks

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### All year: Queenright, Nutrition, Pests & Diseases

# April in the Hive: Weather

### Weather

Temperatures between 30° & 100° Last freeze can be mid-April

**Plants normally blooming** 



# **Drought Conditions**

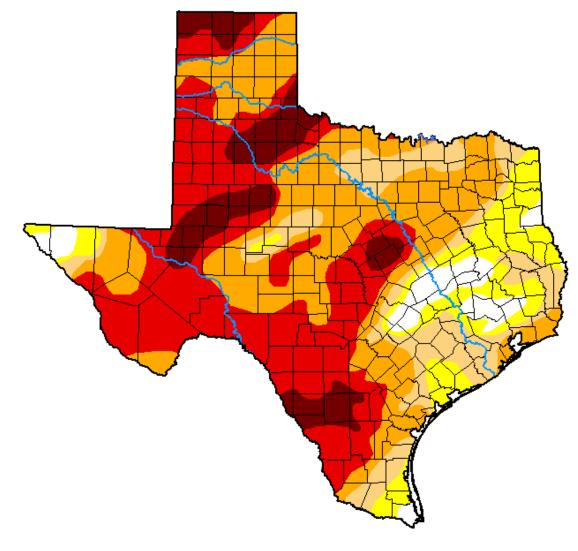
### April 5, 2022

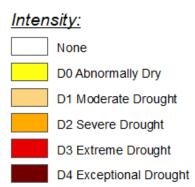
3

(Released Thursday, Apr. 7, 2022) Valid 8 a.m. EDT

#### Make sure bees have water & nectar (or syrup sub)

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





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:

Deborah Bathke National Drought Mitigation Center



#### droughtmonitor.unl.edu

# April in Hive: Bees & Beeks

Bees	Beekeeper
Brood production is booming	Inspect (queen, food, pests). Good brood patterns? If not, address queen problem.
Building comb	Spray sugar water on empty frames to encourage building
Bees gather nectar in the honey flow which is normally the 1 <sup>st</sup> week of May in North TX	Feed sugar syrup (1:1) as needed to draw wax & fill the 2 <sup>nd</sup> box with honey stores, then all new nectar goes into your honey supers. Boardman feeders invite robbing in Spring. No pollen substitute is needed (achoo!).
Bees build queen cells if not queenright or if planning to swarm	For strong hives, you can reduce swarming pressure by adding supers, add/rotate brood frames, do splits, checkerboard honey, requeening (or let bees replace queen)
Varroa mite levels increase with bee count. Hives are 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. Many treatments prohibited with honey supers on. Can switch to screened bottom boards.
Potential for robbing	Maintain entrance appropriate for activity level

### All year: Queenright, Nutrition, Pests & Diseases

# 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 1<sup>st</sup> box is 80% 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

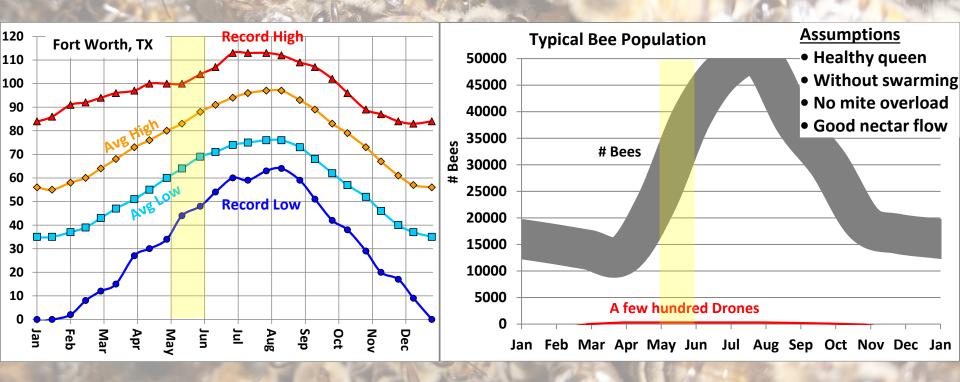


# May in the Hive: Weather & Bee Population

- Temperature

  Avg 60 to 90°
  Record 40° to 105°F
- Nectar flow this month
  Many plants blooming

- Bees population growing
- Also mites

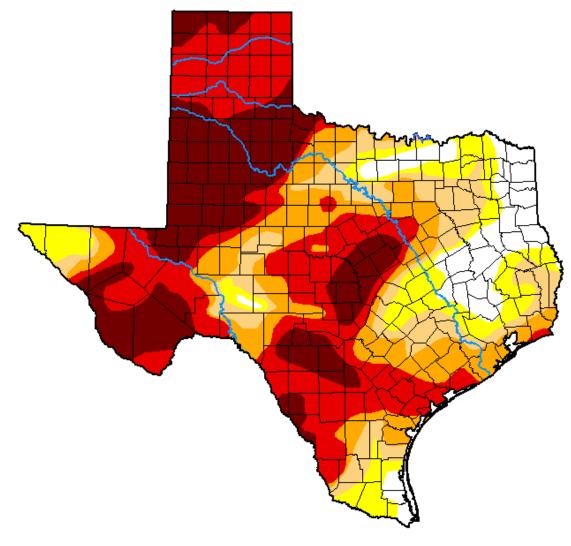


# **Drought Conditions**

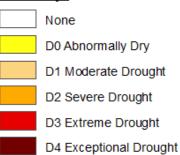
May 3, 2022 (Released Thursday, May. 5, 2022) Valid 8 a.m. EDT

Make sure bees have water & nectar (or syrup sub)

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



#### Intensity:



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



#### droughtmonitor.unl.edu

# May in Hive: Bees & Beeks

Bees	Beekeeper
New colonies?	Feed until brood box has at least 80% drawn wax
Much Brood production	Good brood patterns? If not, address queen problem.
Bees build queen cells if not queenright or if planning to swarm	Remove queen cells only if you have a queen. For strong hives, reduce swarming pressure by adding supers, add/rotate brood frames, do splits, checkerboard honey, requeen, or bees replace queen.
Significant honey storage, if good nectar flow.	Inspect & provide space for food storage. Add honey supers when boxes are ~80% full. Consider queen excluder to dedicate boxes for honey. If no wax comb, feed bees until they build comb.
Varroa levels increasing. Hives 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; safe honey. Many treatments prohibited with honey supers on.
Potential for robbing	Maintain entrance size, appropriate for activity level
It's hot, many bees, sun	Provide ventilation in top &/or screened bottom board
Equipment	Prepare for harvest in ~July (order bottles, etc)

All year: Inspect for Queenright, Food, Pests/Diseases

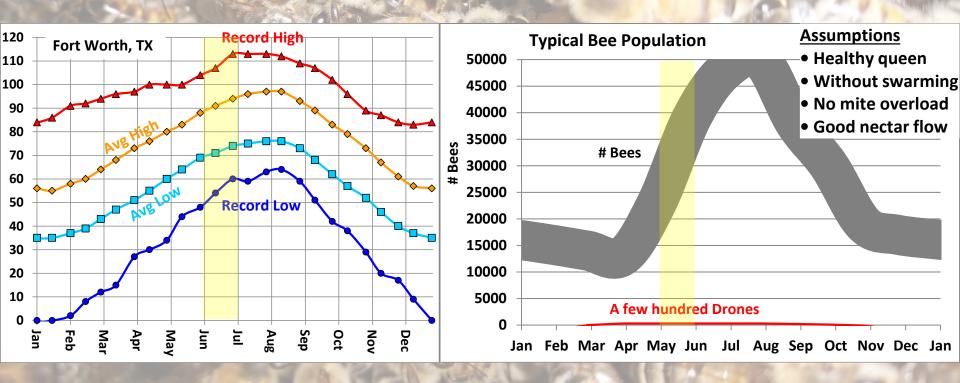


# June in the Hive: Weather & Bee Population

- Temperature

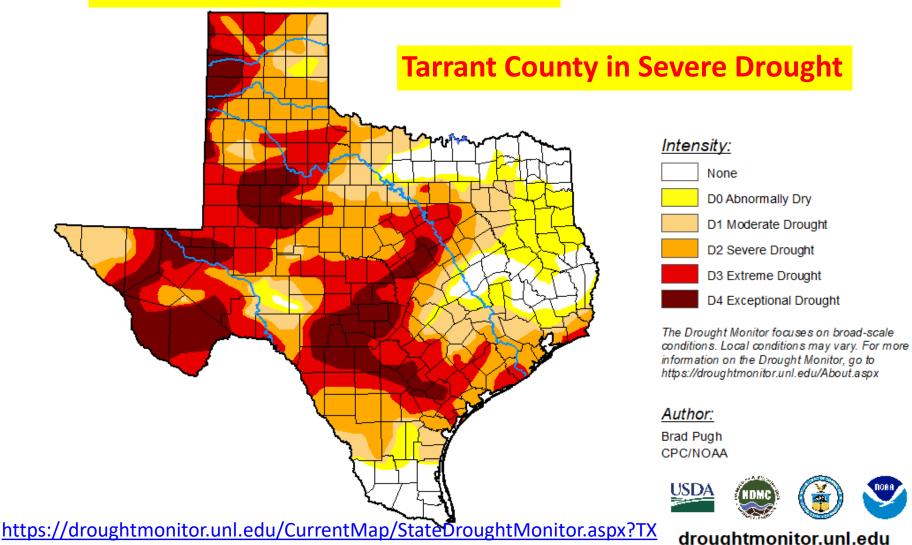
  Avg 70 to 95°
  Record 50° to 110°F
- Nectar flow this month
  Many plants blooming

- Bee population growing
- Also mites



# **Drought Conditions**

Make sure bees have water. New colonies need nectar or syrup sub. Feed after harvest, to build winter stores. June 7, 2022 (Released Thursday, Jun. 9, 2022) Valid 8 a.m. EDT



# June in Hive: Bees & Beeks

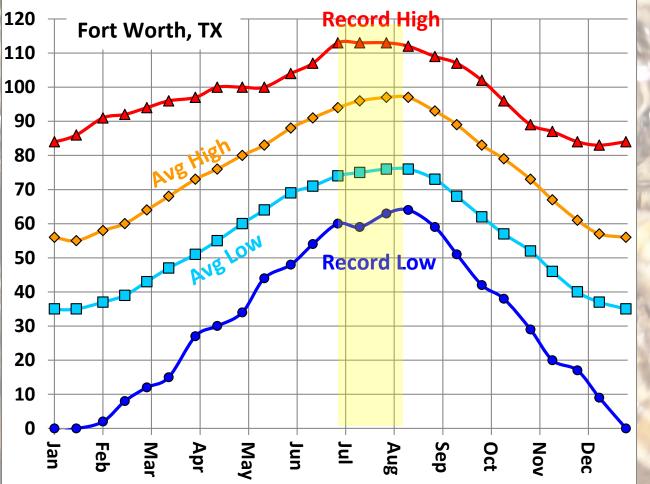
In the Hive	Beekeeper Actions
Colony new this year?	Feed until brood box has at least 80% drawn wax
High brood production	Good brood patterns? If not, address problem(s).
Bees build queen cells if not queenright or if planning to swarm	Remove queen cells only if you have a queen. For strong hives, reduce swarming pressure by adding supers, add/rotate brood frames, do splits, checkerboard honey, requeen, or bees replace queen.
Significant honey storage, if good nectar flow, usually May thru June	Inspect & provide space for food storage. Add honey supers when top box is ~80% full. Consider queen excluder to dedicate boxes for honey. If no wax comb, feed bees until they build comb.
Maximum honey after nectar flow, usually late June	Honey is ready to harvest if few drips when shaken. Put harvested supers on hive for cleanup for one day. Remove & store all but one box above brood box. Feed.
Varroa levels increasing	Implement your Integrated Pest Management plan. Monitor for Varroa. If needed, treat after harvest. Follow treatment instructions; it's the law; safe honey.
Potential for robbing	Maintain entrance size, appropriate for activity level
It's hot, many bees, sun	Provide ventilation in top &/or screened bottom board
All waare Inchast	for Queenright Food Bosts/Discosso

All year: Inspect for Queenright, Food, Pests/Diseases



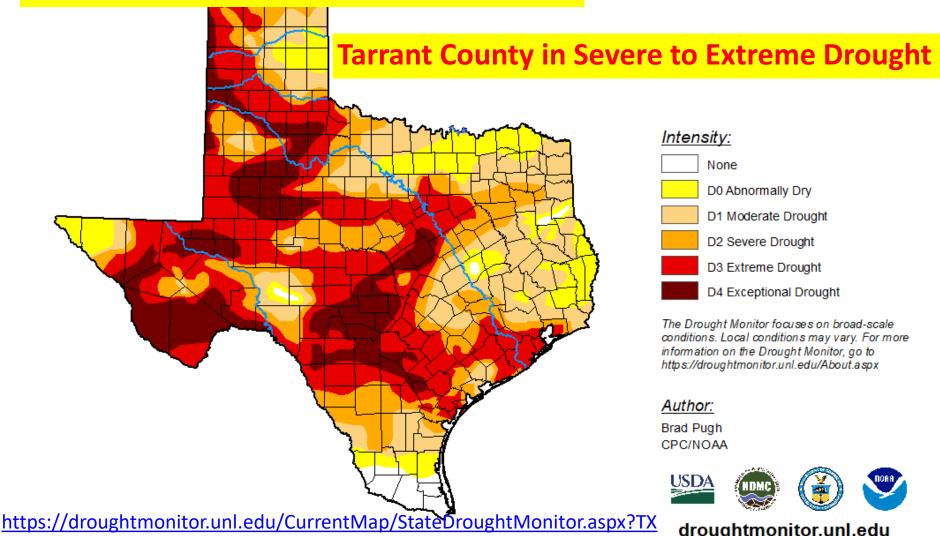
### **July in the Hive: Weather**

- Temperature - Record 60° to 112°F
- Nectar flow was May thru June
- Another nectar flow in late Aug, early Sep (hope)



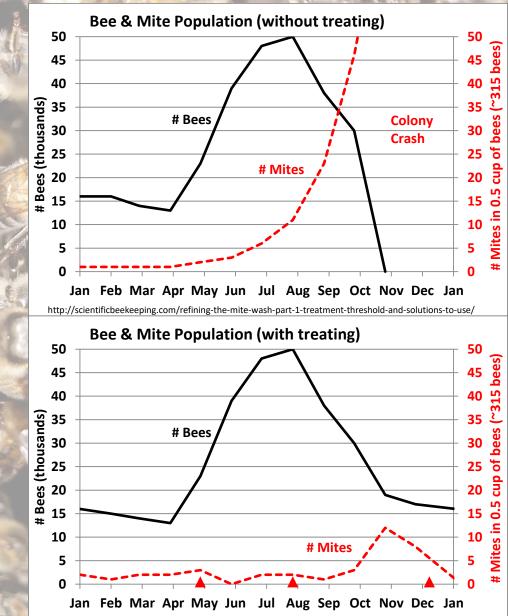
# **Drought Conditions**

Make sure bees have water. New colonies need nectar or syrup sub. Feed after harvest, to build winter stores. July 5, 2022 (Released Thursday, Jul. 7, 2022) Valid 8 a.m. EDT



### **July in the Hive: Population**

- Bees are near peak
   population
- Mite population can still be increasing
- July may be the most important month to check for Varroa & treat if needed



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

# July in Hive: Bees & Beeks

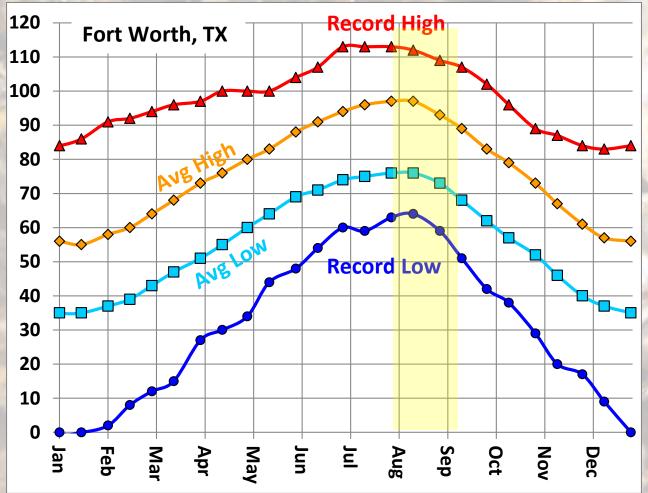
Bees	Beekeeper
Brood production	Inspect regularly (queen, food, pests).
likely past peak	See good brood patterns, or investigate problems.
HOT & DRY!	Make sure bees have reliable water supply.
	Consider shading hives in full sun in peak temps.
	Consider adding ventilation, if excessive bearding.
Not bringing in nectar	Harvest honey after nectar flow. If delay, bees eat your honey.
	After harvest, put supers back on for 24 hrs & bees will clean
	comb, & limit entrance to prevent robbing.
	After harvest, freeze frames for 2 to 3 days, store in plastic
	bags with PDB (not naphthalene moth balls!).
	Can store frames open, but watch for wax moths.
Bees preparing for	Feed after honey harvest.
winter	Build to 30 lbs honey storage before Oct.
	Feeding builds comb now, instead of in nectar flow.
May be low on pollen	Inspect. If low, add pollen sub to strengthen winter bees.
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**



### **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**

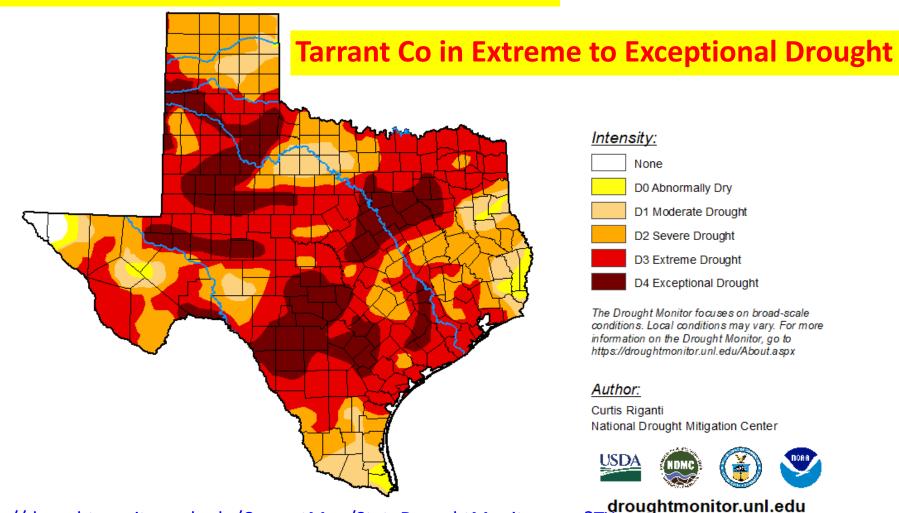
Make sure bees have water.

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



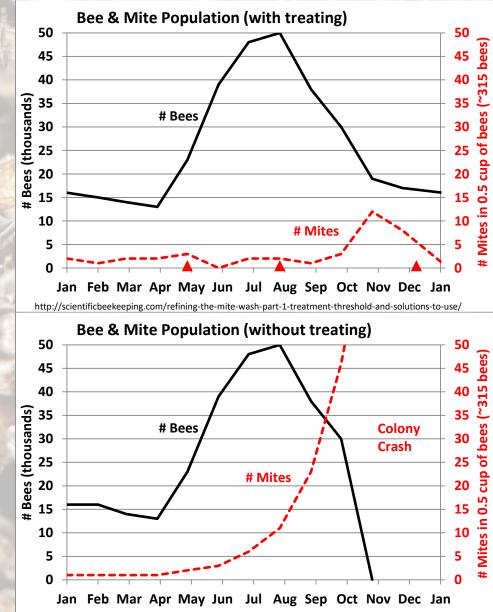
#### https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?TX



### **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/

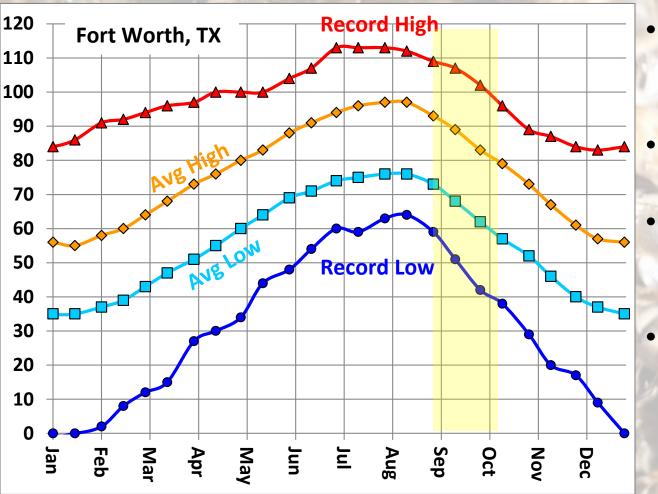
# **August in Hive: Bees & Beeks**

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.
	Nutrition Deste Discourse Illevelor

**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



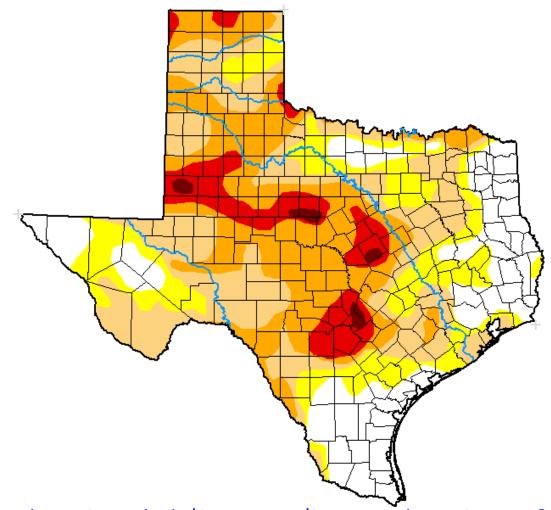
 Plants came alive after rain of Aug 22<sup>nd</sup> **Did you see lots** more brood? How much pollen is going into your hives? is the pollen nearly all one or 2 colors?

# **Drought Conditions**

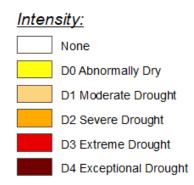
Tarrant Co <u>three</u> levels better after Aug 22<sup>nd</sup>! Mosquito dunks are safe for bees & environ.

#### September 6, 2022

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



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



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#### Author:

David Simeral Western Regional Climate Center



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### Each Dunk Kills Mosquito Larvae For 30 Days or More.

#### Biological **Mosquito Control**

# MOSQUITODÜNKS® FOR ORGANIC PRODUCTION Before They're Old Enough To Bite **Can Be Used In Fish Habitats**

... responsible solutions.

ACTIVE INGREDIENT: Bacillus thuringlensis subspecies scalekinosis strain BMP 144 solids, spores and insectioidal toiens" INERT INGREDIENTS TOTAL Potency: 7000 Aedes anzyoti (AA) International Toxic Units (ITU)

igram primary powder (Dry weight basis). The percent

**Place In Containerized Standing Water** Wherever It Accumulates Near the Household: Flower Pots • Tree Holes • Bird Baths • Rain Barrels Roof Gutters • Old Tires • Unused Swimming Pools **Animal Watering Troughs** 

**KEEP OUT OF REACH OF CHILDREN** PRECAUTIONS

MADE IN USA

### **Mosquito dunks** are safe for bees & environment

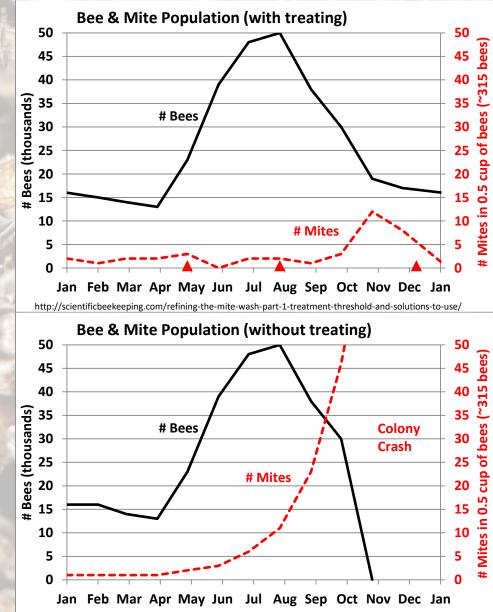
We put them in French drains, rain gutters, etc.



## **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**

Deee	Deckeener
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?

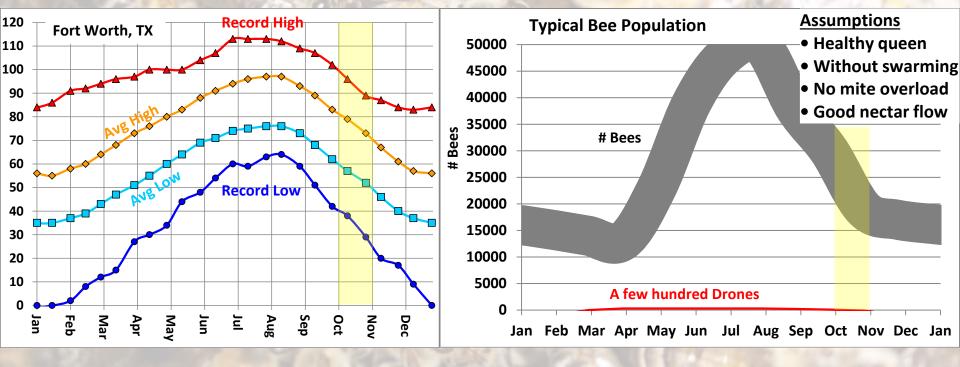
**Queenright, Nutrition, Pests, Diseases, Housing** 



### 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

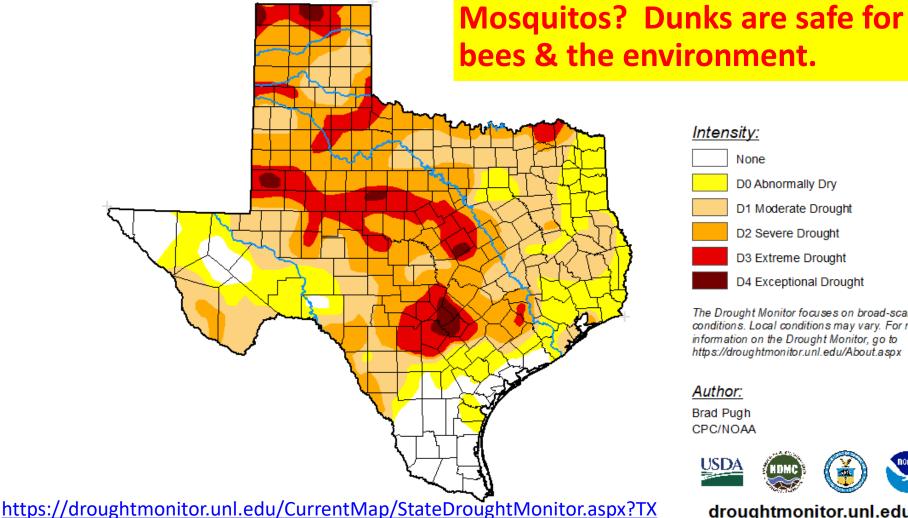
- Bee population is decreasing for winter
- Oct is a good month to treat for mites

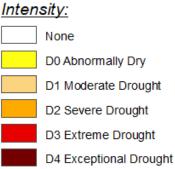


# **Drought Conditions**

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





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

#### Author:

Brad Pugh CPC/NOAA



#### droughtmonitor.unl.edu

# **October in Hive: Bees & Beeks**<sup>37</sup>

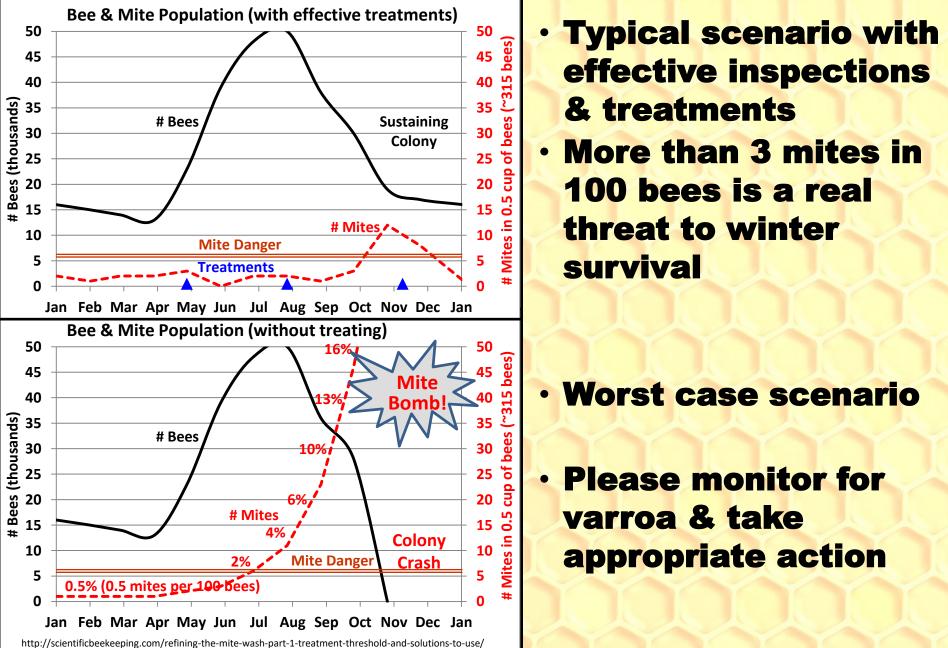
Bees	Beekeeper
Some hives are queenright.	Inspect (on warm dry day) & find out if queenright.
Some are not.	If weak (less than 4 frames covered w/ bees on both sides),
	newspaper combine into stronger hives.
	Too late to re-queen.
No/low nectar coming in.	Consider feeding sugar (2:1 syrup, fondant, brick).
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

**RO BEEKEEPERS** 



38



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110

100

90

80

70

60

50

40

30 20

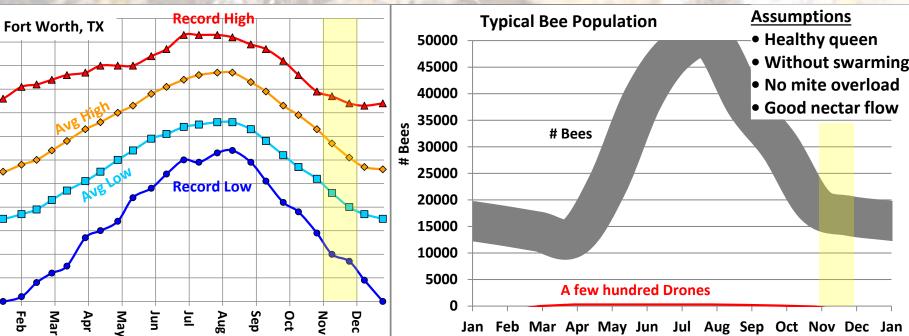
10

### **November in the Hive: Weather & Colony Population**

Bee population is

decreasing for winter

- Temperature
  - Record 15° to 88°F
  - Avg 40° to 70°
  - -1st freeze Oct to Jan (avg Nov 22)
- **Nectar flow low/none**
- Mite load may warrant attention **Typical Bee Population** Record High 50000



# • 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.	
<ul> <li>Prepare for cold weather:</li> <li>Slower brood production</li> <li>Seal cracks</li> <li>Cluster when it's cold</li> </ul>	<ul> <li>Beekeepers prepare for cold weather:</li> <li>Feed if needed for 30-40 lbs of nectar/hive. Full deep=10 lbs.</li> <li>Check pollen stores. Can supplement if low.</li> <li>Provide wind break. Use entrance reducer. May want to close screened bottom. Keep ventilation.</li> </ul>	
Bees keep eating to have energy to generate heat by constantly moving muscles	<ul> <li>Check if they have enough food stores.</li> <li>Bees won't take syrup below ~50°, but will take fondant or a sugar brick, which will also absorb moisture (good).</li> <li>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.</li> <li>Check pollen stores. Can supplement if low.</li> </ul>	
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.	

# • All year: Queenright, Nutrition, Pests & Diseases

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

