



BeeSeasons

What happens, When, in your hive

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BeeSeasons

- ❖ **Early Spring:** Longer days, warm and cool temperatures, the beginning of blooms, pollen available
- ❖ **Late Spring:** Warm and hot, 80 degrees +, nectar flow begins, the bees bring in a surplus of honey
- ❖ **Summer:** Hot and dry, 90-100 degrees, limited blooms
- ❖ **Fall:** Second bloom period, fall rains, temps back in the 80's, Bees gather nectar and pollen for winter survival,
- ❖ **Winter:** short days, cold weather, lack of blooms, bees form a cluster to maintain nest warmth

BeeSeasons Quiz for N. Texas weather

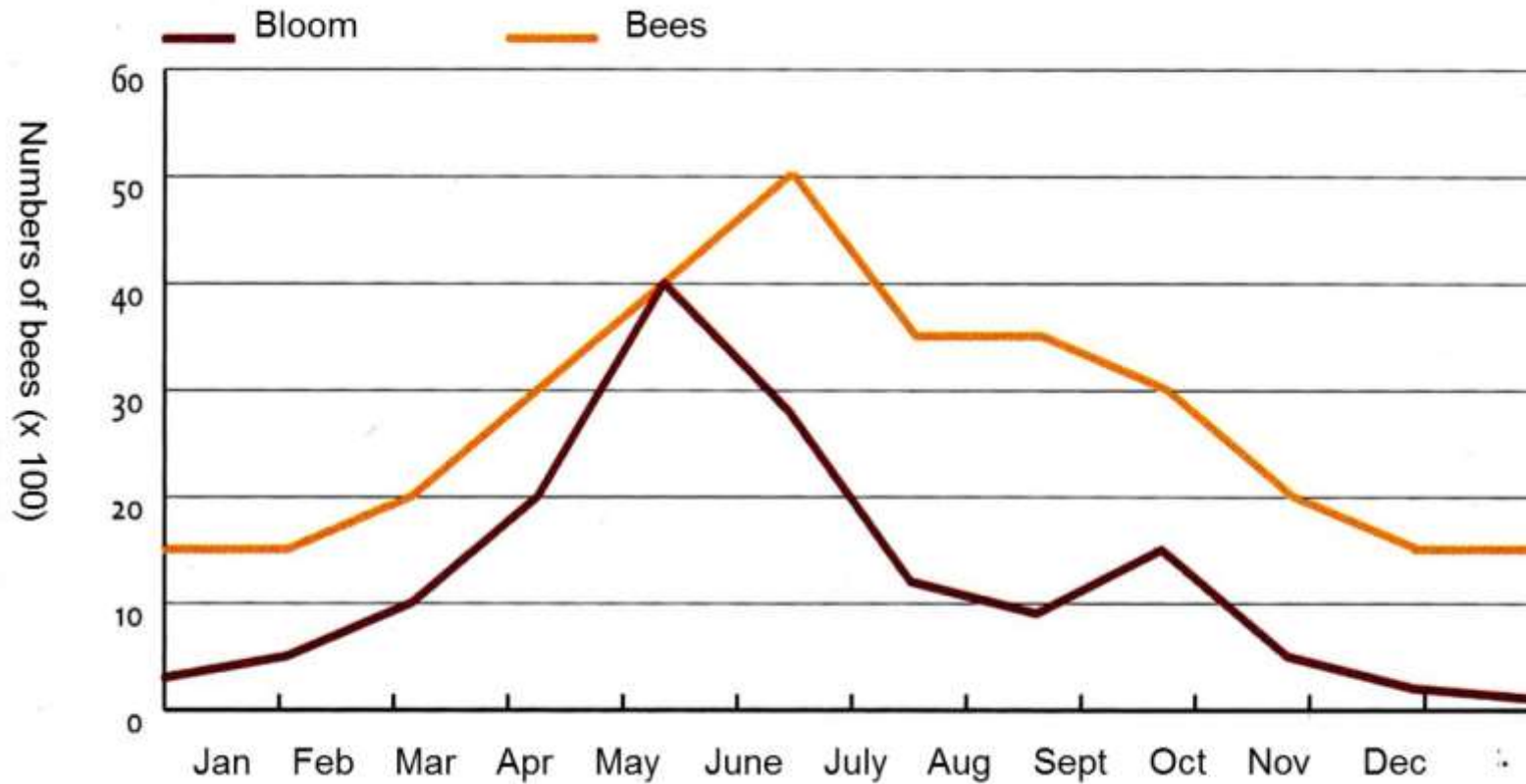
1. At what temperature do bees not fly?
2. At what temperature do bees cluster?
3. What is a hive's nest temperature?
4. What are the best temperatures for nectar production?
5. At what temperatures should you not open a hive?
6. At what temperatures could you move bees during the day?
7. What is a hives' greatest need when the temps are 90-100 plus degrees?
8. What triggers the queen to start laying eggs in early spring?
9. During which seasons would you expect a hive to be broodless?
10. In which season will a hive reach its peak numbers of bees?

- 11. When is the best season for splitting a hive?**
- 12. When is the best season to harvest honey?**
- 13. In which season will your neighbors complain about your bees in their pool?**
- 14. In which season are bees most likely to starve to death?**
- 15. In which season are bees most likely to swarm?**
- 16. Which season is critical to winter survival?**
- 17. In which season will you have the most problems with robbing?**
- 18. Which season is the best time to combine weak hives?**
- 19. During which two seasons can you expect a nectar flow?**
- 20. Name two great nectar/honey plants.**

The beekeeping year - Colony Growth



The Beekeeping Year – Bees follow blooms



The beekeeping year – Temperatures

100° F	ambient air: all brood rearing stops, need water for cooling
91-97° F	wax secretion
93-94° F	nest temperature; eggs & young bees
85° F	broodless winter cluster
68° F	queen does not fly
61° F	drones do not fly
57° F	cluster forms
50° F	brood rearing stops, workers can't fly
42° F	bees can't move, muscles are not warm enough
40° F	bees die if left alone



The beekeeping year – Early spring

Jan, Feb, March - Pollen, Brood building

- ❖ Longer days
- ❖ Warm and cool temperatures
- ❖ Beginning of blooms
- ❖ Lots of pollen available
- ❖ The queen begins laying
- ❖ Colony builds in numbers



The beekeeping year – Early spring * Best Plants

- ❖ Mistletoe
- ❖ Elm Trees
- ❖ Winter Honeysuckle
- ❖ Flowering Trees
- ❖ Fruit Trees
- ❖ Berries
- ❖ Hollies
- ❖ Flowering Quince



The beekeeping year – Late spring * Nectar Flow

April, May, June - Nectar Flow, Honey Season

- ❖ Lots of bees, lots of work
- ❖ Warm and hot temperatures
- ❖ 80 degrees +
- ❖ Nectar flow begins
- ❖ Bees bring in honey surplus



The beekeeping year – Late Spring * Best Plants

Nectar Plants

- ❖ Acacia Trees, Button Bush, Beebrush, Clovers, Cotton, Chinese Tallow Trees, Lavender, Ligustrums, Locust, Mesquite, Mimosa, Purple Coneflower, Sumac, Vitex Trees, Wildflowers, Woolly Lamb's Ear



Honey Harvest: July

Yum!



The beekeeping year – Summer

July, August, September

- ❖ Hot and dry
- ❖ 90-100 degree temps
- ❖ Limited blooms
- ❖ Need good water sources



The beekeeping year – Summer * Best Plants

**July, August, September
Heat Survival**

- ❖ **Abelia, Dessert Willow, Maximilian Sunflower, Russian Sage, Salvias, Sunflowers, Texas Purple Sage, Trumpet Vine, Soft Yucca**



The beekeeping year – Fall

September, October, November

- ❖ Critical for winter honey stores
- ❖ Second bloom period, fall rains
- ❖ Temperatures back in the 80's
- ❖ Bees gather nectar and pollen for winter survival
- ❖ The bees born in the fall will care for the nest through winter.



The beekeeping year – Fall * Best Plants

**Sept, Oct, November
Winter Preparation**

- ❖ **Asters, Goldenrod,
Mexican Mint
Marigold, Pentas,
Roses, Rosemary,
Salvias, Snow-on-
the-Mountain**



The beekeeping year – Winter

December & January

- ❖ Short days, colder weather
- ❖ First frost, lack of blooms
- ❖ Colony goes into a cluster below 55 degrees
- ❖ Queen starts laying in late Jan



The beekeeping year – Winter * Best Plants

**December, January
Cold Survival**

- ❖ **Elaeagnus,
Dandelions,
Winter
Honeysuckle,
Rosemary,
Cabbage/Mustard
family plants**



Special Problems – Weak Colonies

- ❖ **Diagnosis; Why is the colony weak?**
- ❖ **Failing queen? Parasites? Pathogens? Poor forage? Weather?**
- ❖ **Unite disease-free weak colonies**
- ❖ **Newspaper method: Place a single sheet of newspaper between the two colonies, place the weaker one on top. Make a few very small slits for ventilation. Don't combine in hot weather**
- ❖ **Best time to unite colonies is in the fall, November.**

Special Problems – Moving a hive

- ❖ Generally move hives 2-3 mi away from old location
- ❖ Best to move during cool weather 40-50 degrees or at night; avoid moving in the heat – too many bees will die. If moving in heat use screened bottom or top
- ❖ Best to move hives in the spring when smaller
- ❖ If during a nectar flow, don't move
- ❖ Use straps to tie supers, cover and bottom together
- ❖ Close entrance with screen or stuffed grass

Special Problems – Robbing

- ❖ Yes, bees are opportunistic thieves; they will collect nectar honey and syrup and from others
- ❖ Nucleus hives and weak hives are at risk
- ❖ Robbing can destroy a weaker hive
- ❖ Dearth times of year are the worse
- ❖ Best to maintain colonies of equal strength
- ❖ Keep entrances reduced on small or weak hives
- ❖ Combine weak colonies or add to weak hives from strong
- ❖ Avoid open feeders use in-hive feeders during a dearth period



Special Problems – Swarming

- ❖ Bees swarm to perpetuate their kind, survival of the species
- ❖ A swarm is a new colony issued from an old colony usually with the old queen leaving
- ❖ Bees fill their honey stomachs before leaving, packing food to make it through the transition
- ❖ The colony will cluster in a tree, waiting while scout bees find a new home for the colony
- ❖ Bees are very gentle in this state
- ❖ Swarms are great for building comb

Special Problems – Swarming, Signs

- ❖ Overcrowding, congestion
- ❖ Honey bond hive, no open cells for queen to lay eggs in
- ❖ Presence of queen cells in the hive
- ❖ Swarm cells or Supersedure cells
- ❖ Time of year – spring or fall build-up periods
- ❖ Strong build-up of bees in the colony
- ❖ Genetics or race of bees
- ❖ You don't always know



Special Problems – Swarming

Queen cells before swarming



Swarming prevention

- ❖ Relieve hive congestion, give the queen more room
- ❖ Checkerboard empty frames into brood nest
- ❖ Reverse hives in spring
- ❖ Add honey storage space
- ❖ Split the hive in the spring – add a new queen to the split

Good luck! “Plant a meadow, don’t mow”



BeeSeasons Summary

- COMPILED BY:
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- PLANT A MEADOW – DON'T MOW

Early Spring:

Weather:

Plants:

Bees:

Best Plants:

Feb, March, April - Brood "baby bee" Building

Longer days, warm and cool temperatures,

The beginning of blooms, Lots of pollen available,

The queen begins laying eggs – Colony builds in numbers

Flowering Trees, Fruit Trees, Berries, Hollies, Flowering Quince

Late Spring:

Weather:

Plants:

Bees:

Best Plants:

May, June - Honey Flow

Warm and hot temperatures 80 degrees +

Nectar flow begins

Lots of bees - lots of work, Bees bring in honey surplus

Acacia Trees, Button Bush, Beebrush, Clovers, Cotton, Chinese

Tallow Trees, Lavender, Ligustrums, Locust, Mesquite,

Mimosa, Sumac, Vitex Trees, Wildflowers, Woolly Lamb's Ear

Honey Harvest: July

Summer:

Weather:

Plants:

Bees:

Best Plants:

July, August, September – Heat Survival

Hot and dry, 90-100 degree temps

Limited blooms, some nectar & pollen available but not lots

Need good water sources

Abelia, Dessert Willow, Maximilian Sunflower, Russian Sage, Salvias,

Sunflowers, Texas Purple Sage, Trumpet Vine, Soft Yucca

Fall:

Weather:

Plants:

Bees:

Best Plants:

Sept, Oct, Nov - Winter Preparation

Temperatures back in the 70's & 80's, fall rains

Second bloom period

Bees gather nectar and pollen for winter survival

The fall bloom is critical for winter honey stores

The bees born in the fall will care for the nest through winter.

Asters, Goldenrod, Mexican Mint Marigold, Pentas, Roses, Rosemary,

Salvias, Snow-on-the-Mountain

Winter:

Weather:

Plants:

Bees:

Best Plants:

Dec. Jan – Cold Survival

Short days, colder weather, first frost

No blooms or pollen available

Bees form a cluster to maintain nest warmth when temps are below 55

degrees

Elaeagnus, Dandelions, Winter Honeysuckle, Rosemary,

Cabbage/Mustard family plants