



# **Winter Feeding and Spring Buildup**

# Avoiding Winter Losses

- Must have strong colonies in fall heading into winter
  - if you don't have good bees in the fall, you will not have good bees in spring for honey flow.
- I check on every hive every 14 days year round
  - I do three complete inspections per year, April, August, November
  - I feed anytime bees need food
  - I check every hive in early November and determine final food resources and feed 2:1 syrup as needed
- Must have young and healthy bees and **LOTS** of them
  - I keep queens laying well into November and early December
  - I want 30,000-35,000 plus bees in December
- How many bees do you have in the hive?
  - Fully covered brood frame is about 1250 bees per side
  - Approximately 2450 capped cells per side if 70% capped brood
    - A deep frame has 7000 cells both sides
    - Need 40,000-50,000 plus bees in August



# Avoiding Winter Losses

- I feed sugar/protein patties between brood boxes from August to December every 14 days
- Keep young queens
  - Re-queen every year
- Make sure bees have adequate food resources
  - I want 11-12 deep frames honey/pollen on a double deep hive (deep frame equals about 8#)
  - I want 6-7 deep frames on a single deep for double nuc hive (deep frame equals about 8#)

# Winter Hive Preparation

- Place insulation board ½"-1" on top of inner cover
- Turn top entrance away from wind direction
- Prop outer cover up with a stick
- Reduce entrances
- Install SBB
  - I put my boards in 1<sup>st</sup> and December and leave in to 1<sup>st</sup> of May
- Wrap hives
  - Some say this isn't necessary but I see some benefit
  - I wrap only my double nucs in sets of two with black roofing felt
  - Experimenting with wrapping single nucs with insulation board this year
  - I believe wrapping help mores for spring buildup
- Put winter feed on by Christmas











# Winter Feeding

- Winter is not a survival time, just another phase in beekeeping.
- Winter feeding should never be considered emergency feed
- In January and February I use sugar blocks and sugar/protein blocks on top frames in 3" spacer
  - Place 2-3 on each hive right before Christmas
  - Be careful placing to early or bees will move up to them
    - » Make sure bees have clustered a few times
- Dadant winter patties, or candy boards also good options
- I am a firm believer of providing protein all winter
  - This year my hives have twice the pollen stored as usually







# Spring Buildup

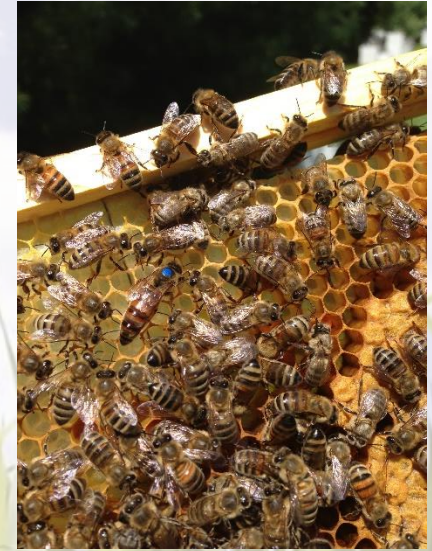
- May 1<sup>st</sup> honey flow begins in my location
  - Locust and tulip popular blooming
  - Your foraging bees must be built up before the flow starts
  - Number one reason for weak honey crop is the bees build up on the flow
- Start feeding 1:1 syrup and protein patties mid February
- Treat Nosema (1gallon per 20000 bees) usually after 1-2 feedings
- Keep SBB closed
- Hive and Queen evaluation
  - March 1<sup>st</sup> want 6-7 frames bees minimum, 1250 average each side, so 2500 per frame
  - Around middle of March inspect hive and brood
    - Want to see 2-3 frames brood (a frame with 70% brood is about 2300 cells each side (6500 cells total on deep frame) so that is 4600 bees to hatch
    - Egg to forager is 42 days
      - First 21 days egg to hatch
      - Second 21 days in hive as nurse, worker, guard
    - Honey flow in KY May-July (Tulip Poplar and Locust in May)
  - Grade bees A-C and record frames of brood
  - Watch for honey bound hive, no laying space
- Inspect again in 2 weeks, want increase in bees and brood frames, DOUBLED



# Spring Buildup

- Hive manipulation:
  - Reverse
  - Re-arrange frames, create queen laying space, keep center and in bottom
  - Remove honey if necessary
- Prevent Swarming
  - Congestion
  - Weak queen pheromone (queen perfume)
  - Have young queens
  - Add supers of comb
  - Remove brood
  - Reverse hive boxes
  - Remove old queen and re-queen
  - Find swarm cells break hive down into nucs.







# Honey Flow Management

- I have 3 boxes of pulled comb on every honey hive by April 15<sup>th</sup> tax day
- I only use excluders if necessary and only my modified version
  - A super of honey is the best excluder
- Install ventilation spacers
- Once honey flow starts **Leave Them Alone**
- I harvest three times a year
  - 1<sup>st</sup> June, July 4<sup>th</sup> and August 1<sup>st</sup>
  - All supers off by August 1st
  - Locust and tulip popular blooming
  - Your foraging bees must be built up before the flow starts
  - Number one reason for weak honey crop is the bees build up on the flow
- As soon as last supers pulled I feed all honey hives 4 gallon syrup and 2 sugar/protein patties















# Recipes

- **Hard Sugar Blocks:**

- 1 quart water
- 12 lb. sugar (24 cups)
- 6 teaspoons HBH
- Five 7"x7"x1.25" cake pans or five 9" pie pans (makes five 3 lb. pans)
- Heat water to boil, add HBH, add sugar and mix, heat to 250 deg. mixing occasionally, remove from heat and let cool to 210 deg., stir quickly and pour into pans, let harden (don't let it get too hard while cooling or you can't pour it)

- **Hard Sugar/Protein Blocks:**

- 1 quart water
- 12 lb. sugar (24 cups)
- 3 cups protein powder (I use AP 23 protein powder from Dadant)
- 6 teaspoons HBH
- Five 7"x7"x1.25" cake pans or five 9" pie pans (makes five 3 lb. pans)
- Heat water to boil, add HBH, add sugar and mix, heat to 250 deg. mixing occasionally, remove from heat add protein powder and mix in quickly. Once mixed, pour into pans, let harden.



# Recipes

- **Sugar/Protein Patties:**

- 3 cups protein powder (Brood Builder, Mega Bee and AP 23)
- 9 cups sugar
- Add enough 1:1 or 2:1 syrup to make consistence of peanut butter and form into patties on wax paper.

- **Protein/Sugar Patties:**

- 9 cups protein powder (Brood Builder, Mega Bee and AP 23)
- 3 cups sugar
- Add enough 1:1 or 2:1 syrup to make consistence of peanut butter and form into patties on wax paper.



# Summary

- Bees are livestock
- Nobody has the answers, just opinions
- Feed anytime and every time it is necessary
- Fall bees determine your spring honey crop

**Honey Bees survival depends on you, the beekeeper.**