

Presentation for:  
Nelson County Beekeepers Association  
3-17-16

# Making 100# Honey Per Hive

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[www.haleshoney.com](http://www.haleshoney.com)

# Hale's Honey

- Kevin and Kim Hale, owners
- [www.haleshoney.com](http://www.haleshoney.com)
- Located in Menifee County KY
- Wintered 73 Hives, will go to about 170 in spring and summer
- Winter losses: Average around 10% yearly
  - 2016 Winter loss = 0%
- Honey production for 2015
  - #118 hive average
  - Top producing hive in 2015 was #155
- Top producing hive to date was #171 in 2014



# Beekeeping Calendar

## August-December

Treatment for Mites  
Re-queen (keep young queens)  
Winter Preparation  
Develop Strong Colonies

## January-February

Survival Months  
Top Insulation  
Candy Boards / Sugar Cakes  
Protein Patties

## March-April

Rapid Spring Buildup  
Bees and Queen Evaluation  
Hive Re-arrangement  
Hive Reversal

## May-July

Prevent Swarming  
Produce Honey  
Make Nucs for Hive Increase  
Raise Queens

## Factors for Success with Bees Overwinter Strong Colonies

Rapid Spring Buildup  
Preventing Swarming  
Add Multiple Honey Supers Early  
Harvest Early and Often

# How did your bees do this Winter

- Do they have adequate food reserves for next few weeks
- What is the strength of your hive
  - How many frames of bees
  - Each Frame around 2000-2500 bees
- Winter feeding should never be considered emergency feed
- Winter is not a survival time, just another phase in beekeeping.
- January thru March I use sugar blocks and sugar/protein blocks on top frames in 3" spacer
  - I check them every 14 days and replenish as necessary
- Clean and check SBB
  - You can tell the strength and location of your cluster
  - Check for high number mites and SHB
- I am a firm believer of providing protein all winter

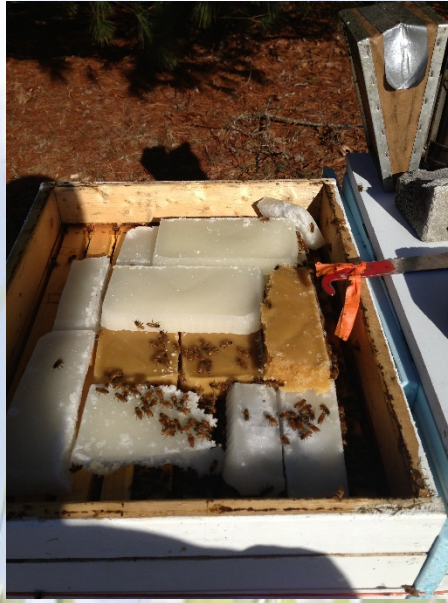
















**Honey Hives 2015**



# 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 mid February to early March
  - 1:1 Stimulates queen to start laying, once you start feeding you must continue until natural nectar is available
  - Depends on temperature, need 3-4 days a week in high 40's to low 50's
  - If feeding winter food, leave it in until last of March
- Start Feeding Protein Patties mid February to early March
  - Queen requires protein to lay eggs
  - Feed only what bees will take (SHB love protein patties)
  - Continue to feed protein patties even after bees start bringing in pollen from Maples in March
- Treat bees for Nosema
  - One gallon per 20,000 bees
  - Usually treat after 1-2 feedings (my first feedings are 2 quarts at a time)
- Keep SBB closed
  - I keep mine closed until May 1<sup>st</sup>
  - Queens like dark spaces to lay in

# Spring Buildup

- Hive and Queen evaluation
  - March 1<sup>st</sup> I want 6-7 frames bees minimum, 1250 average each side, so 2500 per frame
    - Russian bees can be an exception to this, they usually have less
  - Around first or second week of March inspect hive and brood
    - Depends on temperature, need 3-4 days a week in mid to high 50's
    - 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, B or 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
- Remember you must have a **STRONG** colony of bees to produce honey



# Hive Inspections

## 2016 Hive Inspections

Large Hives

3/13/2016

Hive Number	Queen Color	Queen Race	1st Inspection Date	Fumagilin-B Applied	Frames Brood	Grade	Empty Frames
27	Blue	Carniolan	3/7	3/10	1.0	C	11
34	Green	Carniolan	3/7	3/10	3.5	A++	5
35	Green	Carniolan	3/7	3/10	4.0	A++	7
23	Blue(UMQ)	Italian	3/7	3/10	5.0	A++	7
29	Green	Italian	3/7	3/10	5.0	A++	6
4	Blue	Russian	3/10	3/10	4.0	A++	5
25	Blue	KC (2015)	3/7	3/10	5.0	A++	10
11	Green	Italian	3/7	3/10	3.0	A	7
5	Green	Italian	3/7	3/10	4.0	A	6
10	Green	Italian	3/7	3/10	2.0	B+	5
8	Blue	KI (2015)	3/7	3/9	4.0	A++	10
3	Red	Russian	3/10	3/10	2.0	B+	13
15	Green	K	3/7	3/10	3.0	A++	10
32	Green	K	3/7	3/10	5.0	A++	5
9	Green	Italian	3/10	3/10	4.0	B+	6
7	Red	Italian	3/7	3/10	3.0	B	4
6	Green	Russian	3/7	3/10	9.0	A++	2
22	Green	Italian	3/7	3/10	7.0	A++	6
12	Blue(UMQ)	Russian	3/7	3/10	5.0	A++	10
36	Green	K	3/7	3/9	2.5	B-	3
8	Blue(UMQ)	KC (2015)	3/7	3/10	4.0	A+	7
21	Green	Italian	3/7	3/10	7.0	A	5

# Hive Inspections

Nucs

3/13/2016

Hive Number	Queen Color	Queen Race	Ist Inspection Date	Fumagilin-B Applied	Frames Brood	Grade	Empty Frames
Y2	Blue	#23 (I) graft	3/10	3/10	2.5	B	4
TT2	Blue	KC 2015	3/10	3/10	1.5	B-	3
A19	Blue	#11 (I) graft	3/10	3/10	3.5	A++	3
E2	Blue	#23 (I) graft	3/12	3/12	2.5	B	3
B2	Blue	#23 (I) graft	3/12	3/12	1.5	B	3
MM2	Blue	#23 (I) graft	3/12	3/12	2.5	A++	4
CC2	Blue	KI 2015	3/12	3/12	5	A++	2
DD2	Blue	KI 2015	3/12	3/12	7	A+++	5
NN	Blue	CR 2015	3/12	3/12	2	B-	3
EE2	Blue	KC (2015)	3/12	3/12	1.5	B-	2
S2	Blue	#23 (I) graft	3/12	3/12	2	B-	4
Q2	Blue	#23 (I) graft	3/12	3/12	2	B-	4
I	Red	Russian #25 Original Queen	3/12	3/12	3	A	4
G2	Blue(UMQ)	Ki 2015	3/12	3/12	3	A+	4
SS2	Blue	KI 2015	3/15	3/15	3	A+	4
W	Blue	#25 (R) graft	3/15	3/15	3.5	A+	4
FF2	Blue	KC (2015)	3/15	3/15	6	A+++	2
Old 38	Blue(UMQ)	Requeen	3/15	3/15	2.5	B+	5
AA	Blue(UMQ)	Russian #26 original queen	3/15	3/15	4.5	A++	3
28A	Blue(UMQ)	KC (2015)	3/16	3/16	5.5	A++	2.5
HH2	Blue	KC (2015)	3/16	3/16	7	A++	0
II2	Blue	KI 2015	3/16	3/16	4	A+	4
1Q	Blue	Requeen from RMQ	3/16	3/16	7	A+++	1
17Old	Green	Russina #17 original queen	3/16	3/16	3.5	A	2



# Spring Buildup

- Hive manipulation:
  - Reverse
    - Need nightly temperatures averaging around 50 degrees
    - Reverse more than once in necessary
  - Re-arrange frames, create queen laying space, keep her laying in the center and in bottom box
  - Remove honey if necessary to provide laying space (honey bound hive)
- Prevent Swarming
  - Congestion Issues
    - Reverse hive boxes or re-arrange frames
    - Remove brood
    - Add supers of comb
  - Queen Issues
    - Weak queen pheromone (queen perfume)
    - Keep young queens (re-queen yearly)
    - Remove old queen and re-queen
  - Find swarm cells break hive down into nucs ASAP



# Swarm Cells





# Nucs





# Re-queening

- Much debate on re-queening every year
- Young queens swarm less
- Around first of March check to see how queen is laying
- If queen isn't laying good by April 1<sup>st</sup>, re-queen or split
- If a hive isn't producing honey, re-queen
- Best time to re-queen July-September (after honey flow)
  - You want young queen laying into winter
  - Need to provide 1:1 and pollen to keep queen laying in fall
- Re-queen around April 1<sup>st</sup> to prevent swarming
  - Various per your location
- Can't re-queen a laying worker hive with a caged queen
  - They will kill queen
  - Add frames of eggs and brood once a week until they raise a new queen
  - Combine on top of a strong queen right hive

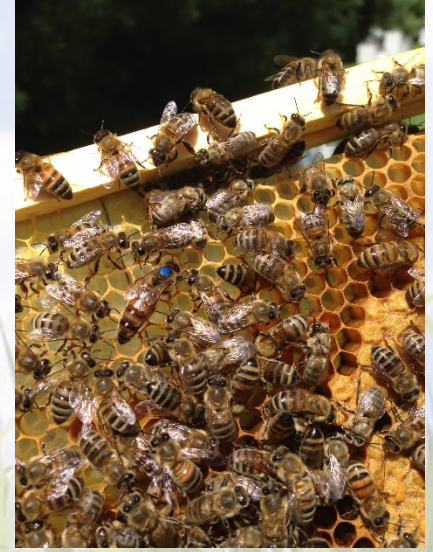














# Honey Flow Management

- Remember you must have a **STRONG** colony of bees to produce honey
  - You want 60,000 bees around middle of May if possible for main honey flow
  - One large colony 60,000 bees will out produce two colonies of 30,000 bees
    - A colony requires 15,000 bees for nurse and house bees
    - So a colony with 60,000 bees has 45,000 forager bees and two colonies of 30,000 bees have 15,000 forager bees each for a total of 30,000
- 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**
- Combine hives if necessary to create a strong honey production hive
- Boost a weak hive with a overwintered nuc
  - brood and bees
- Re-queen a weak Spring hive ASAP
  - One of the main reasons to overwinter a couple nucs
    - Spare queens when needed



# Honey Flow Management

- Have 3 boxes of pulled comb on every honey hive by April 15<sup>th</sup> tax day (sooner if you have early spring like 2016)
  - Helps to prevent swarming
  - Ready when the flow starts
  - Locust and tulip popular blooming soon
  - Nectar starts out at about 80% water and bees process it to 18.5% to create honey. You must have extra storage space for the nectar storage until bees can process it.
- I only use excluders if necessary and only my modified version
- A super of honey is the best excluder
- Install ventilation spacers
- Remove SBB by May 1<sup>st</sup>



# Honey Flow Management

- If using foundation, use only one super at a time
- When foundation 60-70% pulled, add another super on bottom
- use one or more hives to pull foundation only and then move to honey hives
- 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
- As soon as last supers pulled I feed all honey hives 4-5 gallon syrup and 2 sugar/protein patties
- Treat for mites (this is when mites are at their worst)
- Continue to feed 1:1 if necessary
  - August is usually a very poor month for nectar
- Continue to feed protein patties
- Watch out for Robbing



























# Recipes

- **1:1 Sugar Water:**
- 2 gallon syrup
  - 10 lbs. granulated sugar
  - 5 quarts water
  - Heat water to very hot, add sugar and stir
  - Add 4-5 teaspoons of Honey B Healthy per gallon
- 5 gallon syrup
  - 25 lbs. granulated sugar
  - 12.5 quarts water
  - Heat water to very hot, add sugar and stir
  - Add 4-5 teaspoons of Honey B Healthy per gallon
  - Add one cap full of bleach (helps prevent mold)
- **Protein/Sugar Patties:**
  - 9 cups protein powder (I use 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.



# Recipes

- **2:1 Sugar Syrup:**
- 1.5 gallon syrup
  - 10 lbs. granulated sugar
  - 2.5 quarts water
  - Heat water to very hot, add sugar and stir
  - Add 4-5 teaspoons of Honey B Healthy per gallon
- 5 gallon syrup
  - 25 lbs. granulated sugar
  - 6.25 quarts water
  - Heat water to very hot, add sugar and stir
  - Add 4-5 teaspoons of Honey B Healthy per gallon
  - Add one cap full of bleach (helps prevent mold)
- **Sugar/Protein Patties:**
  - 3 cups protein powder (I use 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.



# 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.



# Hale's Honey

Pure & Local Honey

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## *Welcome!*

Hale's Honey is a small honey and bee operation located in Menifee County, KY. We specialize in providing pure local raw honey that is never heated or processed and also producing nuc starter hives. At Hale's Honey, our stock of bees is Italian and Russian. Combining these two breeds yields a mixture of bees that produce honey well while also being resistant to the diseases that face bees today, namely the varroa mite. Our operation is part-time but to us it feels full-time. Over the past few years we have established a sizeable clientele for Hale's Honey and typically have half of it sold before the first quart is harvested. This past year we were also sold out of nucs by Christmas.

Currently we have about 72 hives and use 15-20 of those for honey production. The other hives are used to split for Nuc's and to raise our own queens. We typically create about 70-90 nucs for sale and to maintain our own number of hives.

**[7th Annual Northeastern Kentucky Beekeeping School](#)**

**[Bee School Class Schedule](#)**



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