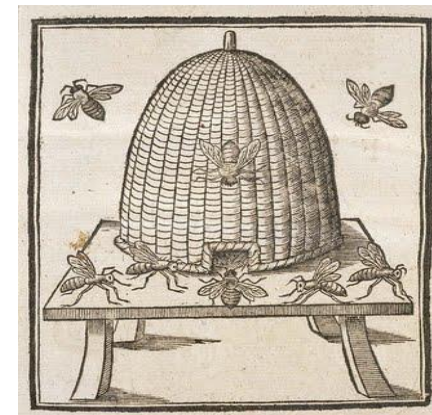


# You Kept Bees (*alive*) a Whole Year!



## *Now What??*



## Colony Management for Years 2, 3, 4...

Byron Compton  
Elm Fork Beekeepers Association



ELM FORK  
BEEKEEPERS  
ASSOCIATION

# Getting Ready for Spring!

## Spring management really began last fall.

- We put our entrance guards on our hives.
  - We ensured our bees had enough honey to survive the winter.
  - We tilted the bottom board so water would not run into the hive.
  - We provided upper ventilation.
  - We provided a wind break for the hive.
  - ... And we treated for mites.
- 
- **So why do we need to worry about spring? Don't the bees take care of themselves?**

# Major Issues a Second-Year Beekeeper Must Address

- **Managing Spring Increase**
  - Splits and Re-Queening
  - Swarm Prevention
- **Honey Production**
  - When to Super
- **Harvesting**
  - Extracting
- **Honey Storage**
- **Frame and Wax Storage**



# Spring Increase

## Think Like a Bee!

A colony's sole purpose is to create more colonies.

Queens begin laying as soon as pollen is available.

Laying increases as resources are available.

Bees move up in the hive as they consume resources.

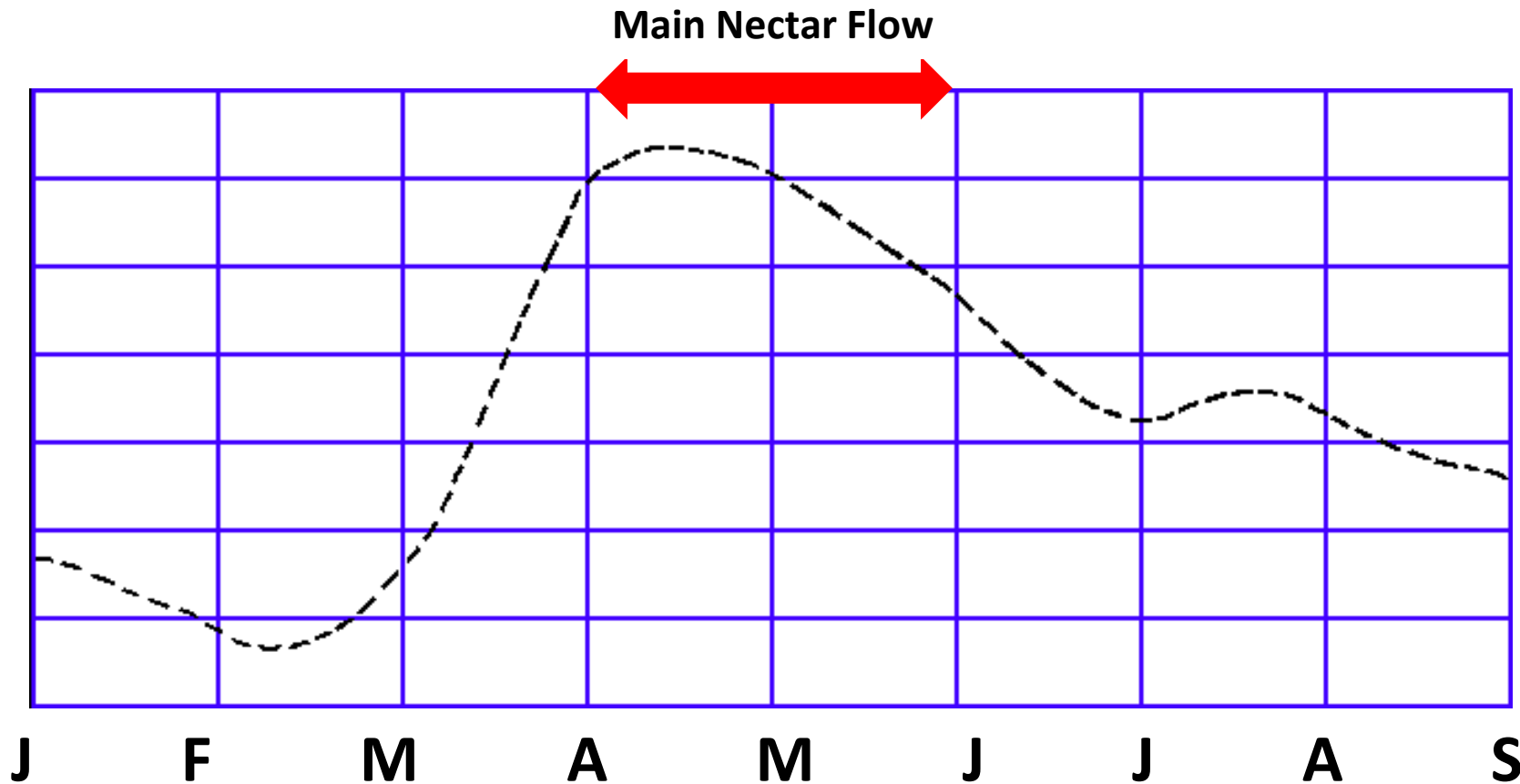
These add up to:

1. Maximum population to coincide with nectar flow.
2. Bees perception of running out of room to grow.
3. Over-crowding in hive – reduces spread of QMP  
(low QMP triggers workers to make Queen cells)

**Result is the instinct to Swarm**

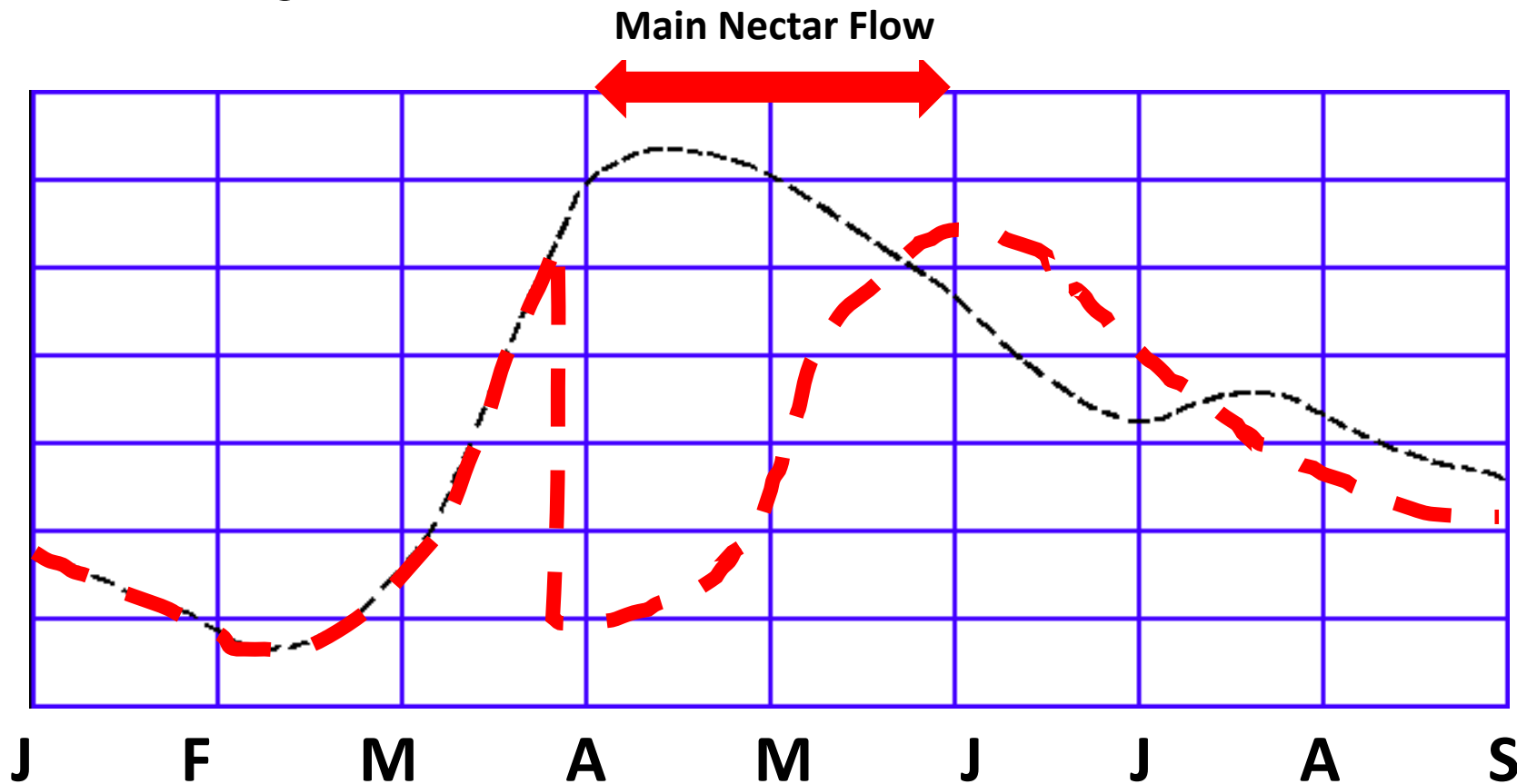
# Hive Population Growth Curve

Queens begin laying in late January and you will find small patches of capped brood in February. This growth increases in March and April. This chart is an approximation of an ideal colony entering January.



# Hive Population Growth Curve

But... remember – Colonies want to create NEW Colonies. The **RED** curve shows a more accurate population curve if the bees aren't managed to prevent swarming.



# Managing the Increase Goal = Prevent the Swarm

## Options:

- Take advantage and increase your apiary – Split your hives
- Brood Chamber Rotation to reduce the swarm instinct
- Sell excess bees (*not* recommended for beginners)

## Considerations:

- What are your goals? Maximum honey production or more hives?
- Do you have enough woodenware to do splits?
- Are Queens available – did you plan ahead and pre-order?



# Managing the Increase Goal = Prevent the Swarm

## Splits:

- A strong hive can be split into 2, 3, maybe 4 new colonies
- Buy new Queens, or let the bees make a new Queen(s)

## Disadvantages:

- Split hives have fewer bees at peak nectar flow – Duh!
- Need to order Queens ahead of time or allow the bees to make their own new Queens
- Some purchased Queens aren't accepted (ave. rate is 40 - 70%)
- Need more woodenware and more apiary room



# Managing the Increase Goal = Prevent the Swarm

## How to Split – Option 1: Key is knowing where the Queen is!

1. \*Remove all but the bottom brood box.
2. Balance frames from the removed box and bottom brood box to have both boxes with brood, honey, and pollen.
3. Place an empty deep or medium on the bottom brood box.
4. Take the frames from the removed box(es) and shake or brush all the bees into the empty box on top of the bottom box.
5. Place a Queen Excluder on top of the empty box.
6. Replace the removed box with the frames on top of the QE.
7. Return the next day and you will see the nurse and house bees have moved up to the top box.
8. You can now take the top box to make your new hive – it will have brood, honey, pollen, and nurse and house bees.
9. That new hive is the one that gets the purchased Queen.

\*If using 3 mediums for the brood chamber, same technique, but remove the top 2 mediums in step 1. Then continue with step 2.

# Managing the Increase Goal = Prevent the Swarm

## How to Split – Option 2: Don't worry about where the Queen is!

1. \*Remove all but the bottom brood box.
2. Balance frames from the removed box and bottom brood box to have both boxes with brood, honey, and pollen.
3. Make sure BOTH boxes have 1 or 2 day old eggs!
4. Replace the removed box and allow the bees to re-occupy the frames.
5. Come back the next day and take the top box to make your new hive – it will have brood, honey, pollen, and nurse and house bees.
6. Come back in 2-3 days and look for which hive(s) has started making Queen cells -- That hive(s) gets the new Queen.

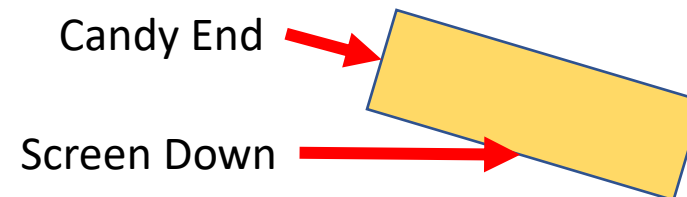
For a walk-away split, allow the hive with Queen cells to continue making their own Queen.

\*If using 3 mediums for the brood chamber, same technique, but remove the top 2 mediums in step 1. Then continue with step 2.

# Managing the Increase Goal = Prevent the Swarm

## Introducing a New Queen:

- Install a new Queen as soon as possible after receiving, weather permitting.
- Remember to remove the cork on the candy end – NOT the other end!
- Place near the middle of the brood ball and in the middle of the frame.
- Press into the comb screen down and at a slight angle with the candy end up.
- Leave the hive alone for at least a week – then inspect for new eggs/larvae.
- Acceptance rate goes up if the colony has been Queenless for a day.



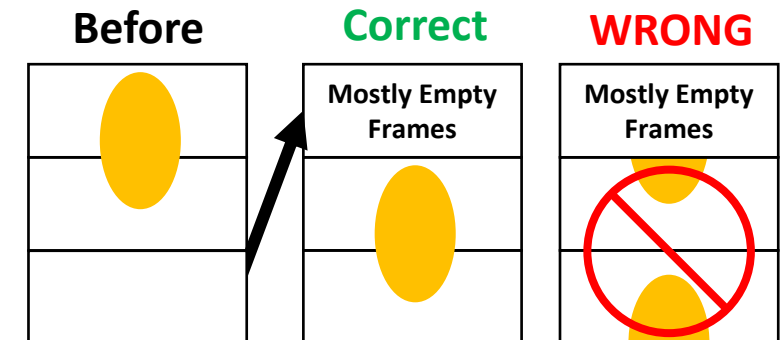
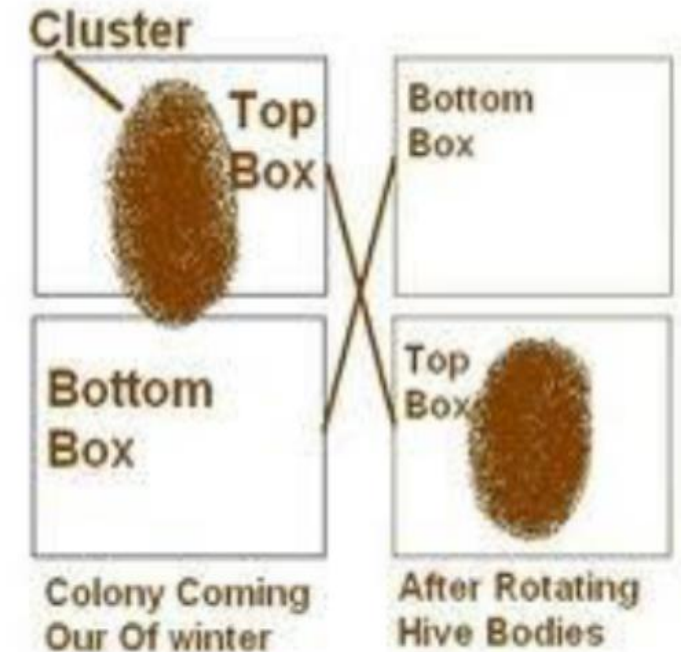
# Managing the Increase Goal = Prevent the Swarm

## Brood Chamber Rotation:

- During winter, the bees move up in the hive.
- Reversing the boxes relieves some population pressure.
- Within the boxes, move frames with the most empty cells to the top box.
- Consider adding a third box to give them even more room.
- If you find Swarm cells, you might be too late to stop the colony from swarming - you can either pinch them or graft the into another hive – like a split.
- Rotation / checkerboarding often solves the problem of reduced QMP by allowing the bees to move more freely.

## Disadvantages:

- Brood box rotation isn't fool-proof. The colony might swarm anyway!



# Increase Successfully Managed – Now What?

## Get Ready to Make Honey (\$...Money...\$):

- Monitor the top brood box in the weeks after you implement your increase method.
- Look for comb build-out and bees storing wet-honey in cells in the top brood box.
- When the top brood box is 75-80% filled with wet and capped honey, add a super.
- When the first super is 50% filled with wet or capped honey, add a second super.
- When a super is 80% +/- capped, you can Harvest. Yes, you CAN extact wet honey!



# Harvesting that Golden Sweetness

## Steps to Be Ready to Extract:

- Have a place to do extraction – honey house if you can, but your kitchen or even garage will do.
- Needs to be clean, have sturdy work tables, sink with hot/cold water, and able to keep bees out – they will smell the honey!
- Buy or borrow an extractor – most clubs have one you can use.
- Empty supers.
- Uncapping tub.
- Uncapping tools – heated or serrated knife, capping's scraper or roller.
- Buckets, preferably with a honey gate.
- Strainers.
- Rubber gloves.
- Don't forget jars to put the honey in!



# Harvesting that Golden Sweetness

STG Farms Honey House: 14'x14' = ~200 sq ft



# Extracting Equipment & Tools





# Harvesting

## Steps to Be Ready:

- Do NOT pull supers more than a couple of days before you plan to extract – SHB and/or Wax Moth larvae will infest your frames!
- If possible, take empty supers to the field with a top and bottom that will not let bees in.
- Remove individual frames and brush the bees off, then place the frame in the empty super you brought.
- Alternative is bring in the whole super and use smoke and a porter bee escape to drive the bees out.
- You can also use a fume board and bee repellent.



# DO NOT LET YOUR FRAMES SIT TOO LONG BEFORE EXTRACTING...!



SHB



Wax Moth





# Extracting

## Ideal Capped Frame



- A radial extractor is not required. You can uncap the frames and allow them to gravity drain into the uncapping tub. Make sure the frame is top-down. It helps if the room is warm. Drain the tub into a bucket with a strainer.
- You can get gated bucket kits that include plastic strainers in 200, 400 and 600 micron screens that fit in the bucket.

## Uncapping



## Extracting & Straining



# Bottling & Storage

## Bottling:

- Buckets with honey gates make it easy and are inexpensive; but you can spend more on metal ones.
- You can go straight from the bucket to the jar with a single straining, but you will probably want to do a 2<sup>nd</sup> straining through a finer screen.
- A bucket or pail holder is handy for the 2<sup>nd</sup> /3<sup>rd</sup> strainings.
- Unbottled honey needs to be sealed to prevent bees & bugs (ants) out.
- If a bucket of honey begins to cool or start to crystallize, get a bucket heater that will warm a 5 gal. bucket in 24 hours and won't get the temperature over about 120 degrees. Over 140 degrees, the heat destroys some of the *(supposed)* medical benefits.



# Frame & Wax Storage

## After Extracting:

- Take the empty frames and supers and put them back in the hives. The bees will clean any leftover honey (and there will be some) completely off the wax.
- Don't place them in the open near the hives – it will induce robbing.
- Come back the next day and collect the now cleaned supers and frames.

## Storage Options till Next Year:

### #1:

- Stack supers in a closed room, container, closed trailer, etc.
- Place “ParaMoth” crystals inside the stack of supers. This keeps the SHB and Wax Moths from laying eggs in the wax. **DO NOT USE REGULAR MOTH BALLS!** The frames can stay all winter, check the crystals periodically to ensure they are still working.

### #2:

- Place the frames in a freezer for 24-48 hours to freeze and kill any SHB or Wax Moth eggs or larvae.
- Remove the frames and place in a large plastic garbage bag and seal tightly to prevent SHB or Wax Moths from getting in to lay eggs.

### #3

- XenTari - a highly selective insecticide for use against larvae (worms) with no effect on the bees or their larvae. Spray unused frames with this before storing. Required no “air out” time.

# Questions?

**I hope I have the Answer...**



**If I don't, ask me something else please...**