

# **MBA Class Field Trips Inspections & Harvesting**

**or**

**What else is there to do on a Saturday morning?**

**Gretchen, Alyssa, Brent, Carol, Cindi, Crystal, Dan,  
David, Efrem, Jennifer, Jerry, Jill, Jim, Konstantine,  
Lisa, Nancy, Russ, Susan, Will, Zane, Zoe**

**12 June 2023**



**METRO BEEKEEPERS**

# MBA Class Field Trips

- 3 bee yards
- 19 students
- > 30 beehives

27 May, Cindy, 8 hives



3 June, Brent, >20 hives



1 June, Gretchen, 4 hives



I learned from watching experienced beeks going through a hive

# Opening Instructions & Lighting Smokers



Suiting up used to be claustrophobic, but I'm ok with it now

# Written Checklist

- **Each hive had a checklist & pencil**

**Inspector name(s)** \_\_\_\_\_

**Hive name** \_\_\_\_\_

**Activity level**

**High Med Low**

**Pollen going in**

**Yes**

**No**

**Box # (from top)**

**1**

**2**

**3**

**4**

**# Frames of Bees**

**# Frames Brood**

**Brood pattern?**

**# Frames Honey**

**# Frames Empty**

**Queen cells, cups?**

➤ **Actions** \_\_\_\_\_

- **Why do we care about each of these?**

# Activity Level



- **Why do we care?**
- **Initial indicator of strength**
- **Dead bees on ground?**

**Each hive has its own personality**

# How Many Frames of Bees?



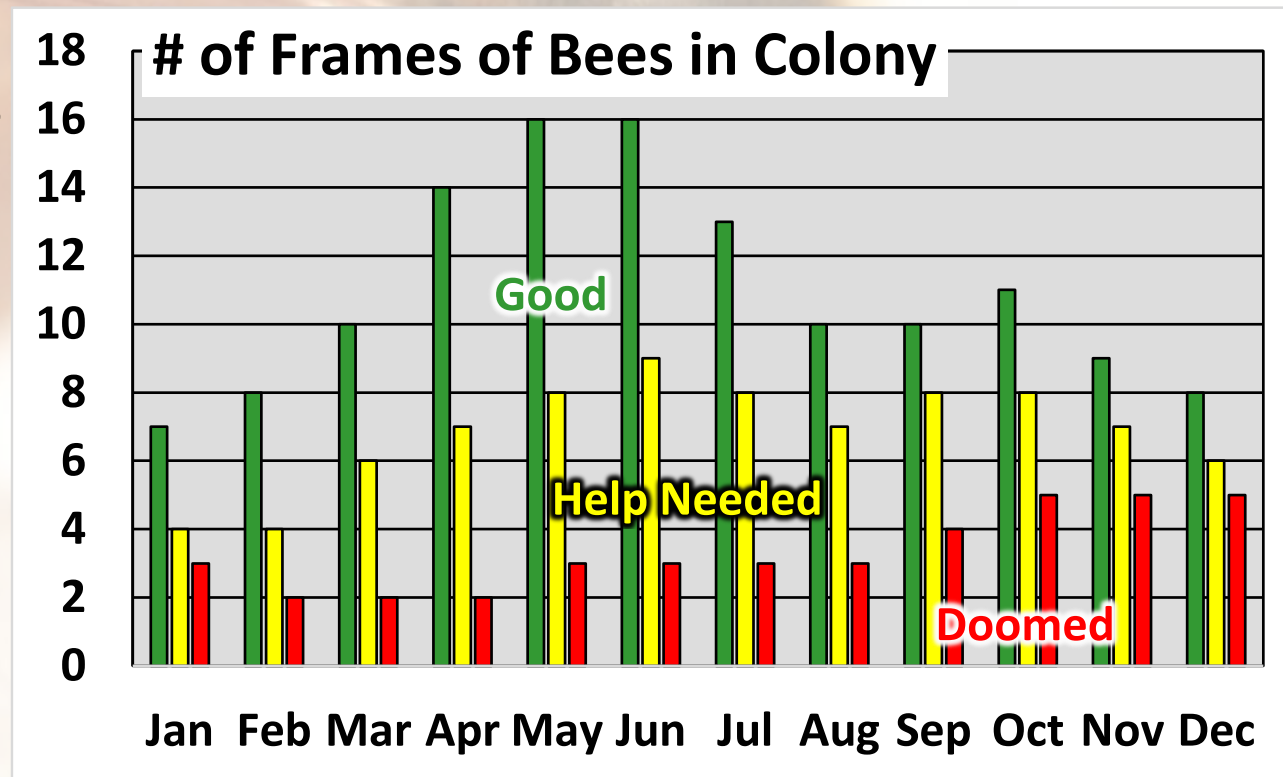
Unbelievably helpful



• Why do we care?

# How Many Bees is Enough?

- **Depends on the time of year**
- **# of worker bees affects ability to:**
  - **Repel predators (moths, beetles, wasps)**
  - **Feed larvae**
  - **Build stores for winter**
  - **Keep brood & cluster warm**
  - **Remove diseased or dead brood**



# How Many Frames of Brood?



- **One frame means full both sides**



Would be great if mentors attend with youth



# Causes of Spotty Brood Pattern<sup>9</sup>

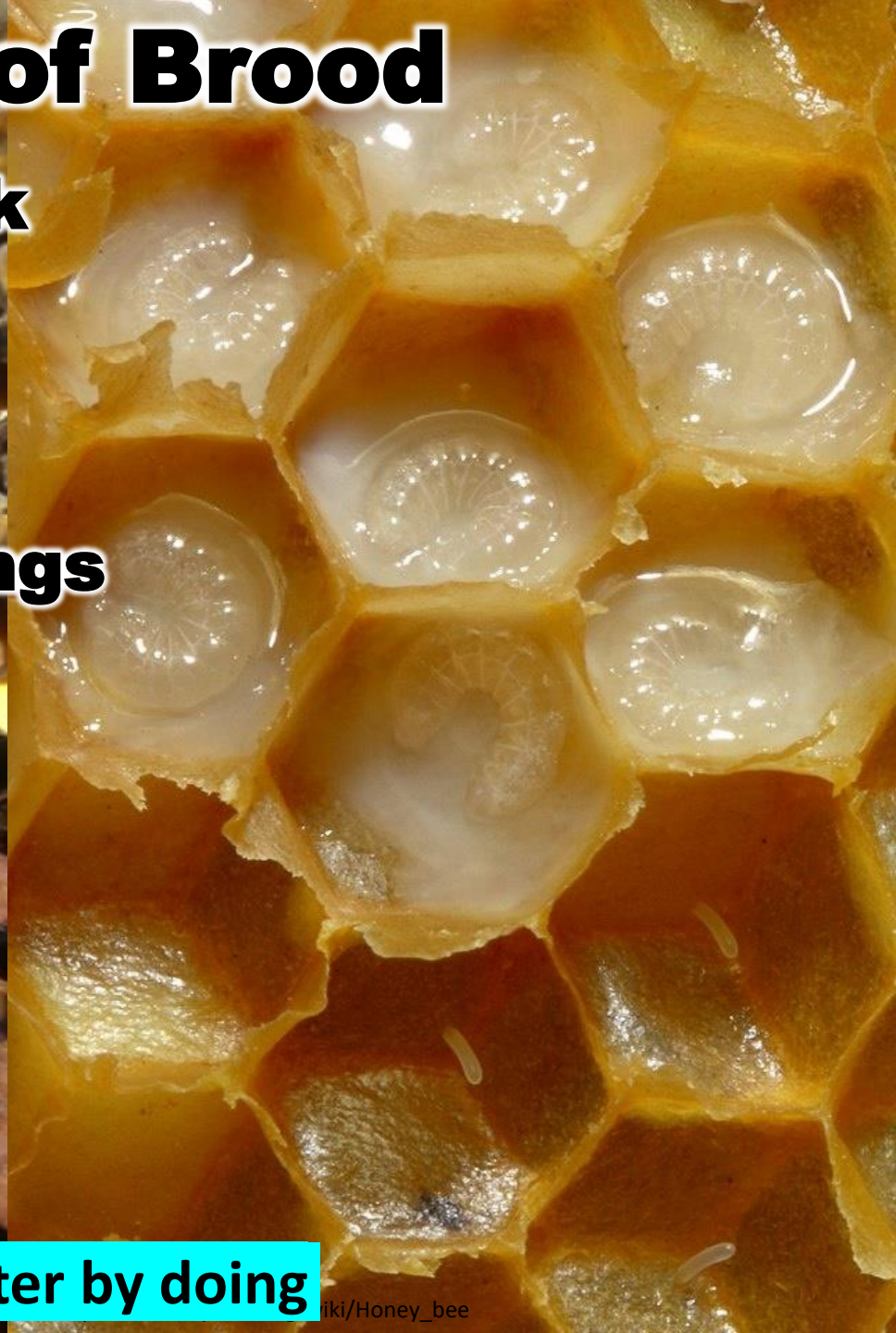
- **Failing queen**
- **Hot dry conditions**
- **Not enough space for nectar & pollen**
- **Poor nutrition (cannibalized)**
- **Varroa infestation**
- **Chalkbrood**
- **European Foulbrood**



**Look for other clues & understand causes to take helpful action**

# Quality of Brood

- **Pearly white, not dark**
- **Glistening**
- **Fat larvae**
- **Full caps, not sunken**
- **Not perforated cappings**



I learn better by doing

# What To Do if Colony is Weak

- **Minimize entrance, Easier to defend**
- **Find out the cause(s) to decide action**
- **Queenright? Replace queen?**
- **Low on stores? Feed syrup, pollen?**
- **Pests? Treat?**
- **Disease? Address?**
- **Not enough brood? Add capped brood from strong colony**
- **Combine with other colony?**
  - **Don't put mites or disease in other colony**
- **Stop the spread? Soapy water, dry ice**

# How Many Frames of Honey?



- **Harvest ready?**
- **Winter stores?**
- **Colony health?**



**Hands-on at hives is beneficial**

- **Nectar that drips when shaken is not harvest-ready**



# If Colony is Low on Honey

- **How low is too low?**
  - **By mid-Oct, have 40+ lbs honey per hive**
- **Healthy colonies with good environment & weather will store enough for winter**
- **Why might they be low on honey?**
  - **Beekeeper takes honey**
  - **Drought, dearth of local plants**
  - **Not enough bees in colony**
  - **Not enough healthy worker bees**
- **Feed if needed to have 10 full frames / hive**
  - **Syrup, if temperature > 50°F**
  - **Fondant or sugar if colder than 50°F**
- **Beekeepers can help winter survival**

# Number of Empty Frames

- **Many empty frames**
  - **Bees can't defend (moths, beetles)**
  - **Remove box until stronger**
  - **Exchange empty frames with drawn comb**
  - **Exchange empty frames with honey**
- **If too few empty frames, frames > 70% full**
  - **If low on space, bees will swarm**
  - **Add a box, maybe checkerboard**
  - **Exchange full frames from strong hive & empty frames from less strong, equalize**



Checkerboarding honey frames →

New box	E	H	E	H	E	H	E	H	E	H
Orig box	H	E	H	E	H	E	H	E	H	E

I'm calmer about having a bunch of bees flying around me



•Queen cup



- Supersedure cells on frame side
- Colony is raising queen

<https://actbeekeepers.asn.au/grafting-into-queen-starting-cells/>



- Swarm cells along bottom of frame
- Colony preparing to swarm

# Cross-Comb

Helpful & enlightening

- **Cross combing generally occurs on foundationless frames or bars**
- **Makes it hard to inspect or harvest**
- **Remove cross-comb, maybe in Autumn when there are few bees**
- **Add ~1" foundation strip along top bar, can guide bees to follow the frames.**





# Inspection Checklist

• <https://metrobeekeepers.net/this-month-in-the-hive-inspection-checklist/>

## Beekeeper's Inspection Checklist



### 1) OUTSIDE OF HIVE

- # of bees coming & going
- Pollen going in
- Crowded entrance
- Fighting or robbing
- Weight of hive (food stores)
- Spotting (treat for nosema?)
- Dead bees on entrance or ground
- Bees on ground (mites? poison?)
- Equipment (box, stand, weathering)
- Water source (reliable, persistent)
- Neighbor issues?
- Tall grass (pest bridges)
- Sun/shade level

### 3) FRAME

- Honey stores
  - If 80% full, add super
  - If low then feed
  - Have 30 lbs for winter
- Pollen, Bee bread, add sub?
- Feeder status? Add?
- Pests (Small hive beetles, Wax moths, ants, etc)
- Nurse bee behavior
- Drones, drone cells
- Dirty comb (replace after ~5 years)
- Burr comb (clean?)
- Cell Level
  - Eggs at bottom of cells
  - Multiple eggs in cells
  - Slightly convex wax cappings
  - Perforations in wax cappings
  - Color & cond of wax & cappings
  - Mites on pupa?
- 300 Bee Level
  - Mite Count
    - Alcohol wash
    - Sugar Roll
    - Sticky board
  - Is it time to treat?

### 2) FRAME

- Temperament of bees
- # of bees on frames
- # of frames with bees
  - If < 6 frames, combine?
  - If full, split?
- Swarm signs
  - Queen cups, open, empty
  - Queen cells (larvae or closed w/ pupa, bottom of frame)
  - Supersedure cells (on frame sides)
- Brood pattern appropriate
- Larvae in jelly?
- Queen sighting or signs?
- Bees with deformities?

### 4) BEEKEEPER

- Order ahead of time (bees, queens, equipment, jars, labels, PDB, etc)
- Equipment for supering, harvesting, wintering
- Record keeping
- Learn more (bee club, books, internet, etc.)

## Bee Hive Inspection Checklist, Date & Time:



Hive # or name												
Weather (°F, clouds)												
Entrance activity, low, mod, high												
Pollen going in?												
Bees on Ground?												
Robbing?												
Hive weight (light, med, heavy)												
Equipment (stand, boxes, lids)												
Ventilation, screen bottom, shade												
Box #												
# frames bees												
# frames brood												
Brood pattern (solid, spotty)												
Larva present?												
Eggs present? 1 at bottom of cell?												
Brood caps: concave, perforated												
Jelly (dry, moderate, heavy)												
Queen swarm cells, bottom												
Queen cups												
Queen supersedure cells, sides												
# frames drone brood												
Hive Beetles												
# frames capped honey												
# frames nectar (uncapped)												
# frames pollen, # colors												
# frames empty cells												
# frames undrawn foundation												
Hive Temperament												
Excluder (remove by Sept)												
Pest or Disease signs												
Varroa test												
Comments, Actions												

Actions to consider: feed, test, treat, SHB trap, add or remove box, split, combine, report disease or poison

# Frames bees	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Good	7	8	10	14	16	16	13	10	10	11	9	8
Help Needed	4	4	6	7	8	9	8	7	8	8	7	6
Doomed	3	2	2	2	3	3	3	3	4	5	5	5

Help: test, kill varroa, re-queen, add brood, add bees, feed syrup/pollen  
 Doomed: test, kill varroa, combine  
 # Frames honey: at least 10 full frames both sides by mid-Oct  
 # Frames honey: similar to # frames of brood  
 # Frames pollen: > 1 full frame both sides when eggs or brood present

- Spotty brood caused by:
- Failing queen
  - Varroa
  - Hot dry conditions
  - Poor nutrition (cannibalize)
  - Not enough space for nectar & pollen
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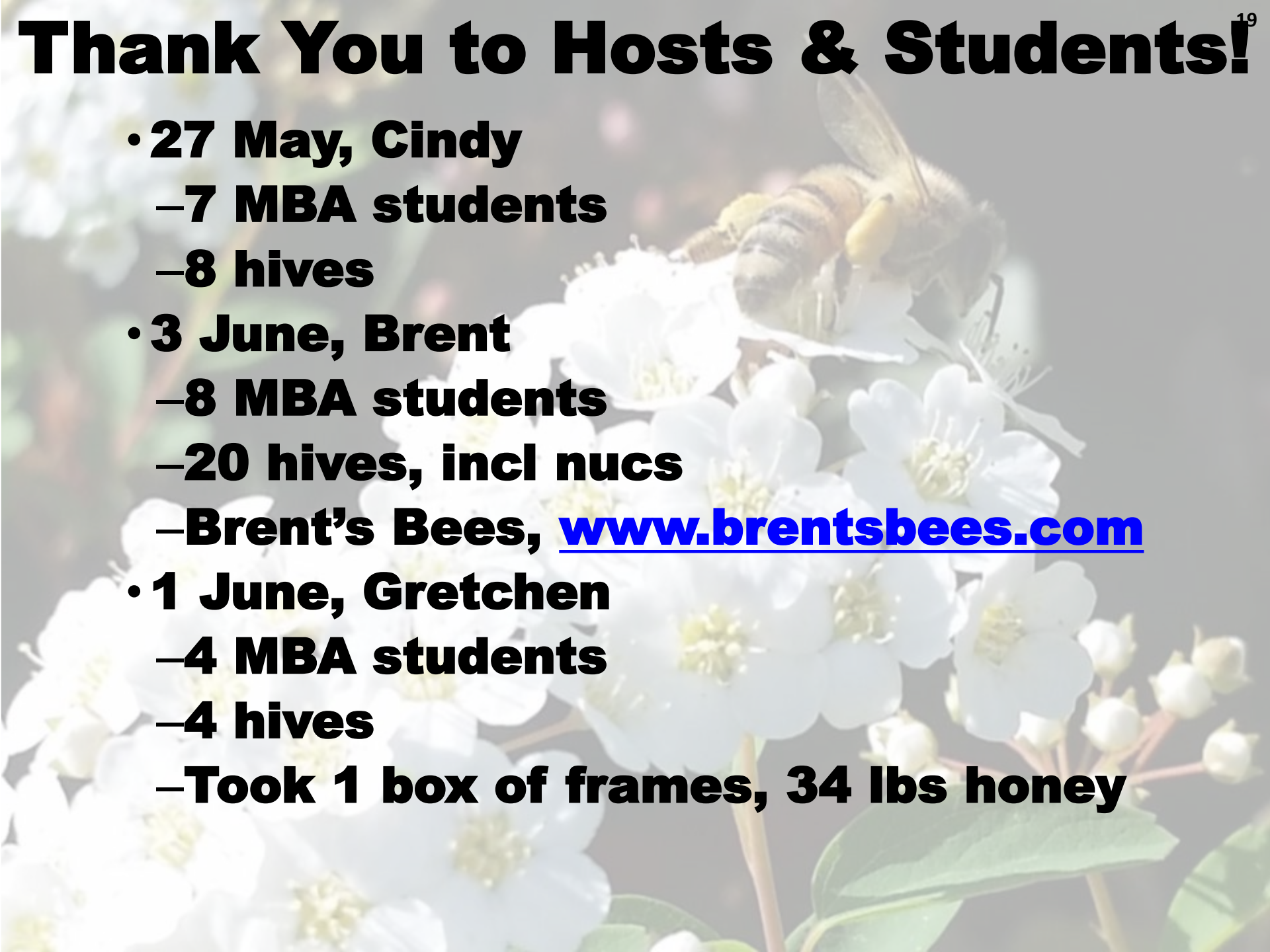
# Harvesting



**There is nothing like being there, hands on!**

# Thank You to Hosts & Students!

- **27 May, Cindy**
  - **7 MBA students**
  - **8 hives**
- **3 June, Brent**
  - **8 MBA students**
  - **20 hives, incl nucs**
  - **Brent's Bees, [www.brentsbees.com](http://www.brentsbees.com)**
- **1 June, Gretchen**
  - **4 MBA students**
  - **4 hives**
  - **Took 1 box of frames, 34 lbs honey**



# Opportunities?

- **Who would like to go on a bee field trip?**
- **Who would host a field trip at your bee yard?**
- **Please sign list during break, &/or email [president@metrobeekeepers.net](mailto:president@metrobeekeepers.net)**
  - **What day(s) & time(s) work?**
  - **Host: what would you like visitors to do?**
  - **Visitors: What would you like to see?**



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**CAUTION**  
**BEES**  
**STAY CLEAR**















































