

INLAND EMPIRE BEEKEEPERS ASSOCIATION

Apprentice Beekeeping Class



Spring Management

Spring Management Topics

GOAL: Draw Comb & Grow Bees

Pollen & Nectar plus Syrup

= comb production

After Dandelion Season

Dearth: pollen and nectar slow

Feed when necessary

Significant Buildup

Some drone laying

Add second deep

Frame/Comb Placement

16+ or 20+ and supering

Hive Inspection



Comb is King



Spring Management

After Package Day

- Check for queen release (midweek)
- Check for eggs/tiny larvae (next weekend)
- Feed sugar syrup AMAP
 - Avoid “blocking out” the queen
- Inspect weekly (normally)

Field Day 1
3 Weeks after
Package Day



First Year Spring Feeding

Syrup: Very weather dependent

- 1:1 sugar to water (weight or volume)
- Use refined sugar (cane or beet)
- Adds moisture
- Useful any time bees are drawing out brood comb

Syrup Feeder Comparison



**Inline
AKA
Frame**

- **High capacity**
- **Works in bad weather**
- **Works round the clock**
- **Must protect bees from drowning (ladders)**

**Boardman
AKA
Entrance**



- **Lower capacity**
- **Entrance - fair weather**
- **Top box - bad weather**
- **Water source**
- **Robbing risk**

Honey Bee Feeding Table

SUGAR SYRUP (Sugar: Water)	Spring	Summer	Fall	Winter
1 : 1 Syrup	YES 1, 2, 3, 5	NO	NO	NO
2 : 1 Syrup	NO	NO	YES 1, 2, 3, 5,7	NO
NON-SYRUP	Spring	Summer	Fall	Winter
Honey 4	YEAR ROUND	YEAR ROUND	YEAR ROUND	YEAR ROUND
Dry Sugar 4	Emergency Feeding	NO	NO	Emergency Feeding
Candy 4	YES	NO	NO	YES
Fondant 4	YES	NO	NO	YES
Sugar Patty 4	YES 6, 8	NO 8	YES 6, 8	YES 6, 8
Pollen Patty 4	YES 6	NO 8	NO	NO

1. Outside temperature must be above 40-45 F for inline feeder use.
2. Remove inline feeders when bees stop taking syrup. Replace with: In spring-empty frame, In fall - fully capped honey frame.
3. Entrance Feeders can be removed at night and replaced with warm syrup in the morning.
4. Be aware of what bee clusters are doing day and night.
5. Moved from feeder into frames for use and storage. Over filling can result in plugging out the queen.
6. Used as needed food source, not moved into frames for stored.
7. To Estimate fall feeding requirements, figure that one gallon of 2:1 syrup will fill one empty drawn frame.
8. During hot months patties will melt and gum up the inside of a hive.

Starting the Smoker

Tinder
Kindling
Fuel

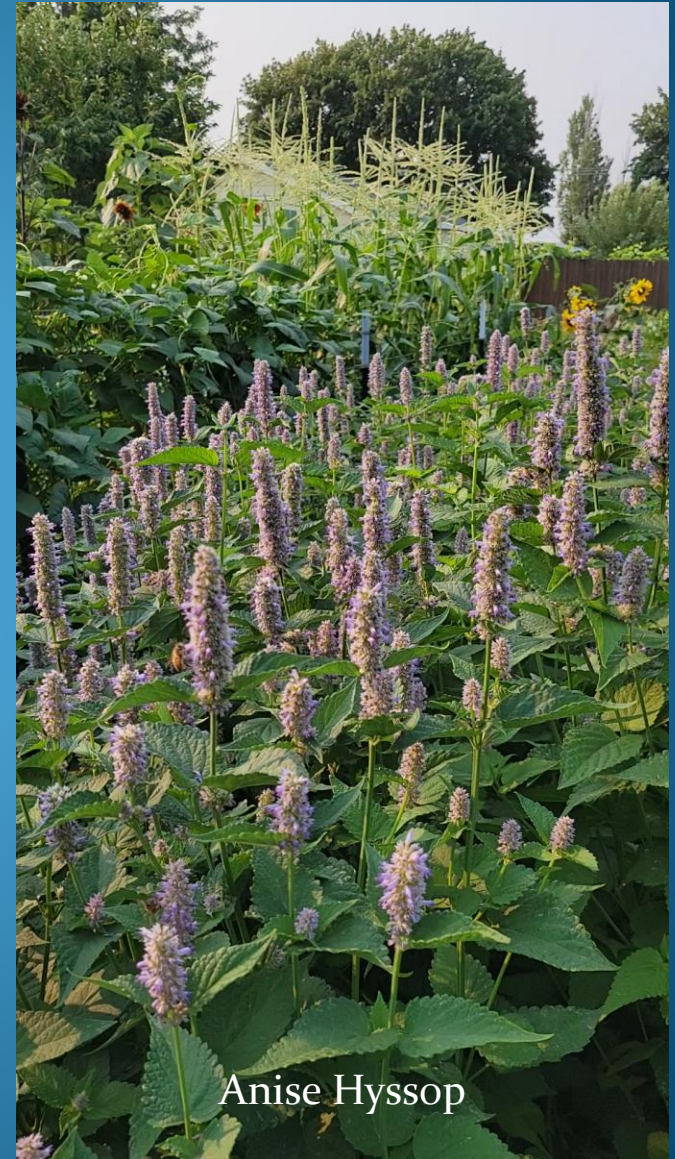


Hive Inspection – Basic Steps

1. Gather tools and start smoker. Smoke the hives.

WHILE IN THE HIVE, BE CAREFUL NOT TO HARM THE QUEEN.

2. Remove outer cover. Remove inner cover and invert at entrance. Remove outside edge frame.
3. Starting from the side opposite the feeder, check frames for eggs, larvae, capped brood, queen, pollen, honey.



Anise Hyssop

Hive Inspection – Basic Steps Cont.

4. When done, push frames back to original position. **Keep frames in the same order and direction for the first weeks.**
5. Replace edge frame and covers.
6. Cork the smoker.



Broccoli flowers



Radish flowers

Beeswax Begins with Young Bees

- **Temperature conditions** must be right. (foraging temperatures)
- They consume **eight pounds of honey** to make **one pound of wax**.

Eight Wax Glands

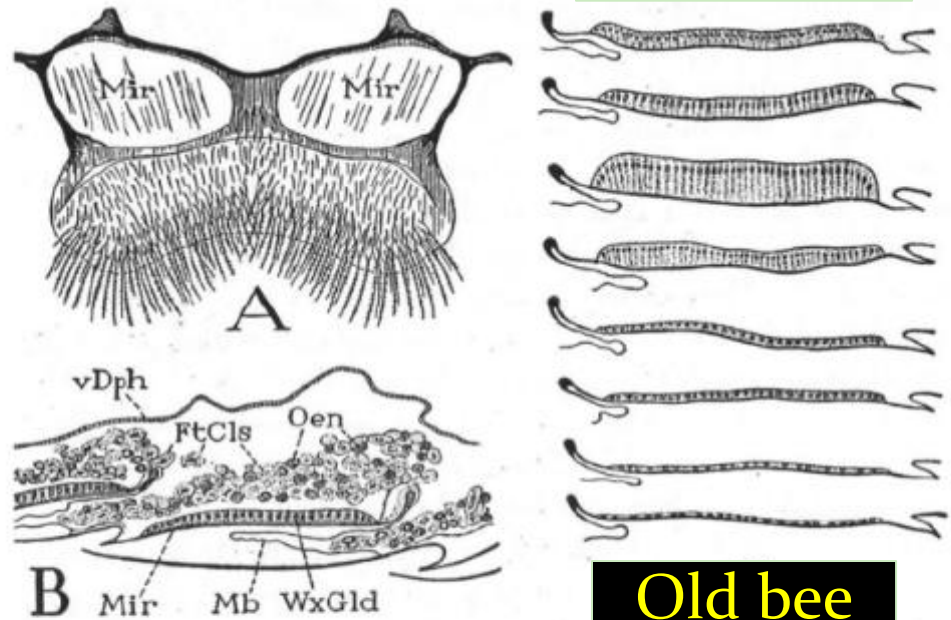


<https://apiscera.com/en/beeswax>

Wax Gland Development

- Most productive at making wax when 12-18 days old.
- Once old enough to forage, they lose this ability - but can revert if necessary – although they are not as efficient.

Young bee



Old bee

Figure 1- The Wax Glands: A = Sternum of segment VI of worker, ventral, showing polished "mirrors" beneath wax glands, B = lengthwise section through two wax glands with overlying masses of fat cells and oenocytes. C = stages in the development and regression of a wax gland. Mir = mirror, WxGld = wax gland, FtCls = fat cells, Oen = oenocytes, vDph = ventral diaphragm, Mb = intersegmental membrane. (Snodgrass 1956).

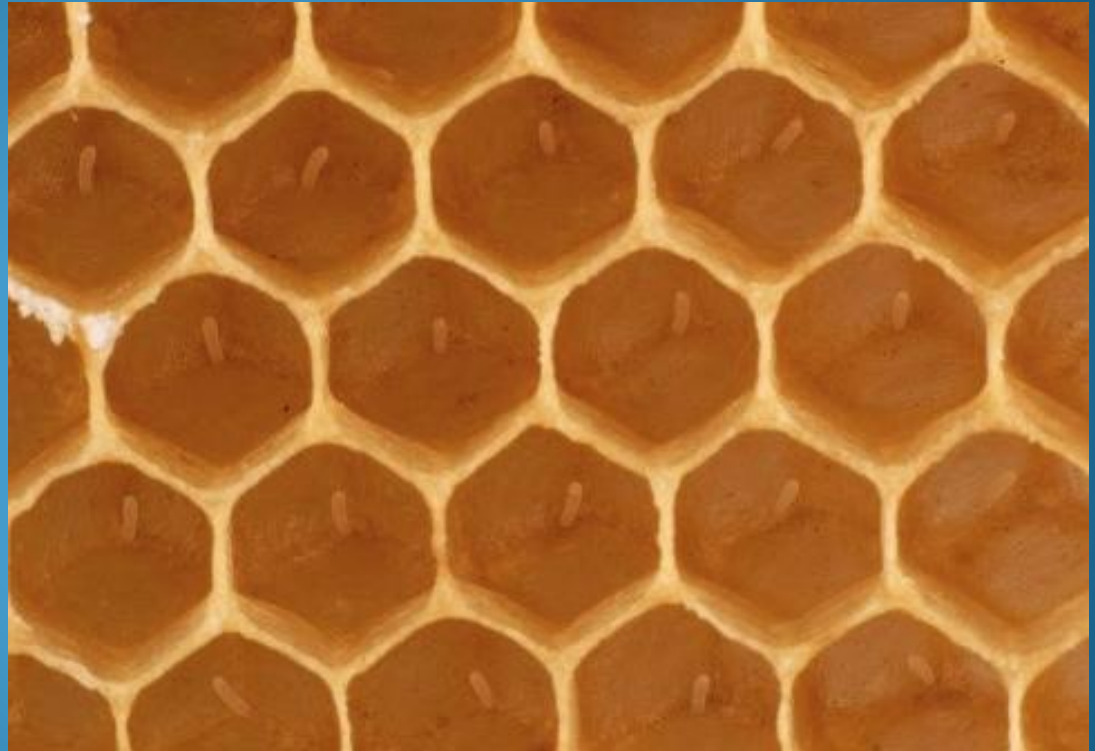
Wonky Comb Happens

Scrape off any bad parts. They need to try again. **Watch for the queen!**



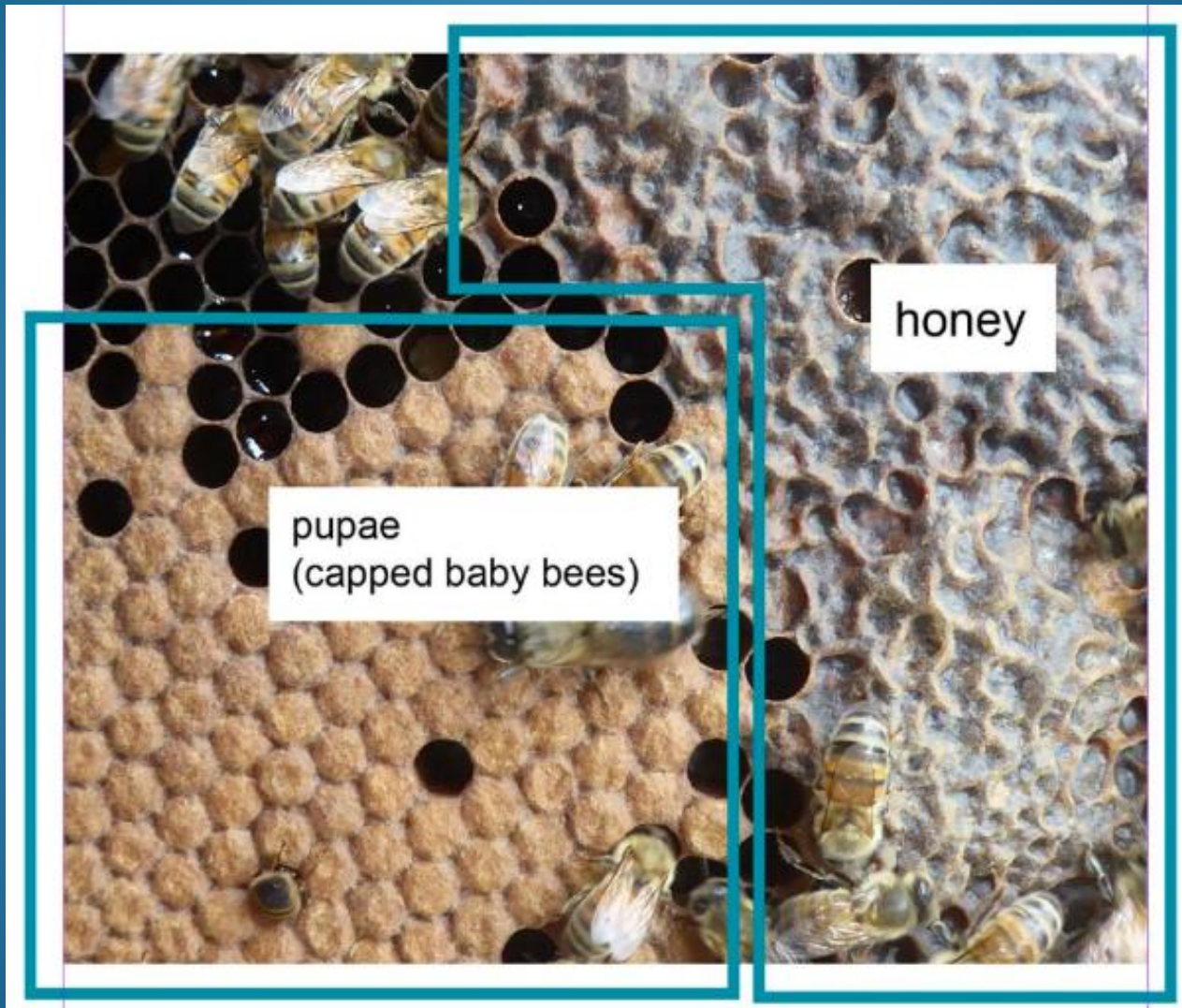
Learn to See Eggs

- Easier on a sunny day
- Learn where to focus
- Photos



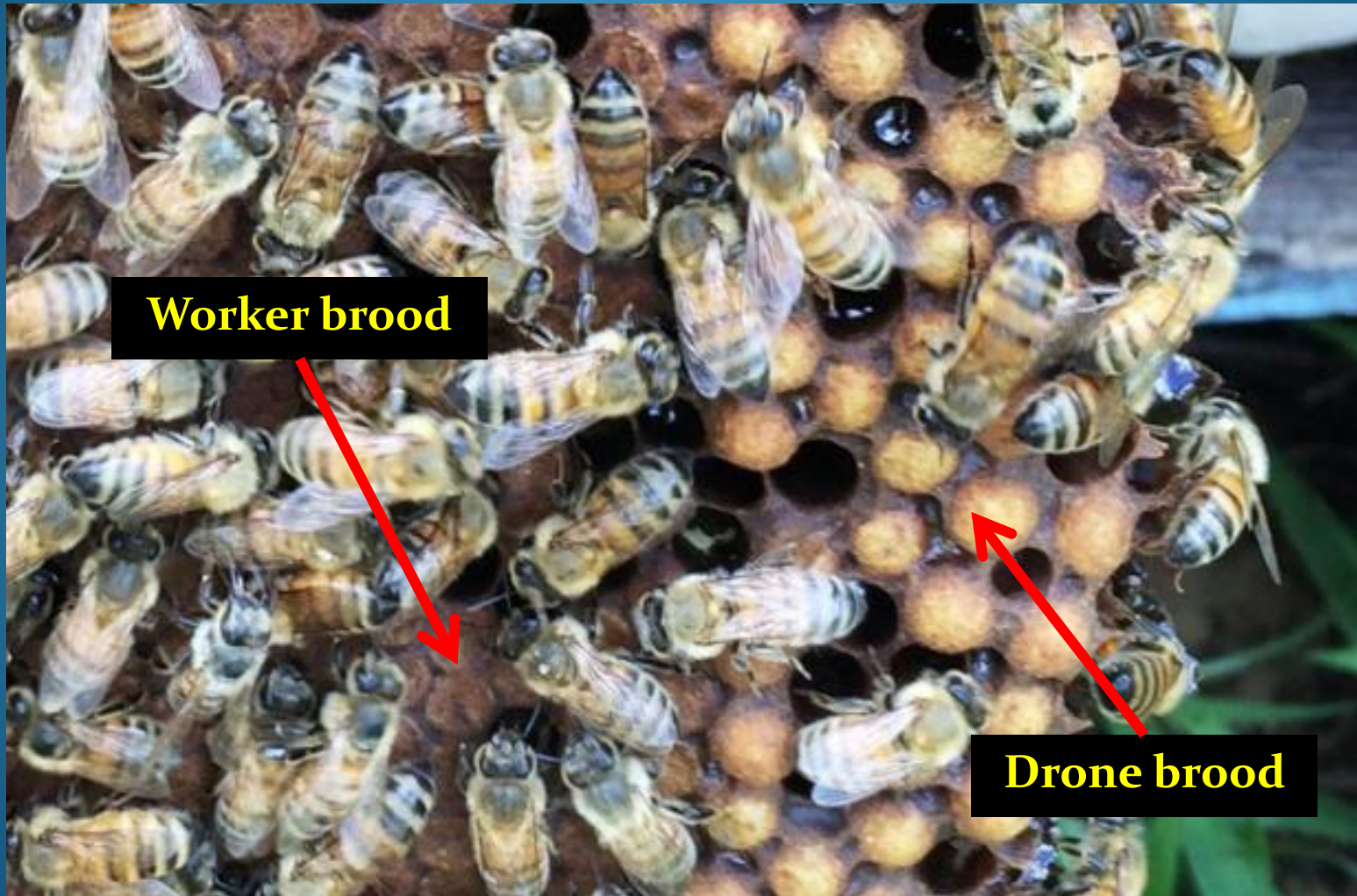
From Buzzing Across America

Comparison of Honey and Brood



From Beekeeping Made Simple

Drone vs. Worker Brood



From Beekeeping Made Simple

Larve



bestfarmanimals.com

Nectar and Pollen



Nectar glistens

Queen Cup vs. Queen Cell

Cup
if no larva



From glorybee.com

Uncapped
cells



Capped cells
(peanut)



**Draw 5 ½ to 6 frames
(8-frame hive)**

Then add 2nd deep

- **Move feeder up**
- **Foundation to middle, honey frames out, brood together**

Timing is weather dependent.

Keep Syrup in Hive:

Check every 3-5 days

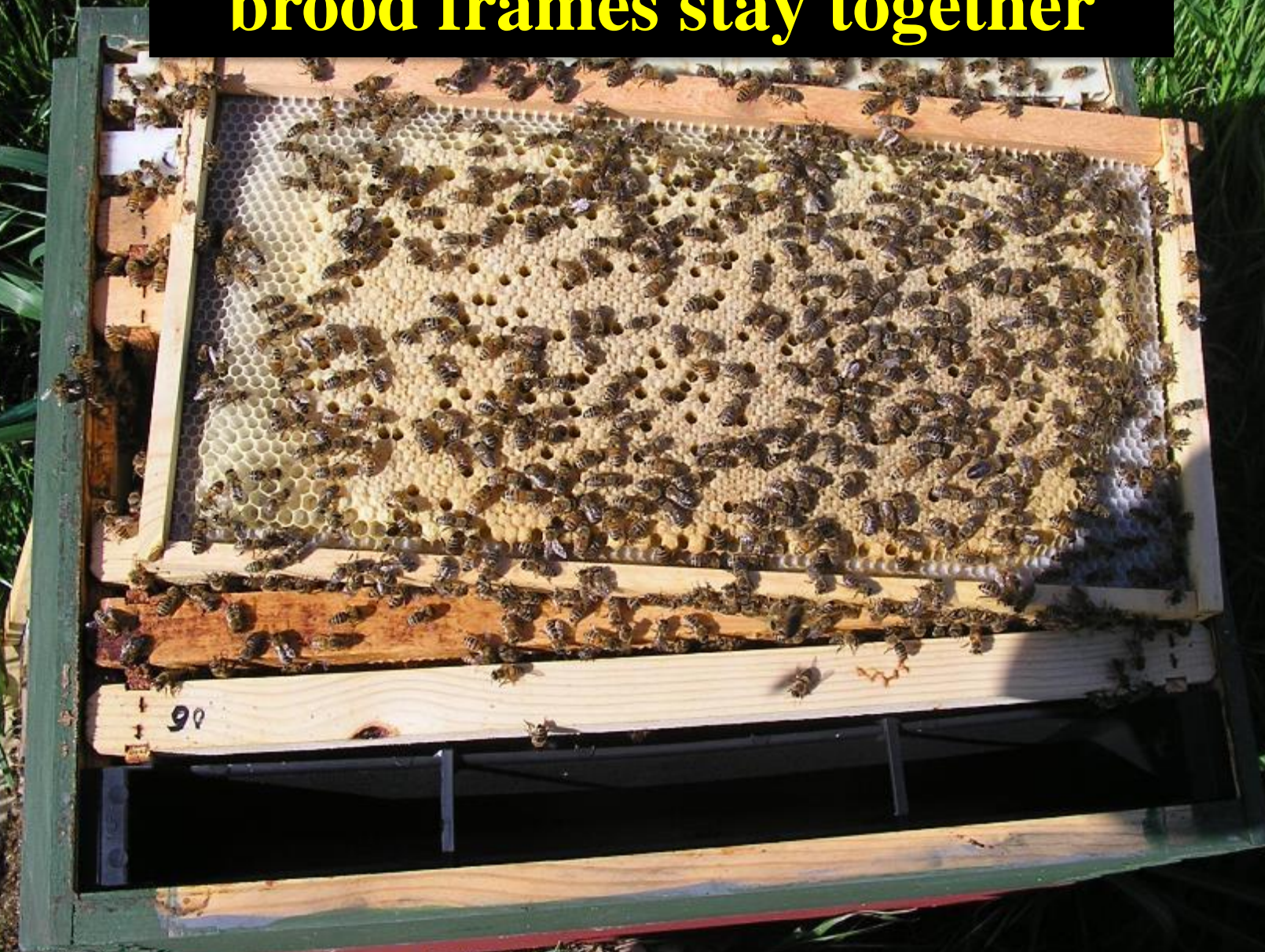
Don't overfill feeder



This is a 10-frame hive

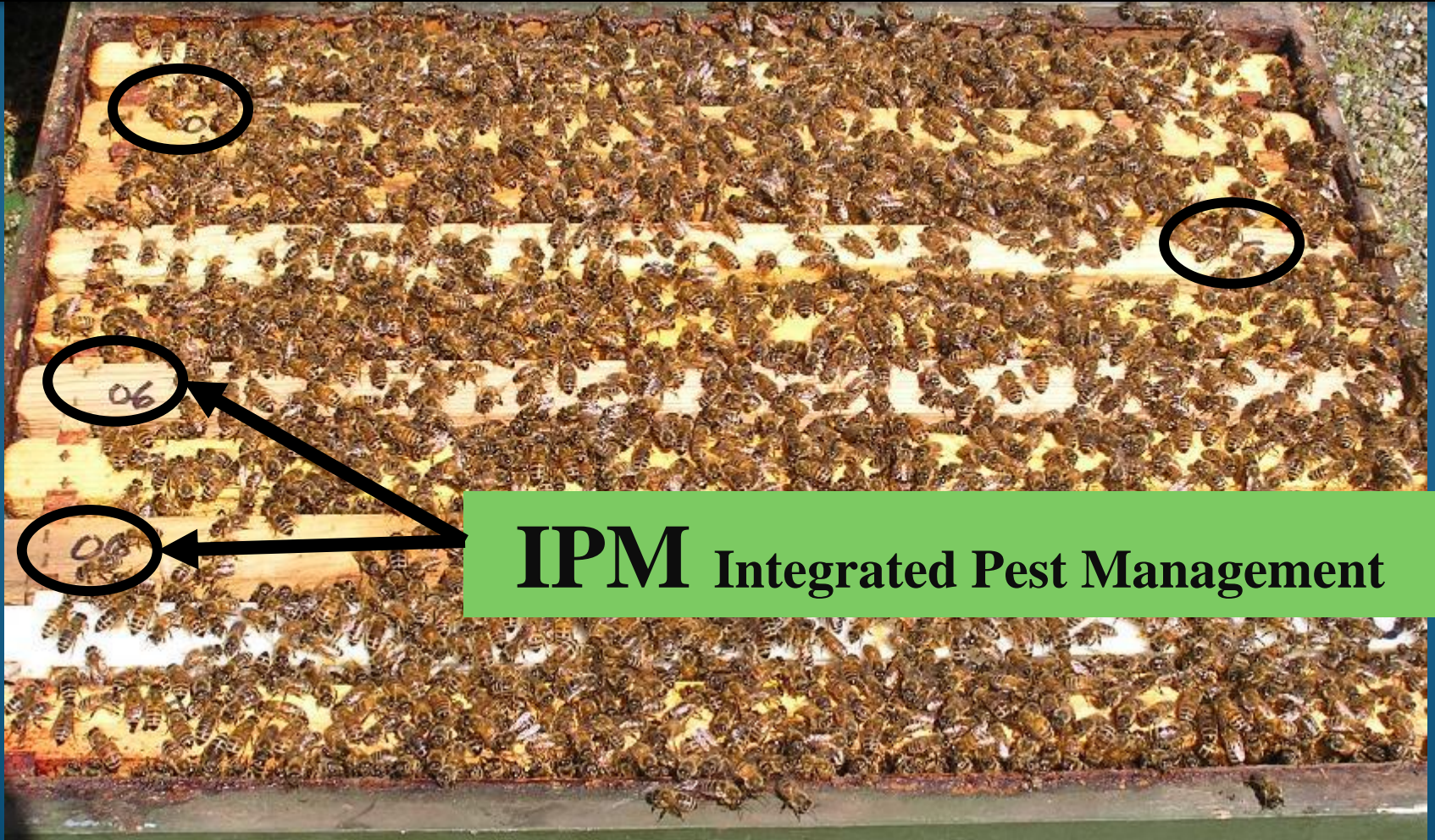
**Reminder: Queen
Cage Placement Site**

**Second Deep with Feeder
brood frames stay together**



**20+ Drawn Frames (10-frame set-up)
Add Honey Super ~ 18**

Feeder removed BEFORE adding honey supers



IPM Integrated Pest Management

Frame Replacement

- As part of IPM, you'll replace frames every five years, max.
- If frames are unused for a season, they can be re-numbered.
- Number them as they are drawn or at end of season.
- You will be able to re-use wood frames by pushing out old comb and replacing it with foundation. It's good to scorch before re-use.

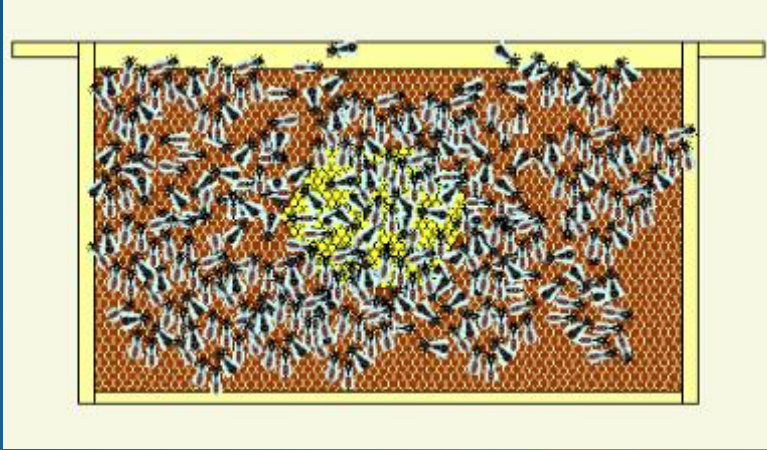


Example Colony Buildup

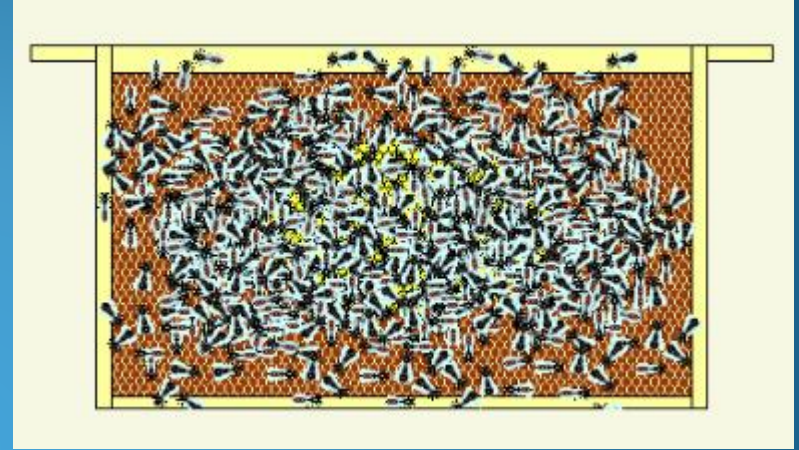
Date	Day	Frames of Bees	Frames of Brood	Remarks
4/12	0	4	0	Package Day
4/19	7	4	2	
4/26	14	4	3	
5/3	21	3	4	Field Day 1
5/10	28	4	5	First new bees
5/17	35	6	6	Second deep time?
5/24	42	7	7	
5/31	49	9	8	Field Day 2
6/7	56	12	9	Remove feeder when most deep frames are drawn. Add a super, then more as needed.
6/14	63	15	9	
6/21	70	15	10	Field Day 3
6/28	77	16+	10	
7/5	84	16+	10	
7/12	91	16+	10	
7/19	98	16+	10	
7/26	105	16+	10	Nectar flow slows.
8/2	112	16+	10	Pull supers.
8/9	119	16+	8	Treat for mites.

Estimating Bees and Brood

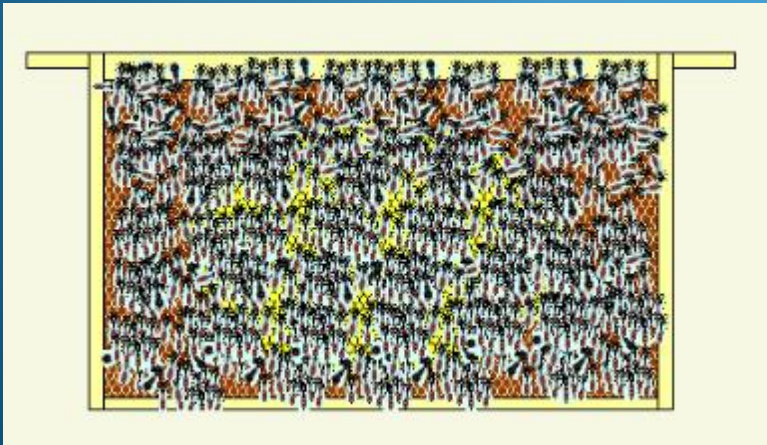
275 sealed brood, 300 bees



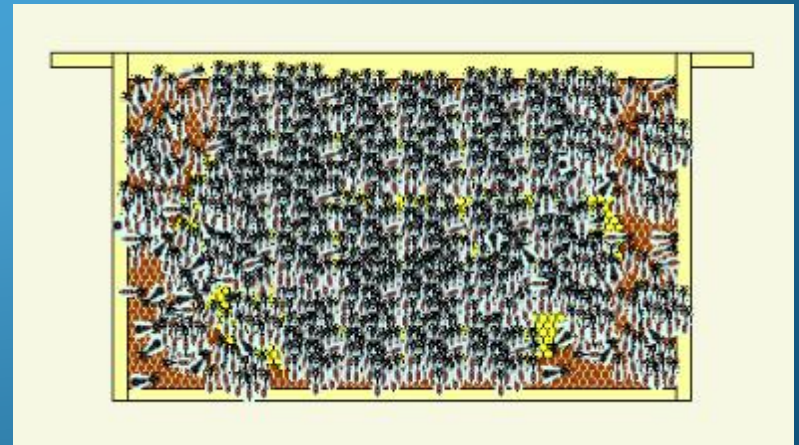
550 sealed brood, 450 bees



1100 sealed brood, 900 bees



1200 sealed brood, 1400 bees



David Cushman

Swarms & Swarm Prevention



Swarm: Original queen leaves with **half** of the bees!
Abscond: The **entire** colony leaves!



Reasons for Swarming

Primary Causes:

- **Crowded brood area –
nowhere for queen to lay**
- **Lack of storage space**



Swarm Prevention for First Year

Add space by “supering”
(adding honey supers above deeps)



Honey Bank

Contains capped frames full of honey and pollen
Beekeeper's Insurance

Used to feed hives low on food

usually in late winter/early spring

If not used for emergency feeding can be
added to nucs or splits

Honey in honey
frames is the best
way to feed your
bees.



Hive Language

1:1 syrup

Dearth

Inspections

Frame placement

Swarm

Abscond

Queen cups & cells

Supering

