The Managed Mentoring Program on getting started in beekeeping.

Managed Mentoring

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Honey Supers – Queen Excluders

Lesson | Adding Honey Supers

What is Covered in this Lesson

- The basics of honey supers
- Triggers and Indicators for adding honey supers
- Supering new vs. existing hives
- Mechanics of Supering - Instructions
- Queen Excluders in conjunction to supering
- Recommendations and advice

Honey Supers

Super > Superior

- *The honey super is placed above, or superior to the brood nest*
  - This is in harmony with the biology of the bees as they are pre-dispositioned to placing honey stores along side and above the next.
- *Supers are typically Medium height boxes*
  - It is not a rule that it has to be a medium
    - You could use a deep box as a honey super, though it is not customary because they become quite heavy when full of honey.
    - You could also use a shallow. These boxes are shorter in height than a medium and used for the opposite purpose – they are lighter than mediums.

Honey Super Indicators

The colony operation provides signs

- *Bees fill honey supers if:*
  - They have a large population of bees that can support the jobs in the colony
    - This colony is flush with resources to sustain the operation of preparing for incoming nectar (prepping cells), taking in nectar from foragers and storing it, drying nectar, etc.
  - They have a contingent of forager aged bees
  - The weather is suitable for forage
  - There is forage available – especially *trees* in bloom
  - They have a place to store nectar during a nectar flow (space in the comb)

Triggers for Adding Super

❑ Conditions that signal supers are needed

- *They are commensurate to the list just covered*
  - Right conditions, right colony makeup, right workforce
- *Nectar storage as a precursor*
  - Bees will deposit nectar in and around the brood nest which is a signal that they would take advantage of honey supers above the brood nest
- *Rearing brood underway*
  - Nectar provides carbohydrates for rearing bees, and it stimulates the workforce to gather nectar for storage

New Hives (or small hives coming out of winter)

❑ Supering colonies for new hives

- *New hives and small hives are building momentum*
  - They may have been started in the beekeeping season, or they might have come out of winter small
  - These colonies require time and energy to build critical mass and once they get to a reasonable size, they will develop a workforce supported by resources and population
  - Heavy forage will commence, and storage requirements will grow.
  - Active colonies will consume nectar as they grow – but in time they will start to store resources – storage in the periphery is an indicator for adding supers above

New Hives – 2nd Brood Nest Box

When the second box is building

- *As a colony moves from one box to two for the nest, they will have the size they require for the nest*
  - When they get to the second box, they will maintain the nest in the two boxes and turn to storage in the outer frames of the nest
  - When the second box (of a new hive) is three-quarter full – it is reasonable to add honey supers
    - Adding at this point allows the bees to discover the space, while not detracting them from finishing the outer frames of the top box of the brood nest
    - As the bees discover the super, it provides opportunity for them to walk the space and add their scent to the area. The bees can assess/discover the need to build wax in there

Established Hives – Super them quicker

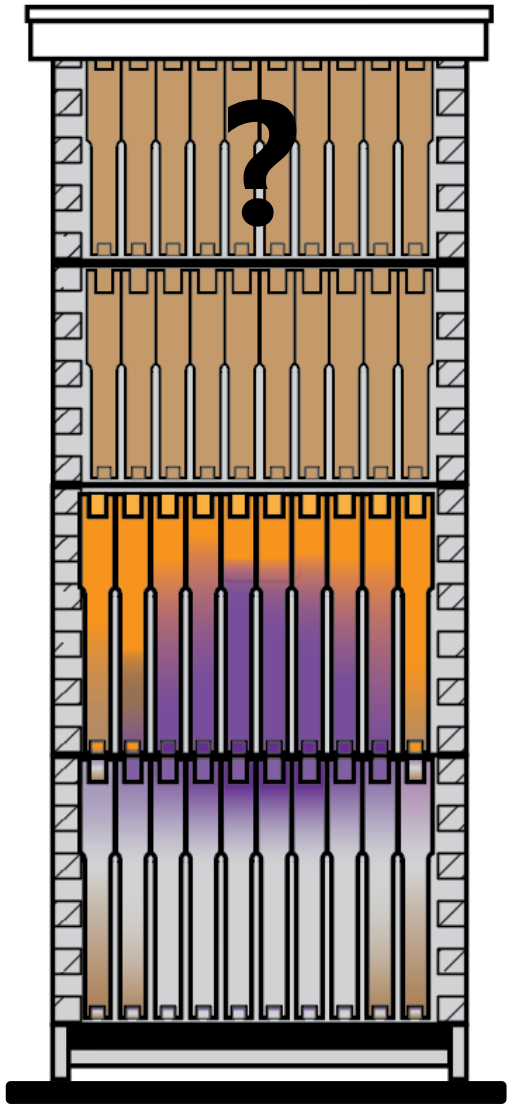
❑ Similar Principle

- *If the hive is operational coming out of winter, they will move quicker*
  - These **colonies have drawn comb** in the brood nest boxes
    - The bees will not be preoccupied with building out honeycomb – and they will not require the nectar consumed to build out that wax. It is going to be stored
  - Their velocity will be quicker and as soon as you see bees storing nectar – or the triggers are in play – then you would be well served to add supers
    - Do weigh the viability of the weather and forage availability as you read the situation
  - An important aspect to consider in the spring is trees in bloom
    - Flowers provide a source for nectar, but blooming spring trees result in an abundance

Mechanics of Supering

❑ Advice you might hear > *Two at a time…*

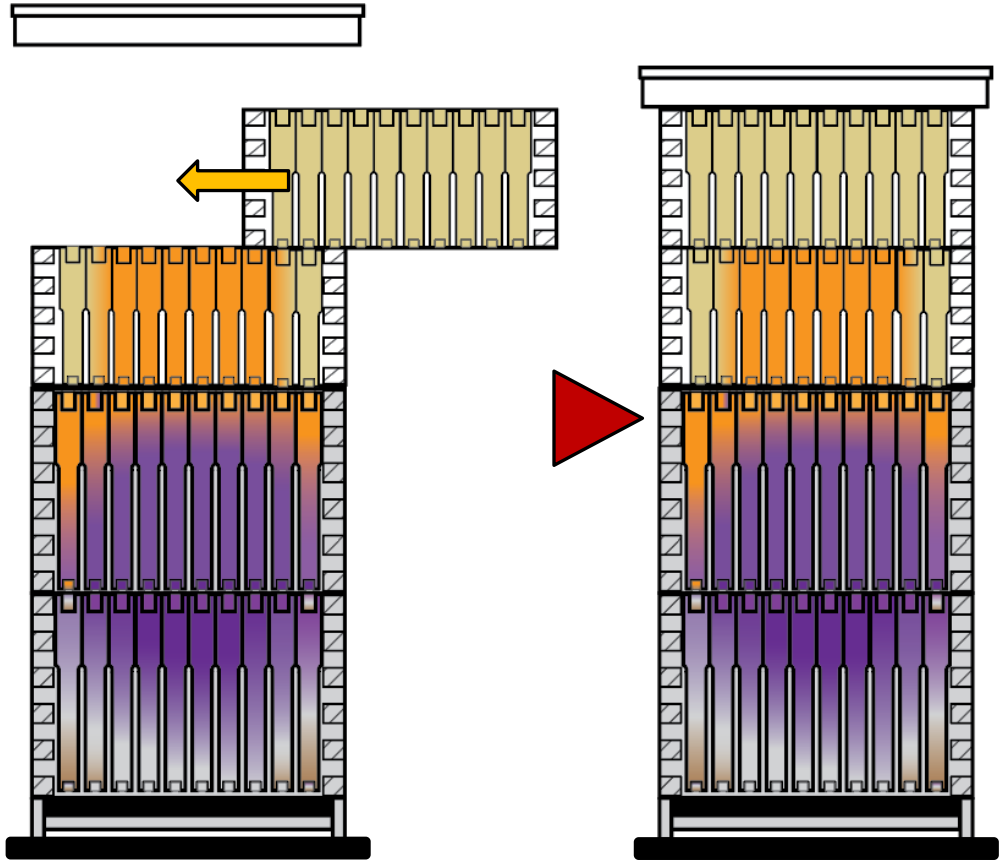
- *A commonly heard instruction: Add not just one, but two at the same time – Should you follow this?*
  - □ This is likely a practice bleeding over from the commercial world.
    - For efficiency commercial beekeepers will put two supers on in the out yard so they do not have to return to an out yard to add more boxes as the season progresses
    - Hobbyists somehow latched on to this and the instruction is now passed around
- *Our Guidance: Add One, then add the other*
  - Our take; add one super in the early spring; hold off on the second one, **especially if the bees need to draw out the honeycomb**
  - In time, come back and add a second super when the first is 75% drawn and bees are storing nectar in the drawn comb



Under vs. Over Supering

❑ OVER Supering

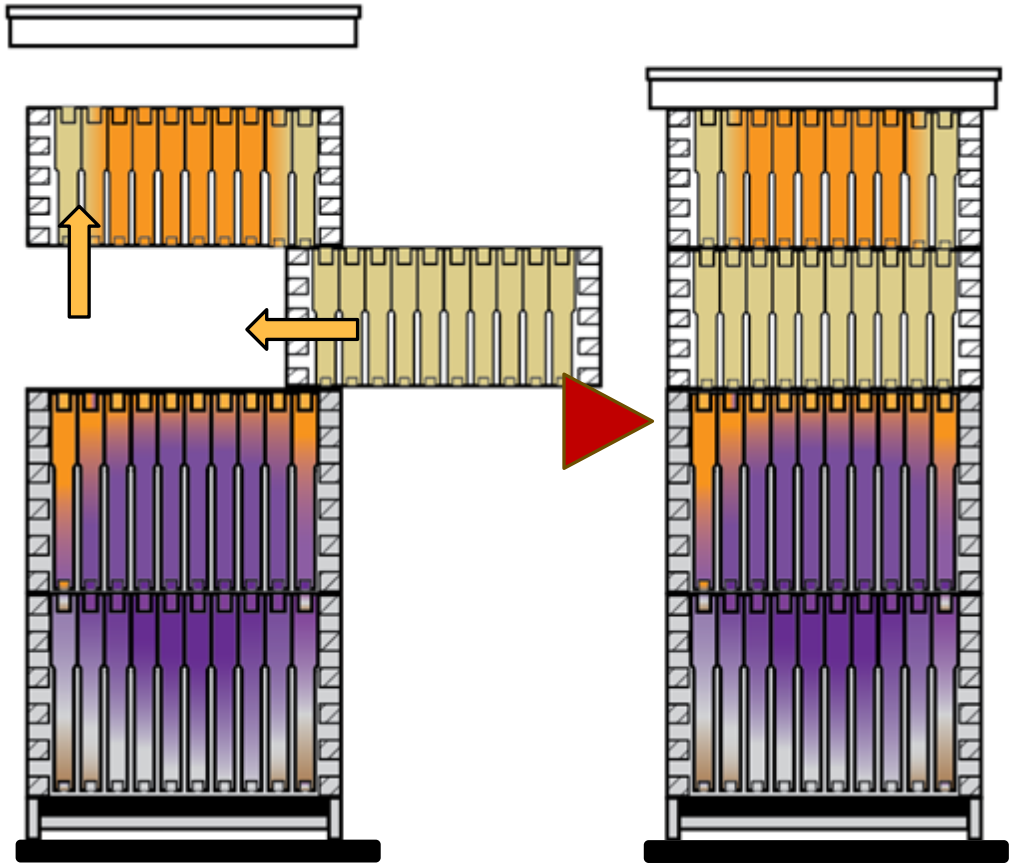
- *Place on top – the logical progression of adding honey supers*
  - If you have two deeps and a super in service and you want to add an additional super.
  - You simply place the next super on top of the stack
  - It results in the hive configuration shown on the right



Under vs. Over Supering

UNDER Supering

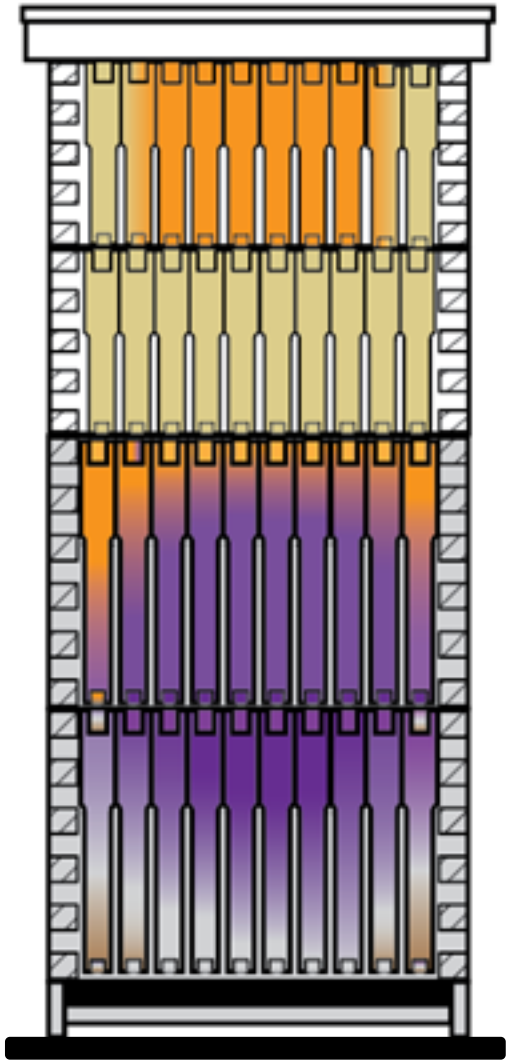
- *Place under an existing super*
  - Take the existing super off of the stack
  - Place the new box over the brood nest boxes
  - Return the Existing Super over the new box



Why Under Super?

Real and Perceived Advantages

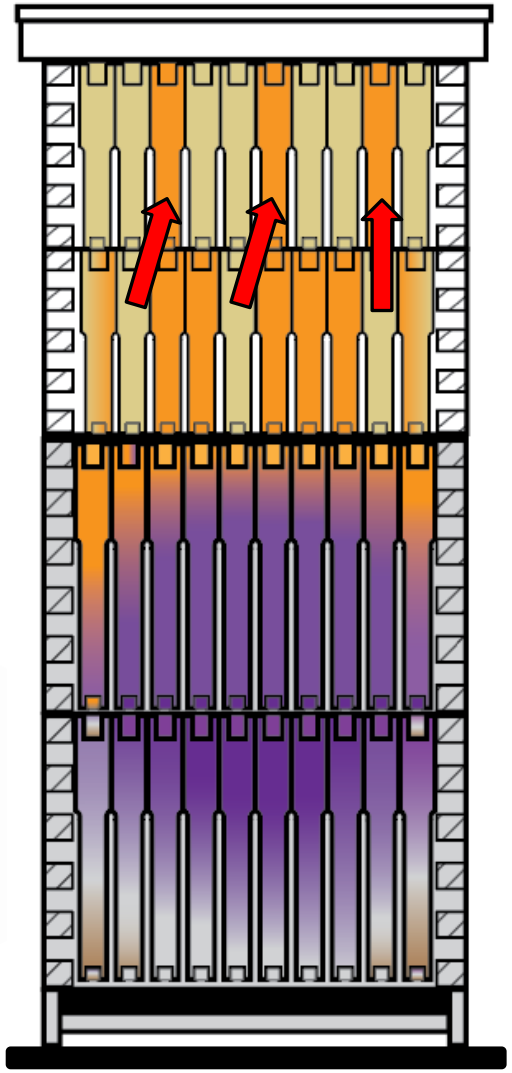
- *When you want to harvest boxes for extraction, the top of the stack will have the finished boxes*
- *Placement under the super 'might' act as a deterrent for the queen to come north*
  - This is up for debate. Some think over supering is better because the queen will not cross frames with honey
  - Others say that under supering is better as open frames are not enticing to the queen – *this seems flawed if you ask us*



A compromise?

❑ Over Super + Exchange Frames

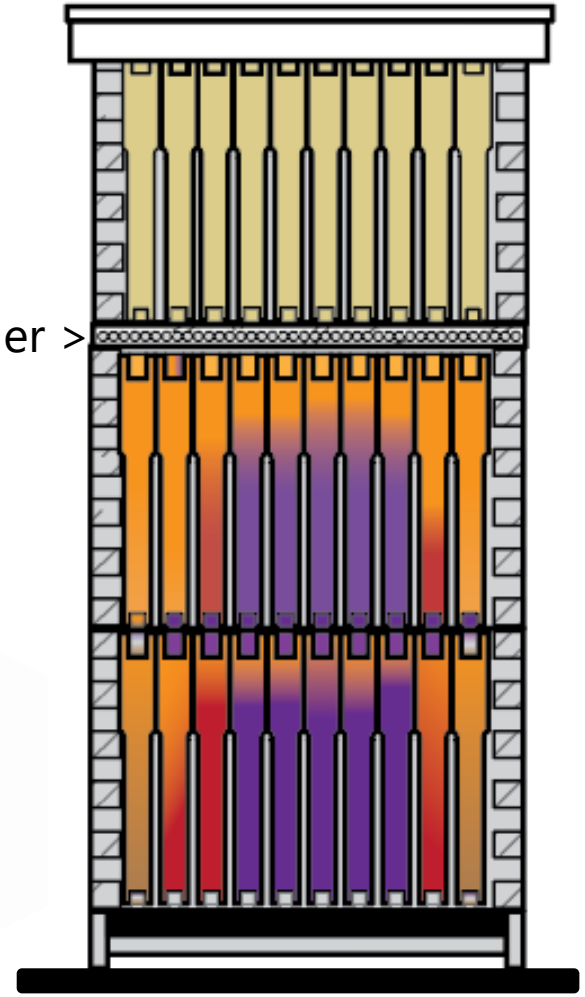
- *In this scenario a box is added to the top*
- *Then three of the drawn honey frames are moved up into the box added to the top of the stack*
- *This accomplishes a few goals…*
  - It brings resource frames into the new box which can serve to entice the bees to come up into the space
  - Bees are compelled to draw out the ‘empties’ in the lower box as they seem to show preference to fill empty spaces



Queen Excluders

Understanding Queen Excluders

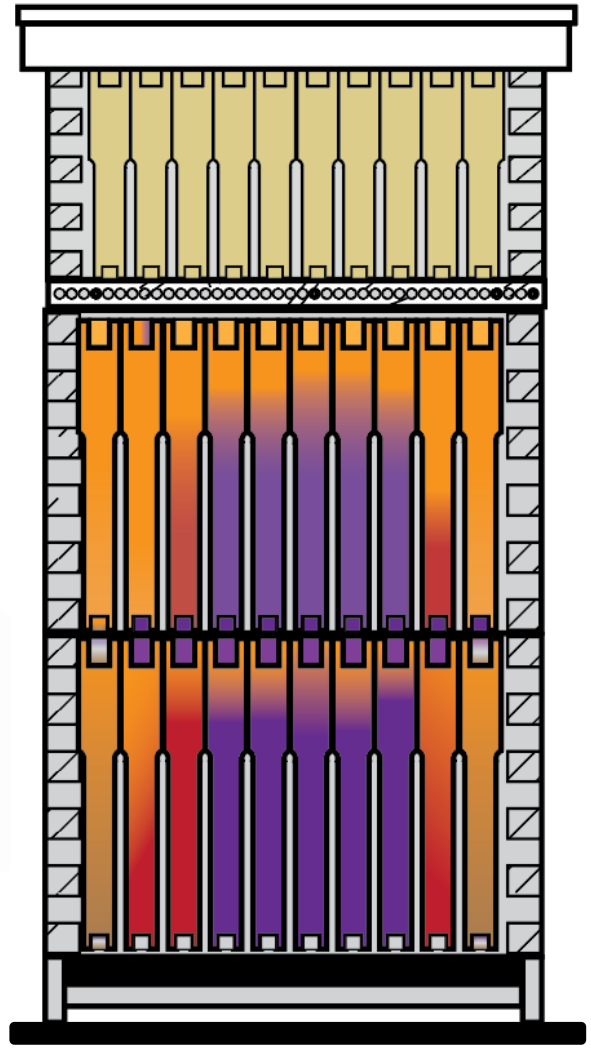
- *Keep the queen out of the honey boxes*
  - The premise is to thwart the queen from passing into the honey boxes, and thereby expanding the brood nest into what you intend to be a honey box
  - It keeps the queen from passing through – slots are too small
- *Do you need this?*
  - More often than not, it is not required. Let's explore some of the dynamics



Queen Excluder not Required?

❑ Likely it is not required

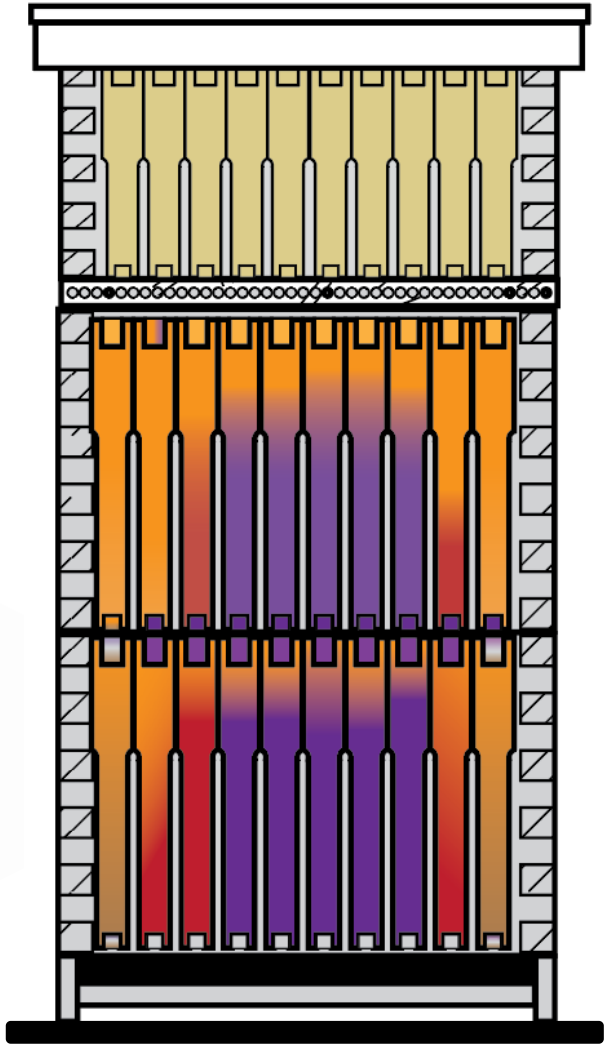
- *Brood Nest Size*
  - The typical size of a conventional brood nest would be two deeps. Expansion into a third box would be atypical
  - The queen excluder is a hard constraint
- *Honey Dome*
  - It is typical for the bees to build a wide swath of honey across the top of the brood combs
  - Experience tells us that the queen stays below the honey band and will not venture north into honey boxes



Honey Excluder

Compromising the expansion

- *Experience with queen excluders*
  - It is established that a queen excluder will keep a queen out, but it also is a detriment to worker bees passing through
  - It should also be noted that it constrains drones into the brood nest as they cannot pass through either
- *As a barrier, it can serve to slow the bees down*
  - Some beekeepers call queen excluders honey excluders because of the perception of introducing a barrier to progress for normal hive operations due to the factors above



Build Out Problems

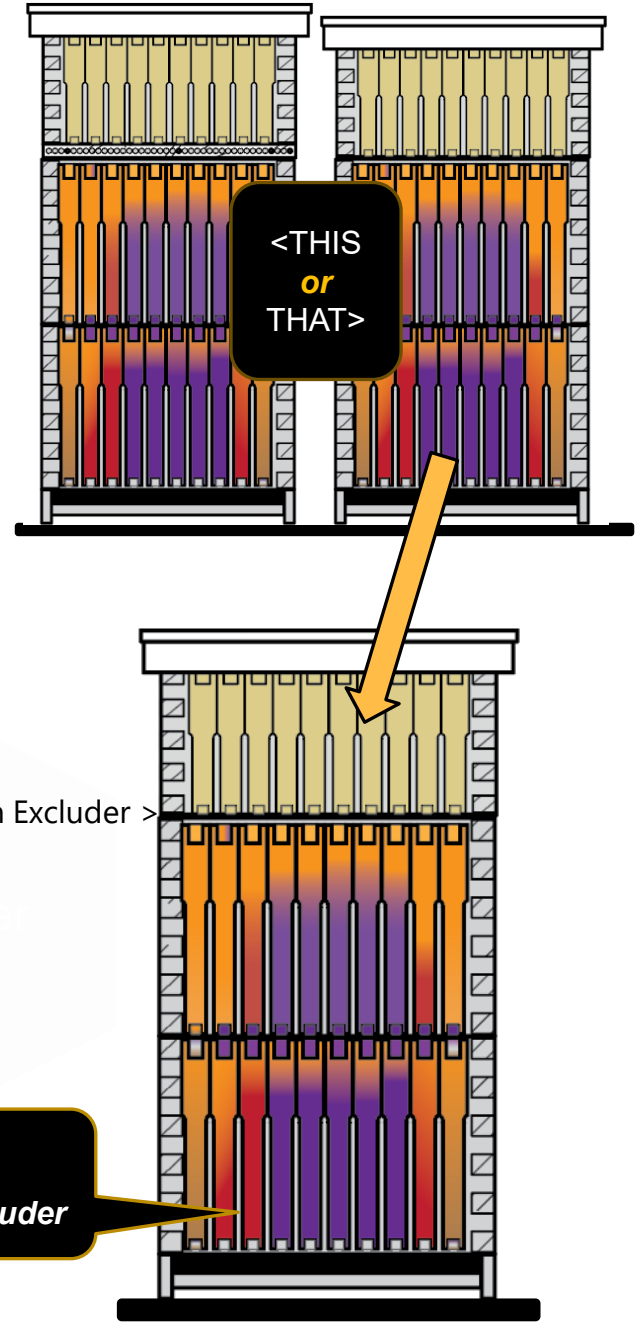
❑ Building Foundation

- *When the top boxes are foundation… do not use a queen excluder*
  - Worker bees are can exhibit reluctance to pass through a queen excluder to get to undrawn frames
  - The progression of drawing out wax will be hampered when a queen excluder sits between the brood chamber and a box with undrawn foundation

Personal Preference

❑ Hobbyist vs. Commercial

- *Commercial beekeepers = Queen Excluders*
  - They have a requirement to keep brood out of honey supers so that when it comes time to extract honey, they do not deal with nest bees in honey supers
- *Hobbyist beekeepers can assess and choose*
  - Experience tells us that – hobbyists often do not have the piece of equipment and therefore do not use them.
  - Additionally, they rarely encounter problems and can address any anomalies on a case-by-case basis

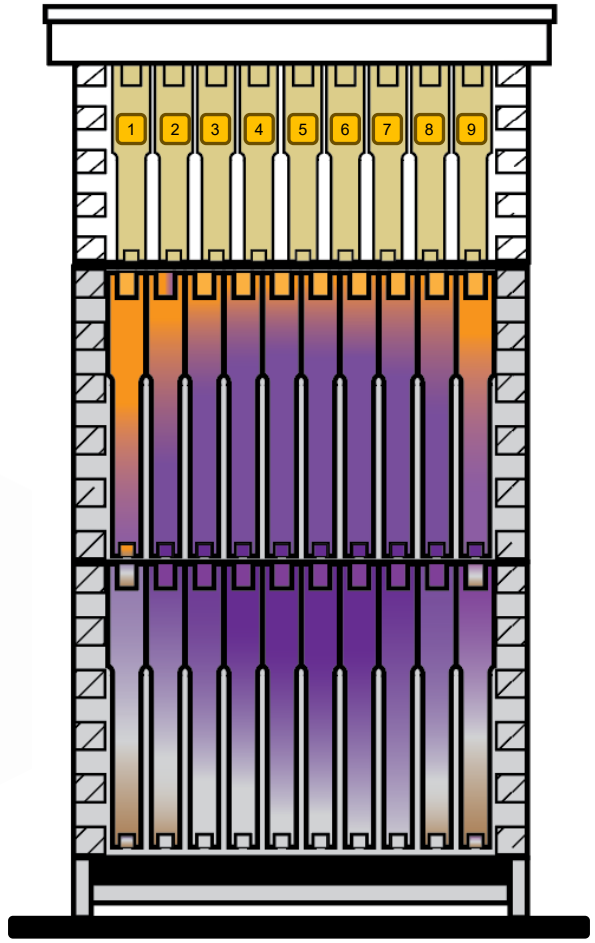


Our Leaning…
Forgo using a queen excluder

9-Frame Honey Super

Benefits of 9-Frame

- *The illustration on the right has 9-Frames in the honey super instead of the customary 10-Frames*
- *When adding supers, this is a strong recommendation*
- *9-Frames setups allow the bees more space to create deeper cells. This expands the face of the frame out from the top bar*
- *This provides easier uncapping during extraction*



Closing Comments

- **Customary Close**
  - Where we stand, where we are going…
    - *This lesson provided insights on adding honey supers*
    - *Our next lessons is on the utility of Nucleus colonies, Then we move our focus on honey harvesting topics*
      - Getting honey off the hive stack – clearing honey boxes
      - Uncapping Process
      - Using Extraction Equipment
      - Bottling Honey

Q&A

- **What Questions did we not anticipate?**
  - If you have feedback, you can leave a constructive comment; but be nice.
  - You could also send an email to comments@managedmentoring.com
    - *Please refer to this video in the subject so we know what the reference is.*