

# Hive Types and Equipment



Bernardo Niño

# Outline



- **Apiary Set-up**
- **Hive equipment**
- **Other necessary equipment**
- **Alternative hive types**

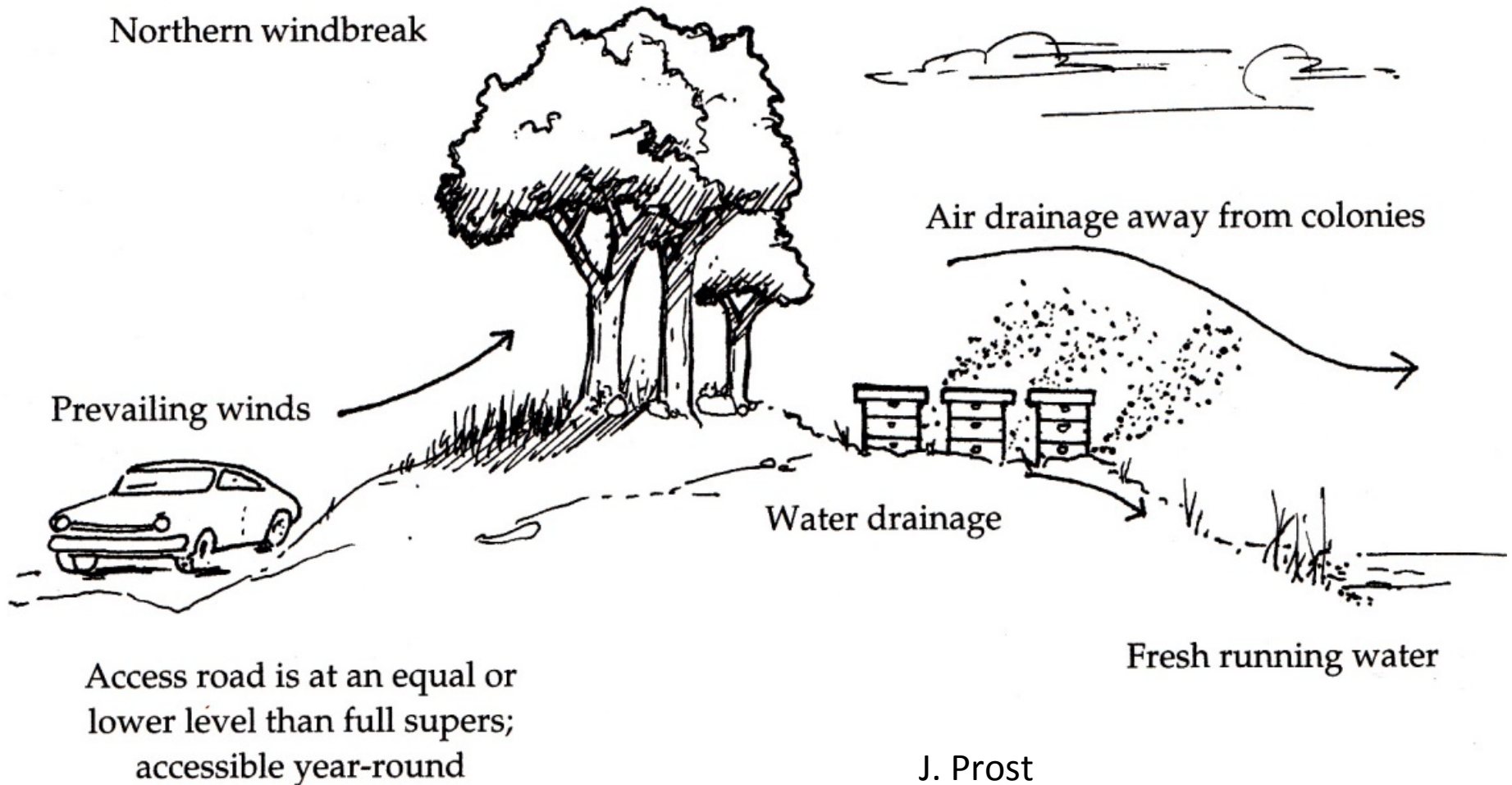
# Where to put your honey bees

- Your backyard
- Your friend's backyard
- Farms
- Businesses
- ALWAYS get permission first!



# Picking an apiary site

## Ideal Apiary Site





# Picking an apiary site

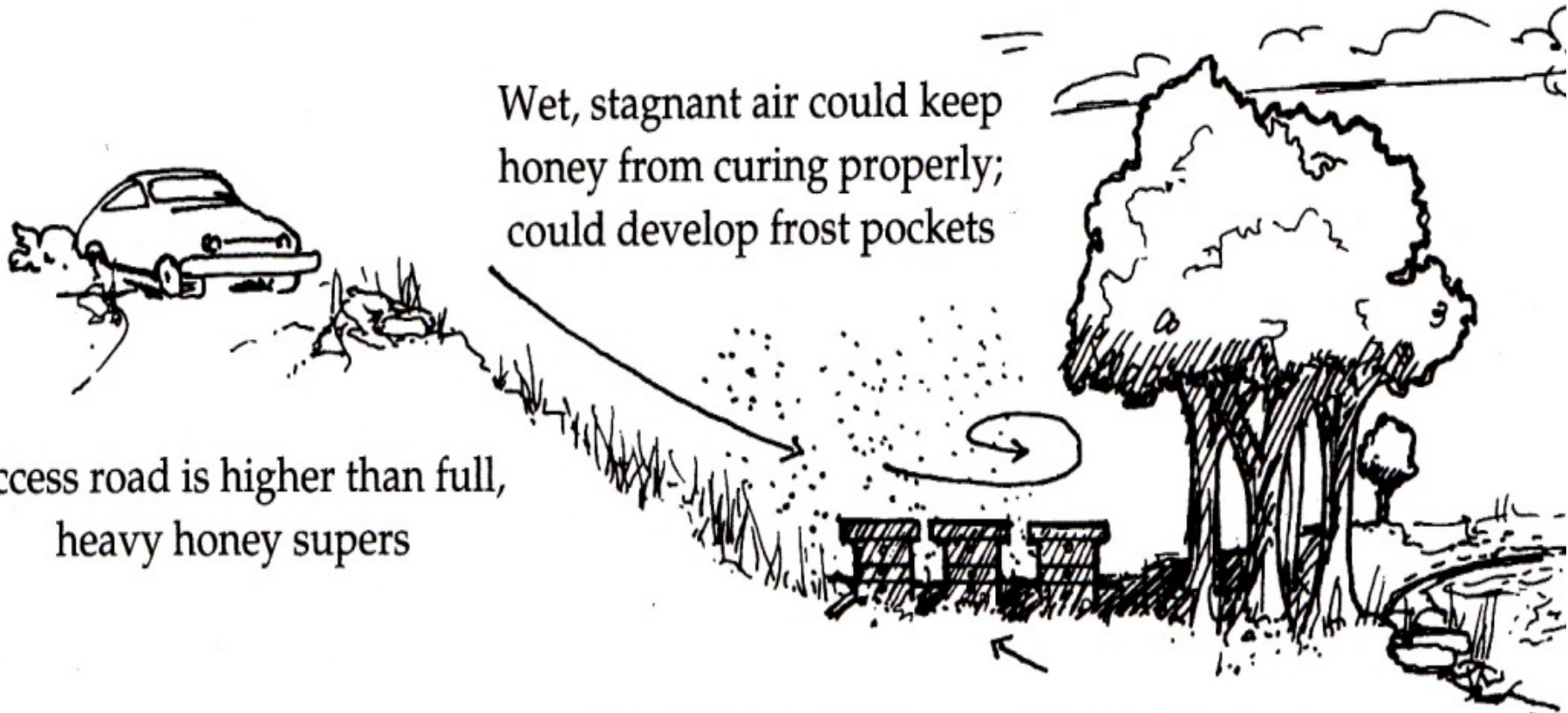
## Poor Apiary Site

Wet, stagnant air could keep honey from curing properly; could develop frost pockets

Access road is higher than full, heavy honey supers

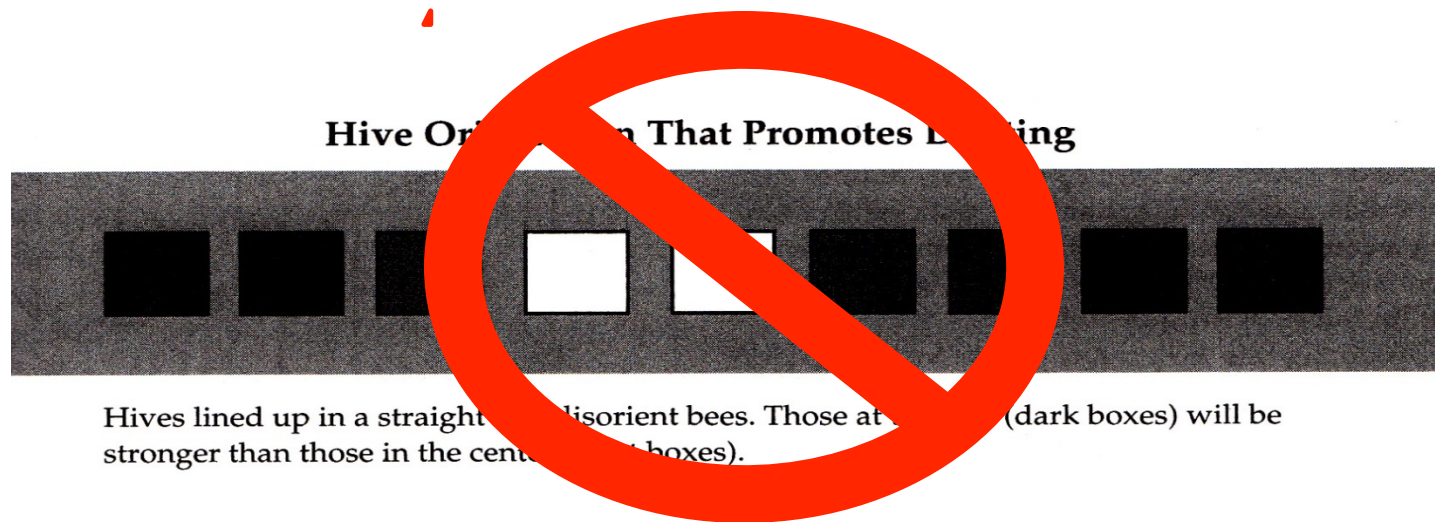
Floodplain; colonies could be washed away

J. Prost



# Apiary setup and hive orientation

- Hives too close together can cause agitation, but too far apart and the labor is more intensive
- Entrances should face south or east
- Reduce drifting by using a horseshoe pattern, providing a windbreak, or painting bottom boards different colors/ patterns



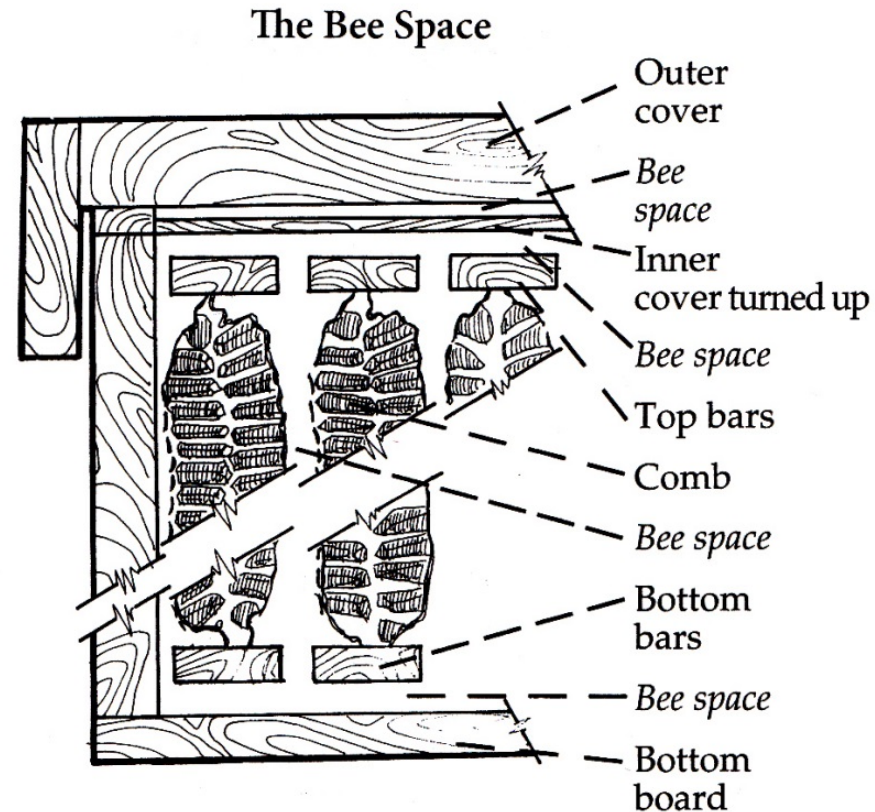
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# Langstroth hive

- Lorenzo Lorraine Langstroth (1810 –1895)
- Patented in 1852
- Important because he discovered “bee space”
  - 3/8 inch (9.5mm)



Beekeeper's Handbook



# Hive components

- Bottom Board
  - IPM
  - Solid
- Boxes/Supers
  - Deep
  - Medium
  - Shallow
- Frames
- Cover
  - Telescoping (inner and outer)
  - Migratory



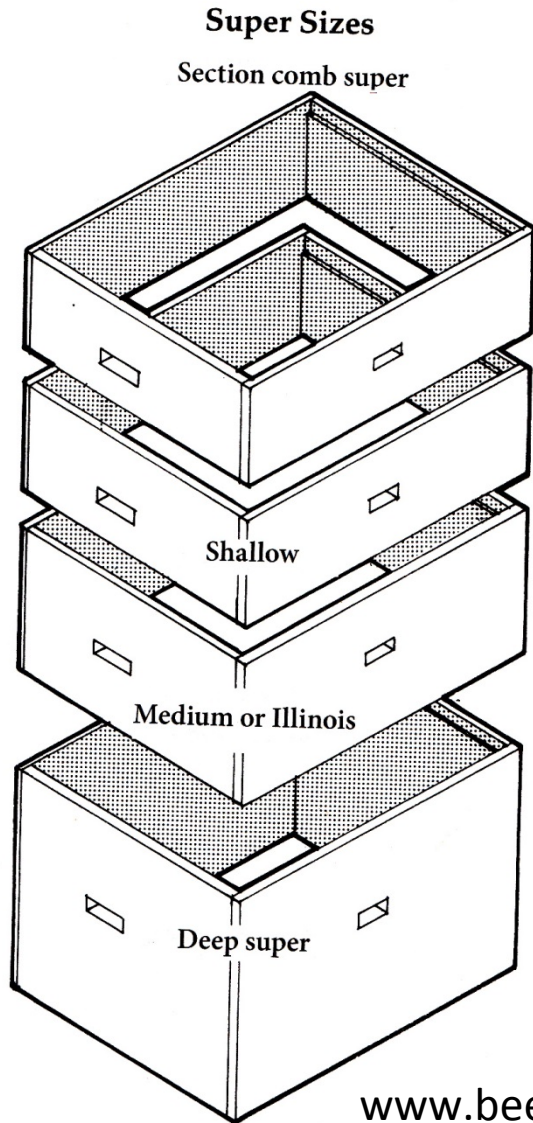
# Bottom boards



- Solid better for warmth
- IPM (screened) can be used for Varroa mite monitoring



# Supers



- Can be in 4 sizes
  - Comb, ( $4 \frac{13}{16}$  ")
  - Shallow, ( $5 \frac{11}{16}$  ")
  - Medium, ( $6 \frac{5}{8}$  ")
  - Deep ( $9 \frac{5}{8}$  ")
- Pick which is best for you!

# Brood box (super)



- Usually a deep box
- Where all the brood is reared
- Queen should reside here

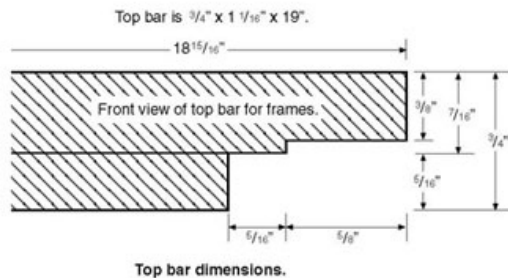
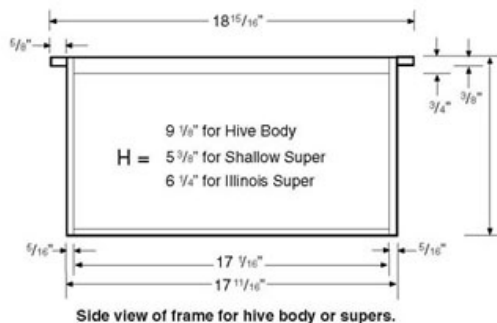
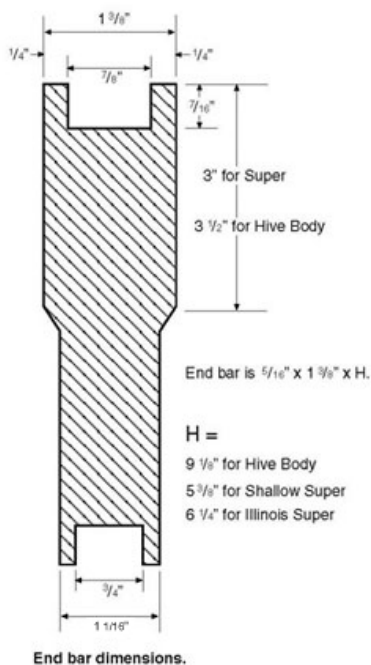
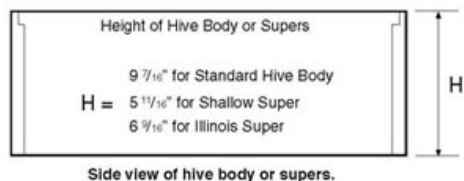


# Honey super



- Usually NOT a deep super
- Queen excluder recommended
- No Brood!

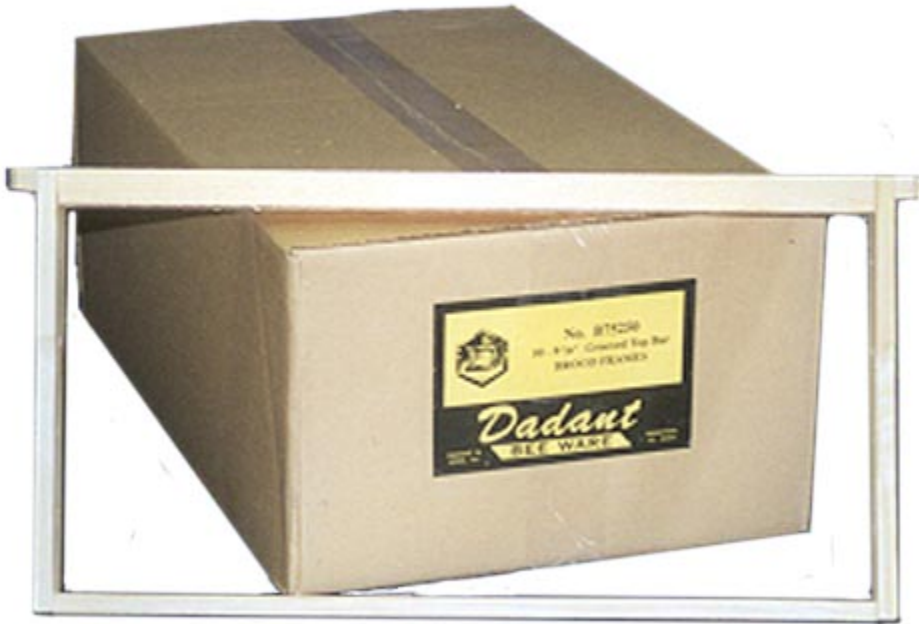
# Frames



## Frame sizes

1. Deep
2. Medium
3. Shallow

# Frames



- Wood frame w/ wax or plastic foundation



- All plastic frames

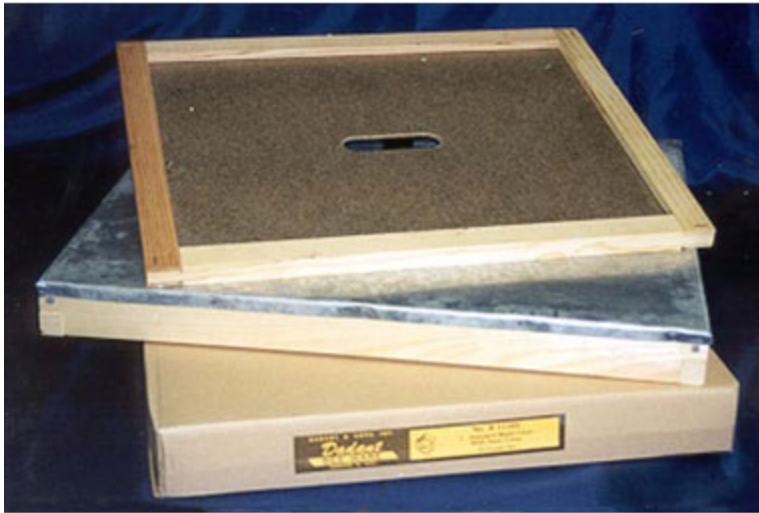
# Migratory hive cover



- Used in areas with less rain
- Can easily be modified for can feeding
- Easier to stack closer together for pollination



# Telescoping hive cover

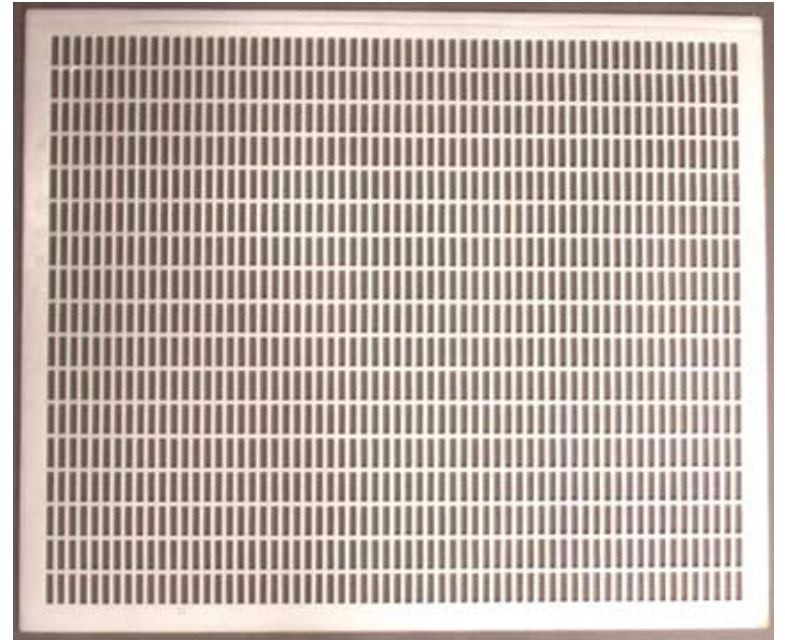


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- Two parts
- Protects hive from the rain and snow
- Heats up easily
  - Paint
  - Shade
- Harder to stack closer together

# Queen excluder

- Placed on top of brood supers
- Queen too big to go through but workers can move freely
- Honey supers remain brood free
- Handle with care



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# Entrance reducer

- Should be utilized in spring and fall
- Can help regulate airflow which helps climate control in the hive
- Prevents robbing



# Feeders

- Should be utilized with packages and during dry times of the year
- Types
  - Entrance feeders
  - Top feeders
  - In hive feeders
  - Feeding cans
- Sugar 1:1, 2:1 or syrup





# Hive staples/straps

- Useful when moving short or long distances



# Hive stands

- Makes lifting easier
- Extends life of equipment
- Helps with pest control, skunks, rodents, ants, etc.
- Types
  - Cinder blocks
  - Railroad ties
  - Pallets
  - Tiles
- Prepare ground first with weed control or flat shingles



# Make your own hive stands

- Our hive stands with  $\frac{3}{4}$  inch conduit pipe
- Better for ant control
- Oil or tanglefoot can be applied easier



Can be made to  
fit 1,2, or 3 hives



# ANTS!!!



# Ant Video





# Outline



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# Alternative hive types

- Top-bar hive
- Warre hive
- Flow Hive



# Top-bar hive

- Lower cost
  - Easier to build yourself
- Lots of maintenance
- No heavy lifting
- Lower honey yield than Langstroth
- Foundationless frames
- More docile bees?

# Warre Hive

- Lower cost than Langstroth hives
- Low maintenance
- Lighter than Langstroth hives
- Comparable honey production to Langstroth\*
- Foundationless frames
- Fancy looking

# Flow Hive

- Expensive
- Particularly challenging in CA
- Presumably easier honey extraction
- Innovative





# Which is right for you?

- Generally a good idea to start with a Langstroth hive
- Many more resources for managing Langstroth hives
- But Langstroth is not perfect!

- Smoker
- Veil
- Hive tool
- Bee brush
- Gloves



# Smoker

- 4 X 7 inch or 4 X 10 inch
- Bigger smokers are easier to light and last longer before additional fuel is needed
- Fuel
  - Wood chips
  - Pine needles
  - Dried grass
  - Fuel pellets



# Veils/Jackets

- Wire mesh veil with helmet
- Sheer veils with hat or helmet
- Jackets style (veil and half suit)
- Full suit



# Hive tools

- Personal preference
  - Hand size
  - Equipment type
- Too dull
  - Won't cut through wax & propolis
- Too sharp
  - Will damage frames





# Bee brush

- Used for gently getting bees off of the frame
- Useful for
  - Honey extraction
  - Grafting
  - Science!



# Gloves

- Don't provide the dexterity necessary for proper bee handling
- Useful during an accident or really defensive colonies



# A few bigger vendors

- Brushy Mountain



- Mann Lake



- Dadant



Questions???