



A Beginner's Guide to Keeping  
Bees Thriving in the Boston Area

# Beekeepers School

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**BABA Beekeeper's School 2026**



# **BABA Beekeeping School**

**Week Two Setup**



# What is Covered in this Lesson

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Week 1 Recap

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Announcements

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Agenda

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# Welcome to Week 2

## □ Week One

### ■ Week One Recap

- Learning about Langstroth Bee Boxes
  - Guidance for Purchasing Bee Equipment
  - And Sourcing Protective Clothing, Gloves, etc.
- The objective for the week was to get you setup with your equipment purchases



# OUTLAY EQUIPMENT, Transparency

- Hive Kit (2 hives)**
  - Boxes, Frames, etc.
  - Adjunct Things
- Equipment**
  - Basic – Required
  - Recommended
- Honeybees**

Category	Item	Cost	Notes	Date	Store
Hive +	Hive Kit	\$380	Painted, constructed hive kit - Mann Lake	6/13/2025	Mann Lake
Hive +	Honey Bees	\$200	Italian Package	6/13/2025	Mann Lake
Hive +	Entrance reducer	\$4		6/13/2025	Mann Lake
Hive +	Metal Frame Rests	\$7		6/13/2025	Mann Lake
Hive +	Hive Stand	\$55		6/13/2025	Mann Lake
Hive +	Ratchet strap	\$10		6/13/2025	Harbor Freight
Bee Equip	Frame Hanger	\$16		6/13/2025	Mann Lake
Bee Equip	Internal Feeder	\$16		6/13/2025	Mann Lake
Bee Equip	Top Feeder	\$43		6/13/2025	Mann Lake
Bee Equip	Smoker	\$56		6/13/2025	Dadant
Bee Equip	Hive tools *3	\$10		6/13/2025	Mann Lake
Bee Equip	Queen marking pens	\$30		6/13/2025	Mann Lake
Bee Equip	Queen Marking tube	\$8		6/13/2025	Mann Lake
Bee Equip	Stick lighter	\$3		6/13/2025	WalMart
Bee Equip	Bee Brush	\$9		6/13/2025	Dadant
Bee Equip	Easy Check	\$26		6/13/2025	Dadant
Bee Equip	Alcohol	\$3		6/13/2025	WalMart
Bee Equip	Sharpie, tape, knife	\$20		6/13/2025	Harbor Frieght
Bee Equip	Formic Pro	\$70		6/13/2025	Mann Lake
Bee Equip	ApiGuard	\$50		6/13/2025	Mann Lake

**\$1000 (\$1015)**



# OUTLAY PROTECTIVE GEAR, Transparency

- Suit (Jacket)
- Veil
- Gloves
- Nitril Gloves

Category	Item	Cost	Notes	Date	Store
Protective Gear	Veil	\$30		6/13/2025	Mann Lake
Protective Gear	Three Layer Jacket	\$125		6/13/2025	Dadant & Mann Lake
Protective Gear	Bee Gloves	\$26		6/13/2025	Mann Lake
Protective Gear	Nitrile Gloves	\$12		6/13/2025	Harbor Freight

**\$200 (\$193)**



# ALL IN Equipment and Protective Gear

- Gear, hive, bees
- Other nice to haves
  - Beyond basics...

**\$1500 (\$1531)**

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Hive +	Honey Bees	\$200	Italian Package	6/13/2025	Mann Lake
Hive +	Entrance reducer	\$4		6/13/2025	Mann Lake
Bee Equip	Nuc Kit	\$70		6/13/2025	Mann Lake
Bee Equip	Paint, Nails, Hardware, etc.	\$50		6/13/2025	Home Depot
Bee Equip	Queen Excluder	\$11		6/13/2025	Mann Lake
Bee Equip	Frame Jig	\$40		6/13/2025	Mann Lake
Hive +	Metal Frame Rests	\$7		6/13/2025	Mann Lake
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Hive +	Gorilla aluminum hive bench	\$90	aluminum bench	6/13/2025	Home Depot
Bee Equip	ApiGuard	\$50		6/13/2025	Mann Lake
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# Extractor / Honey Harvesting (Down the road)

- Harvesting Equipment
- Honey Processing
- Honey Packing
- Extractor (\$\$\$\$\*), Tools, etc
- Jars/Labels

*\*many use club extractors or go in with friends to share expenses on these expensive pieces of equipment*

Category	Item	Cost	Notes	Date	Store
Honey Harvesting	Fume Board	\$21		6/13/2025	Mann Lake
Honey Harvesting	Honey Robber	\$50		6/13/2025	Mann Lake
Honey Harvesting	Honey bucket with gate	\$40		6/13/2025	Mann Lake
Honey Harvesting	Uncapping fork	\$15		6/13/2025	Mann Lake
Honey Harvesting	Extractor	\$1,500	8 frame mann lake extractor-motorized	6/13/2025	Mann Lake
Honey Harvesting	Uncapping Tub - Hive Butler	\$120		6/13/2025	Mann Lake
Honey Harvesting	Honey Jars 200	\$216		6/13/2025	Mann Lake
Honey Harvesting	Honey lids	\$50		6/13/2025	Mann Lake

**\$2000 (\$2012)**

**\*or \$500 (\$512)**



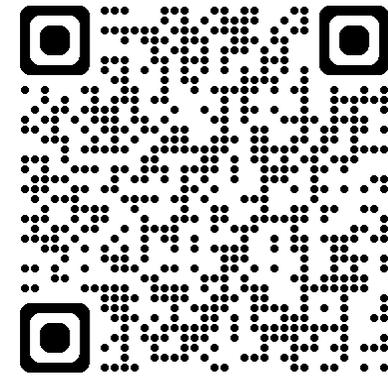
# ~\$3,500

- If you bought it all day 1...
- Around \$3500
  - This is what it could cost to make a single jar of honey!

Category	Item	Cost	Notes	Date	Store
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# Presentation Materials



- **Week One Presentation Materials Available**
  - The presentation can be accessed on the web  
<https://managedmentoring.com/baba-bee-school>
- **Presentation Access Going Forward**
  - Each week the presentations will be added to that page
  - If you want to follow along for this week – Week 2 is there
  - As we start each week, the weeks lessons will be available



# This weeks Agenda

- **Examining Styles**
  - This week we focus on **choosing a style**
- **Building Equipment**
  - We cover **building your equipment, and painting equipment with a sidebar on frames**
- **Local Beekeeping**
  - We end with **Beekeeping is Local**



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# **BABA Beekeeping School**

## **Recommendation on Beekeeping Styles**

Lesson | Beekeeping Styles



# What is Covered in this Lesson

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Beekeeping Styles

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Equipment Choices

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Beekeeping Management Styles

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Bees are Livestock

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Conventional Beekeeping Management Styles

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# Defining a Style

## □ Beekeeping Styles

- There are many options for the style in which you keep bees.
- Two factors tend to dominate the discussion:
  - Type of Equipment used
  - Type of Management Applied
- Given this is a beginner focused instruction this guidance will follow the most common practices which will be overviewed.

*Definition*

**Style:** a manner of doing something

# Equipment Choice

*Equipment  
Choices Vary*

## Langstroth Hives are the Norm

- **There are many types of equipment to choose**
  - Langstroth, Top Bar, Warre, Horizontal Langstroth Formats, Layens Hives, Flow hives, and more.

# Equipment Choice

## *Equipment Choices Vary*

### Langstroth Hives are the Norm

- **There are many types of equipment to choose**
  - Langstroth, Top Bar, Warre, Horizontal Langstroth Formats, Layens Hives, Flow hives, and more.
- **New Beekeepers come upon choices**
  - Research about getting started yields a diversity of ideas...
    - Beekeeping Styles in the mainstream vary and it is not uncommon for a beginner to think to start with something different.

# Equipment Choice

*Making the case to go with Langstroth*

- **This course assumes Langstroth**
  - The truth is we are versed in hives other than Langstroth
  - But,... pragmatically we could not provide the breadth of instruction to teach varying formats in this beginner offering
    - Avoiding Confusion: Trying to teach alternative formats, that employ different management practices, would lead to confusion and be a distraction

# Equipment Choice

## *Making the case to go with Langstroth*

- **This course assumes Langstroth**
  - Recommendation
    - We like other kinds of hives, but we still assume that it is best to learn the craft with Langstroth boxes.
      - Even if you want to use other equipment, we recommend that you learn beekeeping and biology on Langstroth equipment
      - Once you have beekeeping acumen; then go alternative.

# Equipment Choice

*Making the  
case to go with  
Langstroth*

- **Consider this line of thinking**
  - Beekeeping requires a certain know how.
    - It is not too unusual for new beekeepers to experience failure in early years.
      - There is a lot to know, and many pitfalls to avoid.

# Equipment Choice

## *Making the case to go with Langstroth*

- **Consider this line of thinking**
  - Langstroth hives are the most used hives in the world.
    - The ubiquity of Langstroth hive use means that there is a readily available expertise for how to use them.
      - In fact, much of the core beekeeping instruction assumes you are using Langstroth.
    - Fellow beekeepers will know how to use Langstroth hives.
      - Other form factors are considered niche and instruction is usually supported through dedicated communities



# What if you are 'still' not going with Langstroth hives?

- **Maybe you already have other equipment?**
  - You can consider tailored instruction elsewhere, but you are welcome to follow along here for a base overview.
    - Much of beekeeping is about biology and management practices.
    - Use this information, and supplement it with other resources that provide direction instruction for the equipment you use.



# What if you are 'still' not going with Langstroth hives?

- **Maybe you already have other equipment?**

## ALTERNATIVE?

- Hold your equipment, purchase Langstroth gear, and then come back to it in time.
  - If beekeeping is something you learn to love, then there will time in the future to experiment with alternative hive equipment and you stand to have greater success with it once you have some baseline experience.

# Management Styles

*There are a wide range of ways to manage colonies*

- **Management Styles are widespread**
  - Beekeepers have evolved to have dozens of beekeeping management styles.
  - Some have been lost to time and others are still in widespread use.
  
- **In the US and abroad, this is what you will see**
  - Mainstream Approaches:
    - Treatment Beekeeping, Treatment-Free beekeeping
  - Other Alternative Examples:
    - Biodynamic, Minimal intervention, Horizontal Hive, Straw Basket Formats, etc.

# Management Styles

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- **Treatment Beekeeping**
  - The Treatment Management is the Predominant Form
  - This instruction program follows the mantra that bees are livestock and as such proactive management is followed.
    - As such, this program will provide instruction to actively manage the colony by conventional standards.
    - This includes monitoring and preventative care following conventional guidance.
      - Key to preventive care is management of Varroa Mites.
  - Swarm Control
    - Densely populated areas require swarm prevention

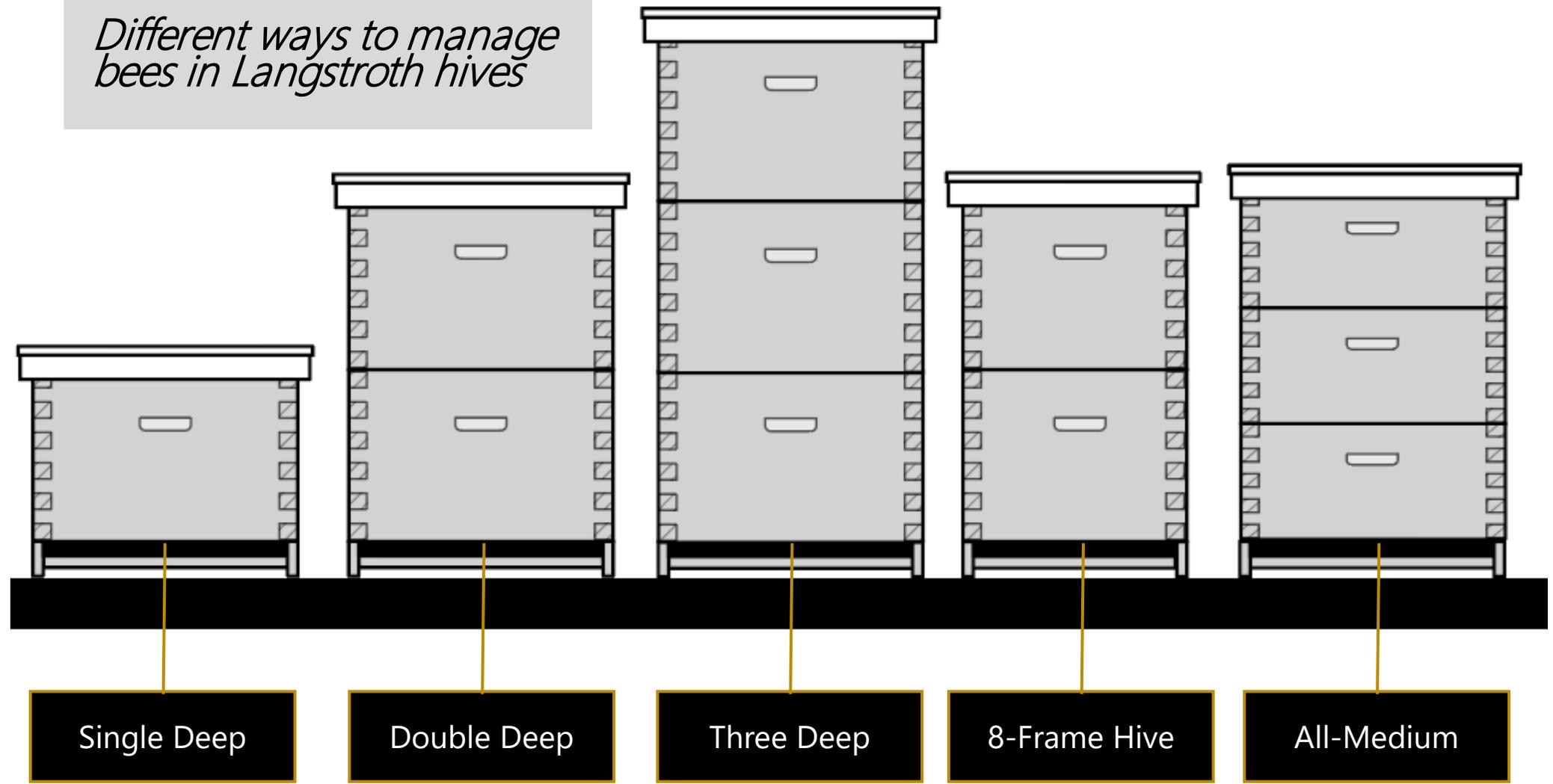
## Final Word about styles

- **Staying Mainstream**
  - It is practical for a beginner track to stay with the most conventional styles of beekeeping.
    - We appreciate the experience one gains when implementing different styles.
    - However, we suggest you stay with us and in time, if it moves you, branch out.
  - Having a leg up on a solid plan provides confidence and helps you develop a good baseline.
  - Working with support sets you up for success and a more enjoyable experience.



# Many management styles have emerged

*Different ways to manage bees in Langstroth hives*



Single Deep

Double Deep

Three Deep

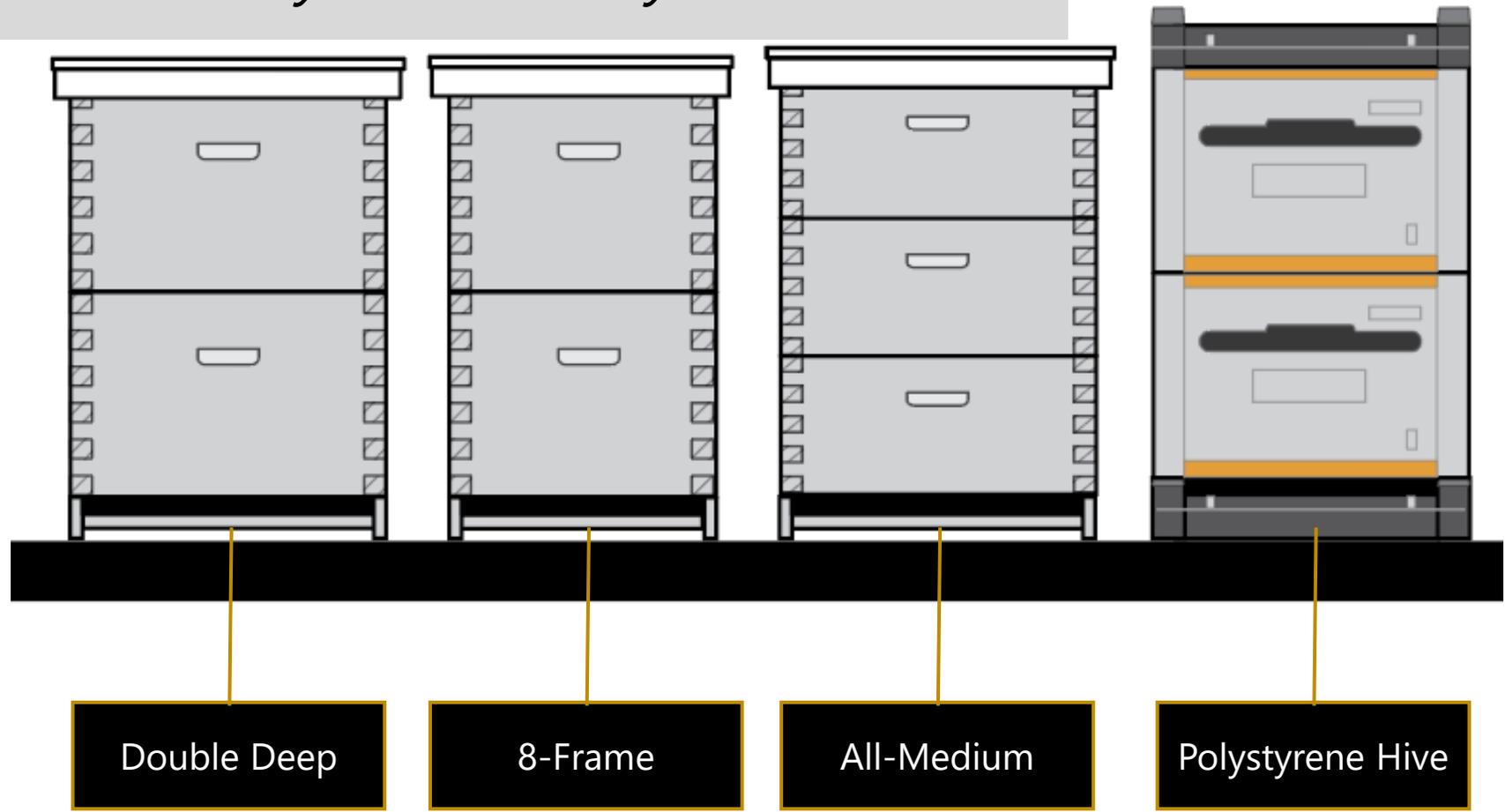
8-Frame Hive

All-Medium



# Recommended Configurations

*Four common hive setups to choose from  
We are ok if you choose any one of these.*



Double Deep

8-Frame

All-Medium

Polystyrene Hive



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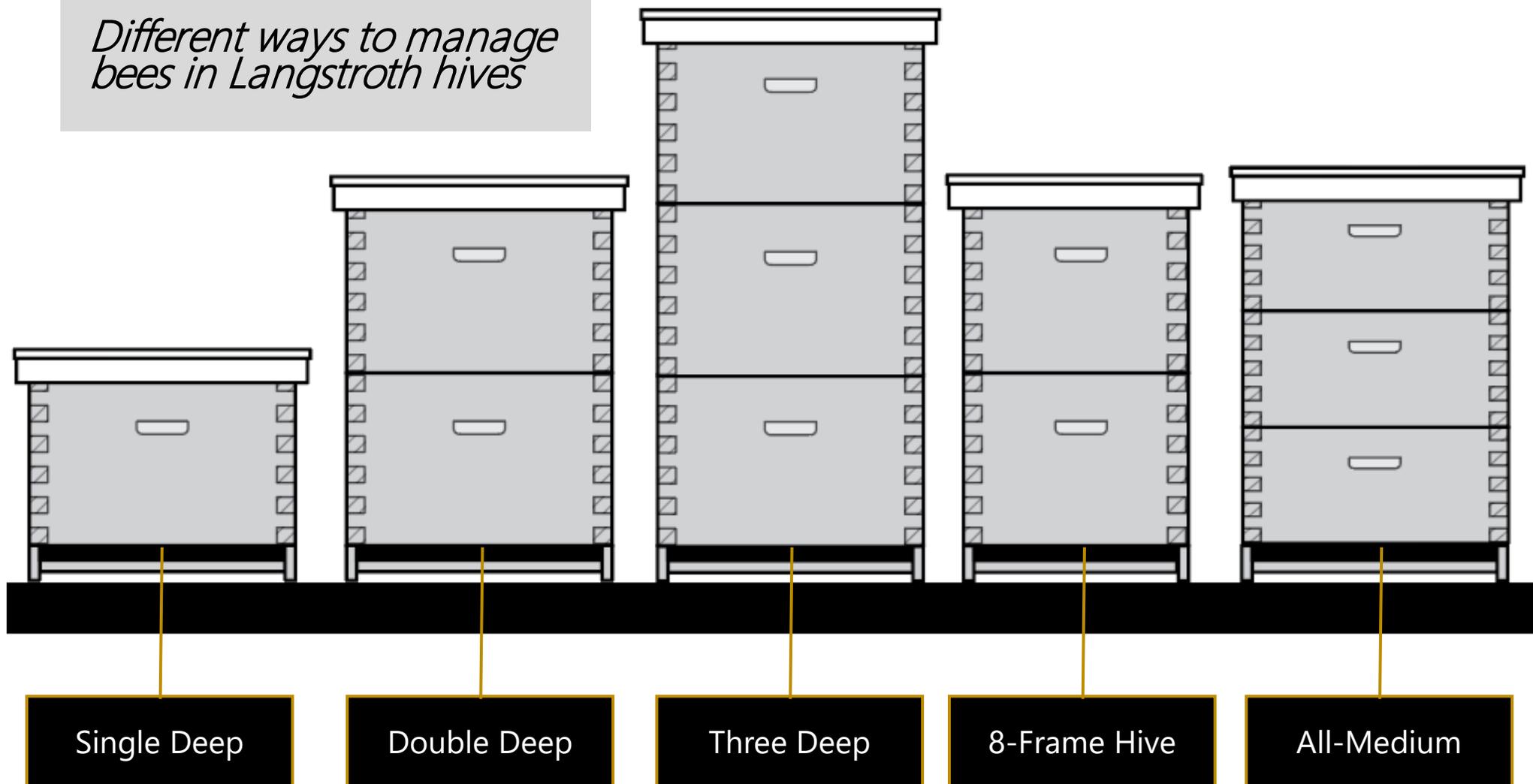
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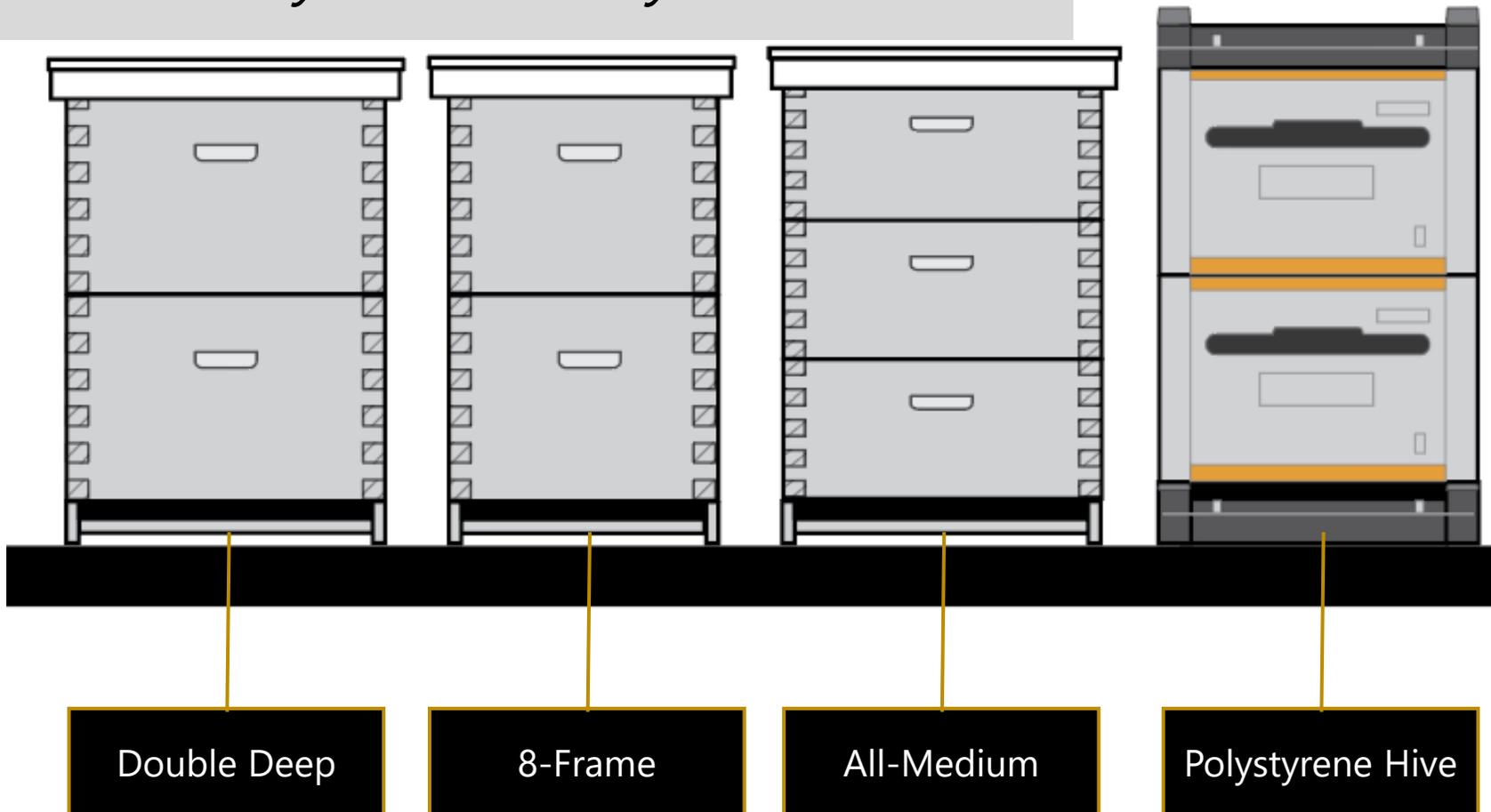
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# **BABA Beekeeping School**

**Sourcing and Building Frames / Foundation**

Lesson | Building Frames



# What is Covered in this Lesson

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Frame Primer

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Frame and Foundation Design

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Foundation

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Frame Fabrication

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Frame Jigs

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Frame Assembly

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Buying Pre-Manufactured

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Drone Brood Frames

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Foundationless Frames

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# Frame Primer

- **Frames and Foundation are the core of the hive**
  - They provide the base for the nest and storage
  - As such they are an important consideration in beekeeping
  - The design, and options for frames in the marketplace varies
    - Frames come in different sizes for different box dimensions
    - They vary in design and construction material
    - Foundation choices also vary widely



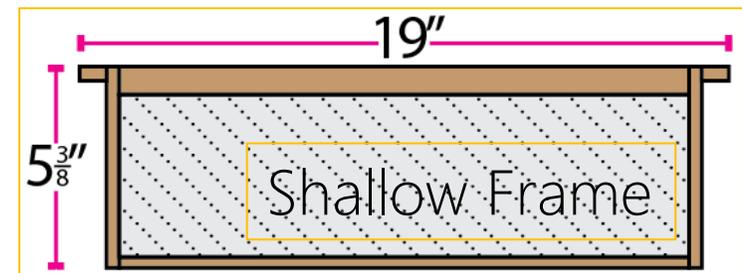
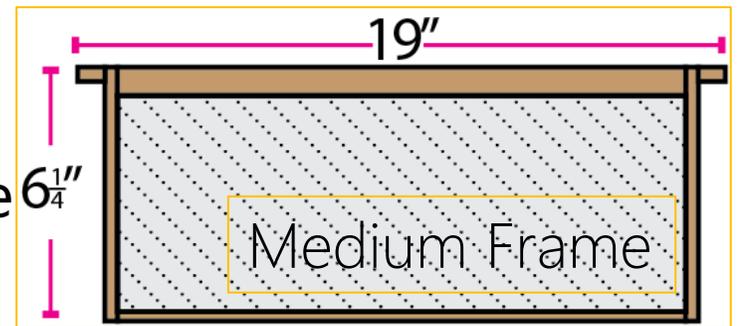
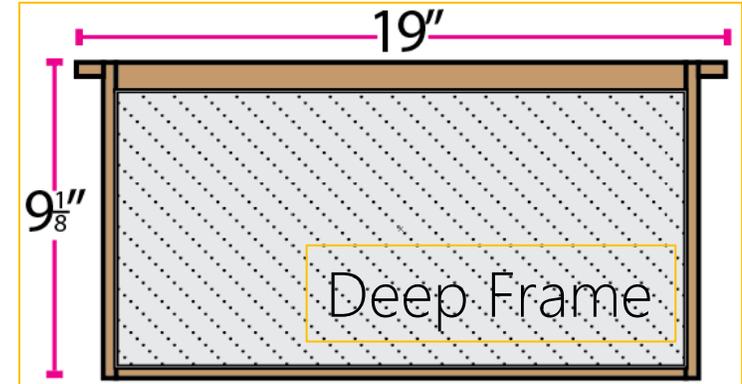
# Frame Dimensions are “Standard”

- **Langstroth Hive Dimensions**

- Deep 19" x 9(1/8)"
- Medium 19" x 6(1/4)"
- Shallow 19" x 5(3/8)"

- **Designs differ**

- Each manufacturer has discretion on design of components





# Two form factors dominate

- **Wax and Plastic Foundation Styles**
  - These are the two predominant forms sold today
    - Wooden Frame > Plastic Foundation
      - Very popular for ease of use, cost, assembly.
      - Comes with a plastic embossed sheet that is coated in wax.
        - The plastic is offered in a number of colors: white, black, various shades of yellow...
    - Wood Frame > Wax Foundation
      - The traditional frame setup is the more conventional way to go
        - Wax foundation is often enhanced by embedded wires which negates having to wire the frame manually.





# Frame Construction

## □ Frame Materials

- Frames are traditionally made of wood with wax foundation
- Variations abound
  - Frames can be made with Wood for the framing and plastic for the foundation
  - Frames can be purchased as fully plastic (frame and foundation) or metal (*not recommended*)
    - They can even be purchased as a single unit in plastic or metal (aluminum) fully drawn – meaning with fully developed cells, not just cell patterns.



Fully drawn plastic frame



Flowhive Frame



# Buy Plastic - Done



- **Almost all new hive are sold with Plastic**
  - This is the way of the world
    - Many advantages for the seller and benefits for the buyer over traditional wax foundation sheets
  - How about your pros and cons?
    - PRO: Durable for honey production, Easy to put into service, No Labor
    - CON: Building out wax can be hit and miss | Natural – not so much
    - CON: Often the wax coating is not well done
      - **Get some wax, give it some additional coating**



# Plastic - **BUY PRE-BUILT**

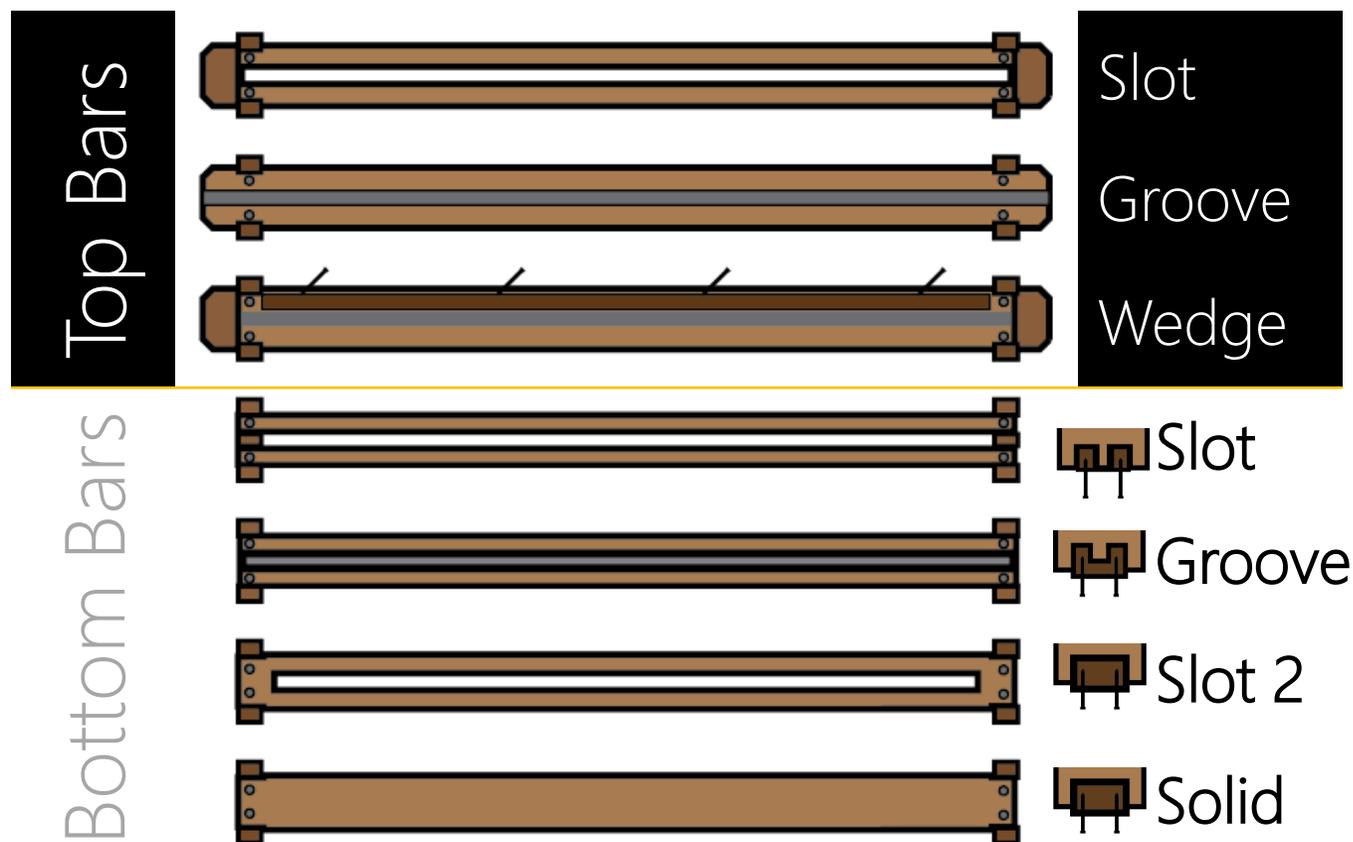
- **It is often more cost effective**
  - 20 Frames, ASSEMBLEDs > \$84.00 (Mann Lake)
    - Pre-Assembled with Waxed Rite-Cell Foundation
  - 20 Frames Unassembled > \$92.00 (Mann Lake)
    - This is 20 unassembled frames
    - Plus 20 sheets of Waxed Rite-Cell Foundation

*Unassembled*

*Costs More, and you have to build them... why would you do this?*



# Frame Variations Abound



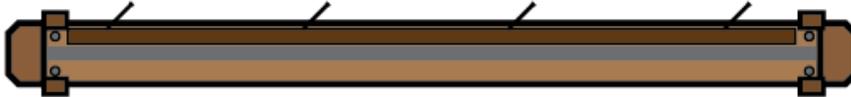
## □ Pick a Style

- Settle on wax vs. plastic
  - Choose the frame style that corresponds to the foundation you are using.
- Wax Foundation
  - Conventional Wedge Style frames with crimp wire foundation are recommended.



# Wax Foundation Expanded

Top Bar

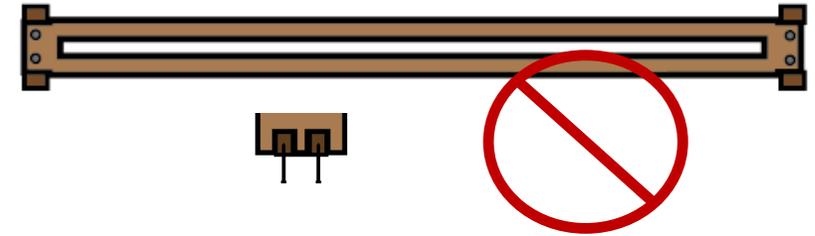


Wedge

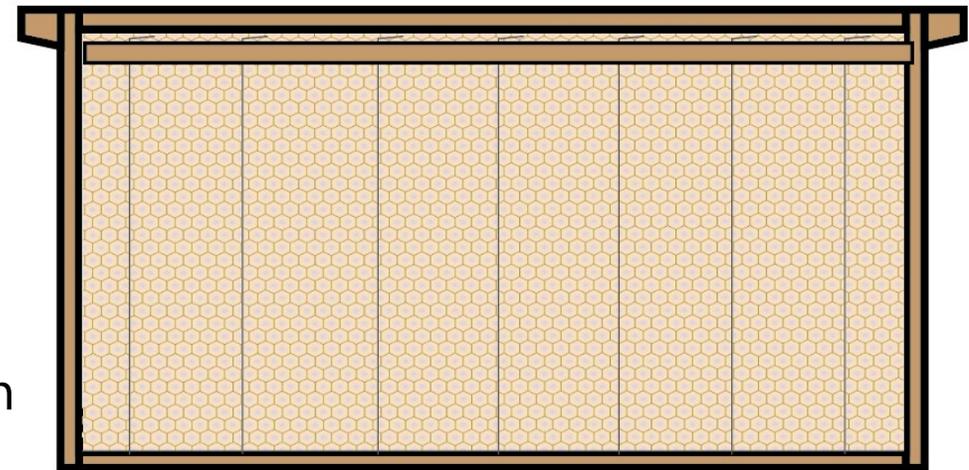
Bottom Bars



Groove



- **Wedge Frames**
  - Choose a Wedge Style Frame
  - Pick a Groove Bottom Bar
    - Smooth on the bottom, with a groove for the foundation to rest in





**Slotted  
bottom  
bars lead to  
problems**

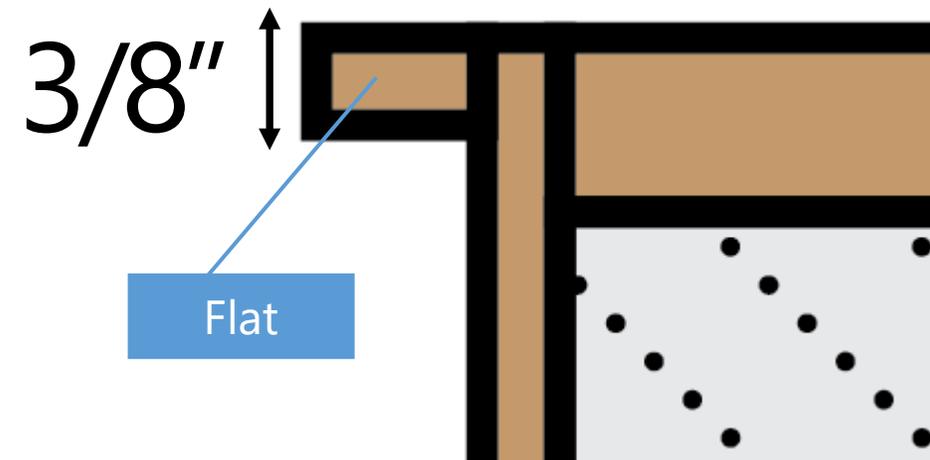
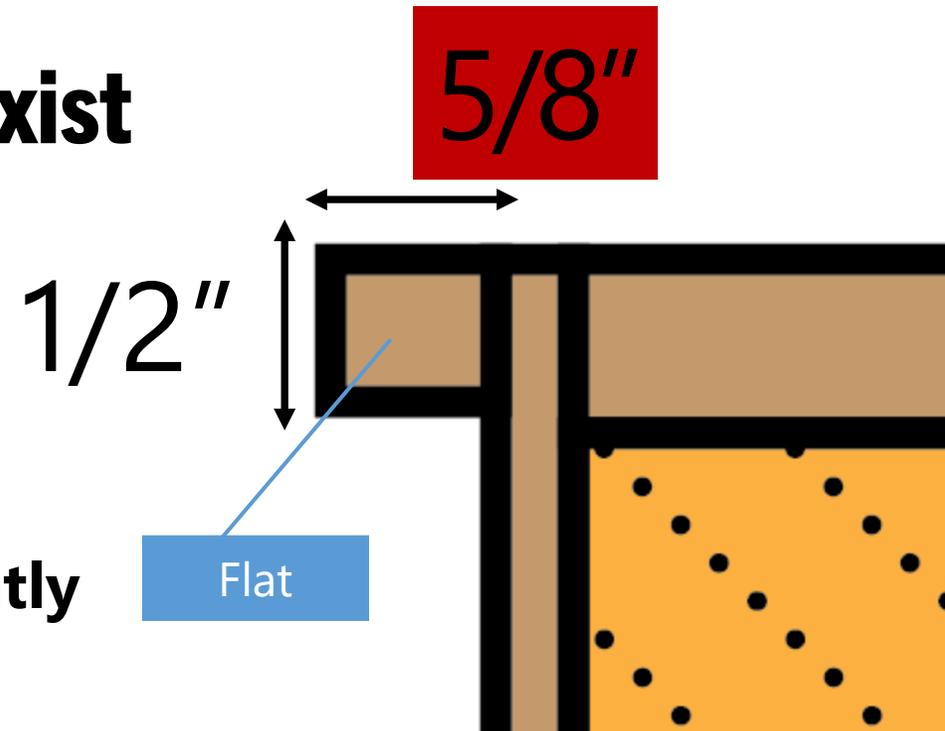
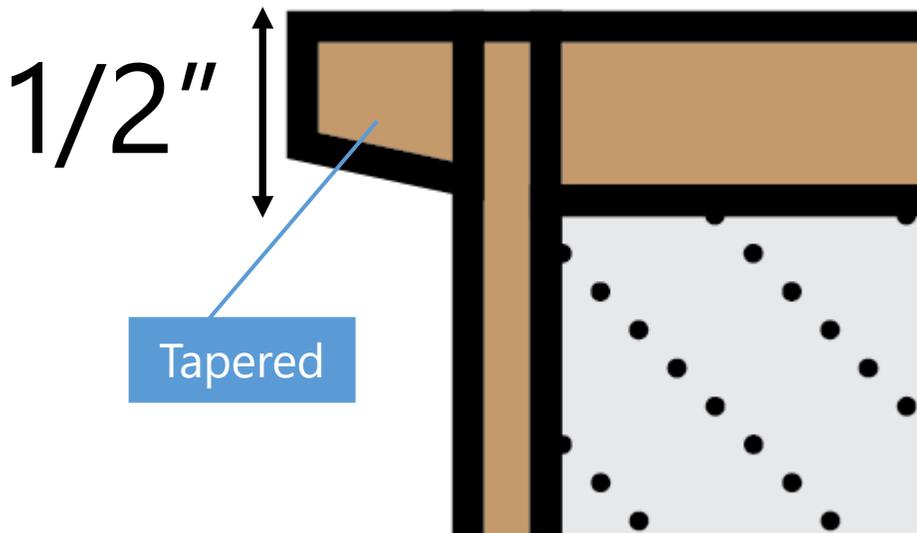




# Frame Design Differences Exist

- “Standard” 1/2 Inch
  - Sometimes tapered...  
Sometimes not...

**Tapered frames rest differently**



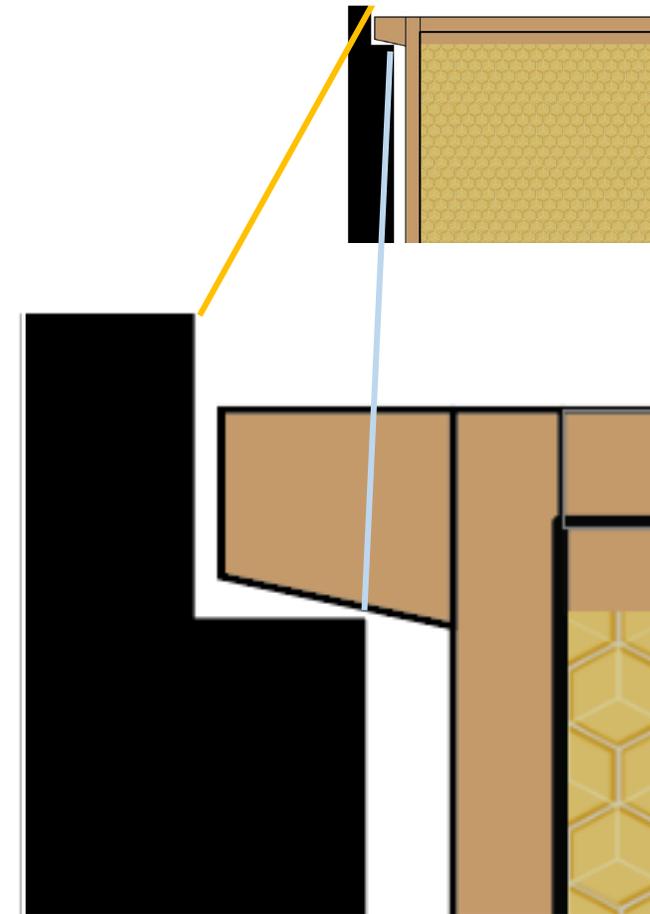


# Frames Rest in a Rabbet Joint

## Definition

### **Rabbet:**

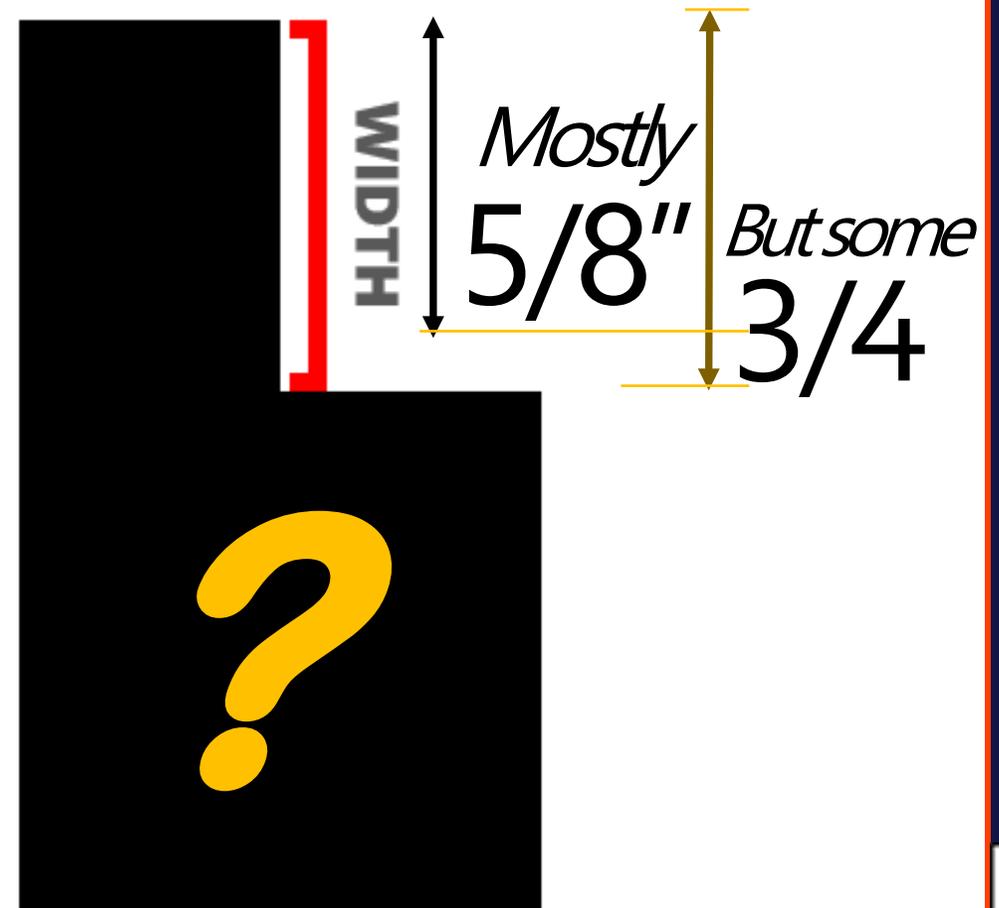
A step-shaped recess cut along the edge or in the face of a piece of wood, typically forming a match to the edge or tongue of another piece.





# Rabbets Dimensions - Vary

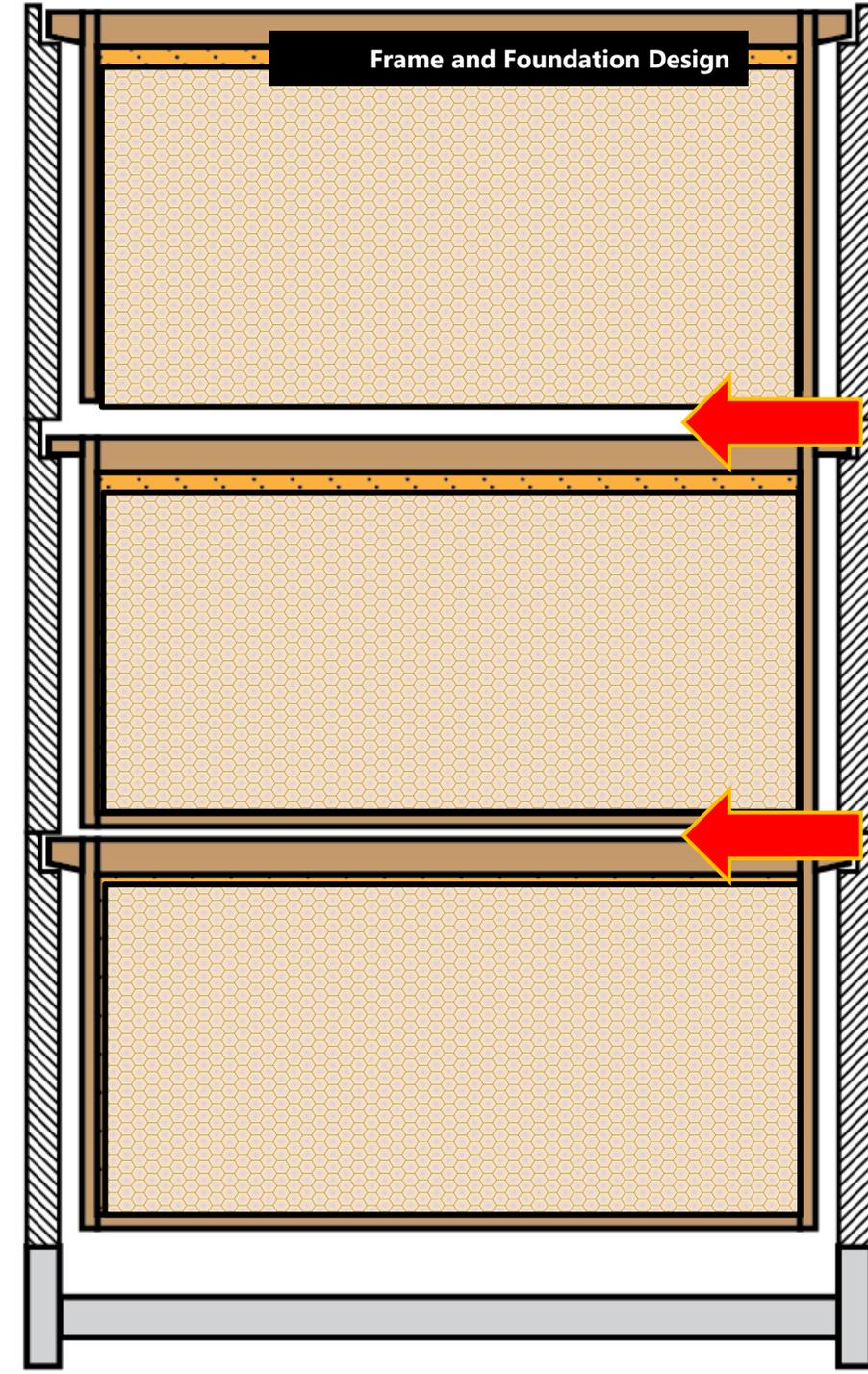
- **Widths are not universal**
  - The dimensional width of a Rabbet can vary
- **Why this matters**
  - Bee Space
    - The design you choose will impact how the frames hang in the hive.
    - This can lead to space problems if the frame design and box hardware are not compatible and designed to work together.





# Mismatches

- **Mismatches result in alignment problems**
  - Box dimensions affect how frames occupy the boxes
  - Mix and matched frame rests and rabbet dimensions impact how the frame hangs in the box
  - Intermixing tab sizes and shapes cause gap differences.





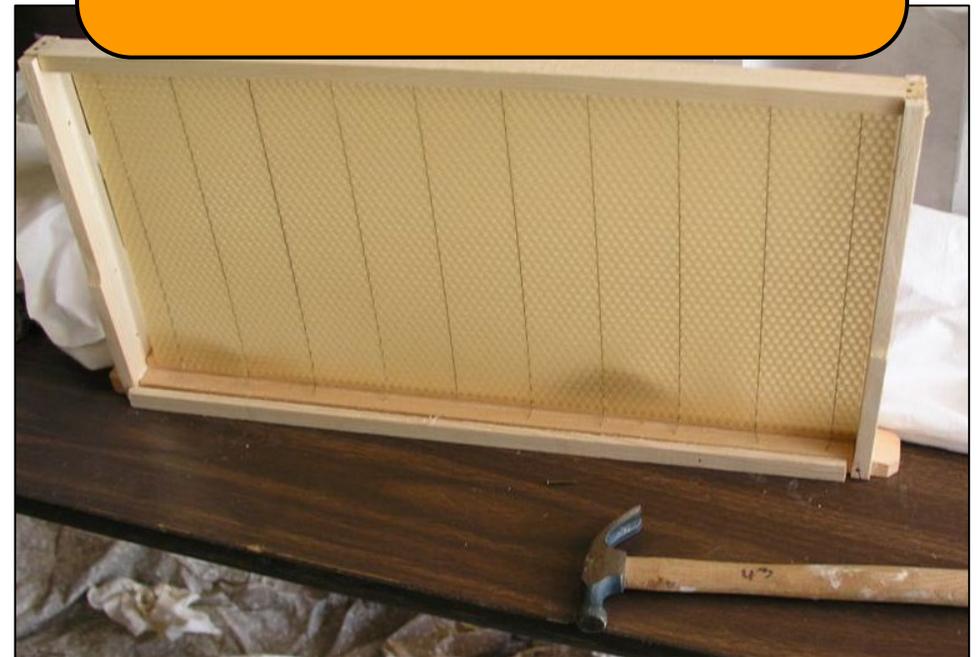
# Source your Foundation (get the right size)

## Buy Frames + foundation together

### Deep Size Examples

- **Wedge Bar – Divided Bottom**
  - Uses wired 8 1/2" foundation with hooks
- **Slotted Top Bar – Grooved Bottom**
  - Uses wired 8 7/8" foundation with no hooks
- **Wedge Bar – Solid Bottom**
  - Uses wired 8 1/8" foundation with hooks
- **Wedge Bar – Grooved Bottom**
  - Uses wired 8 7/16" foundation with hooks

Foundation Size  
Varies!





# Foundation Varies!

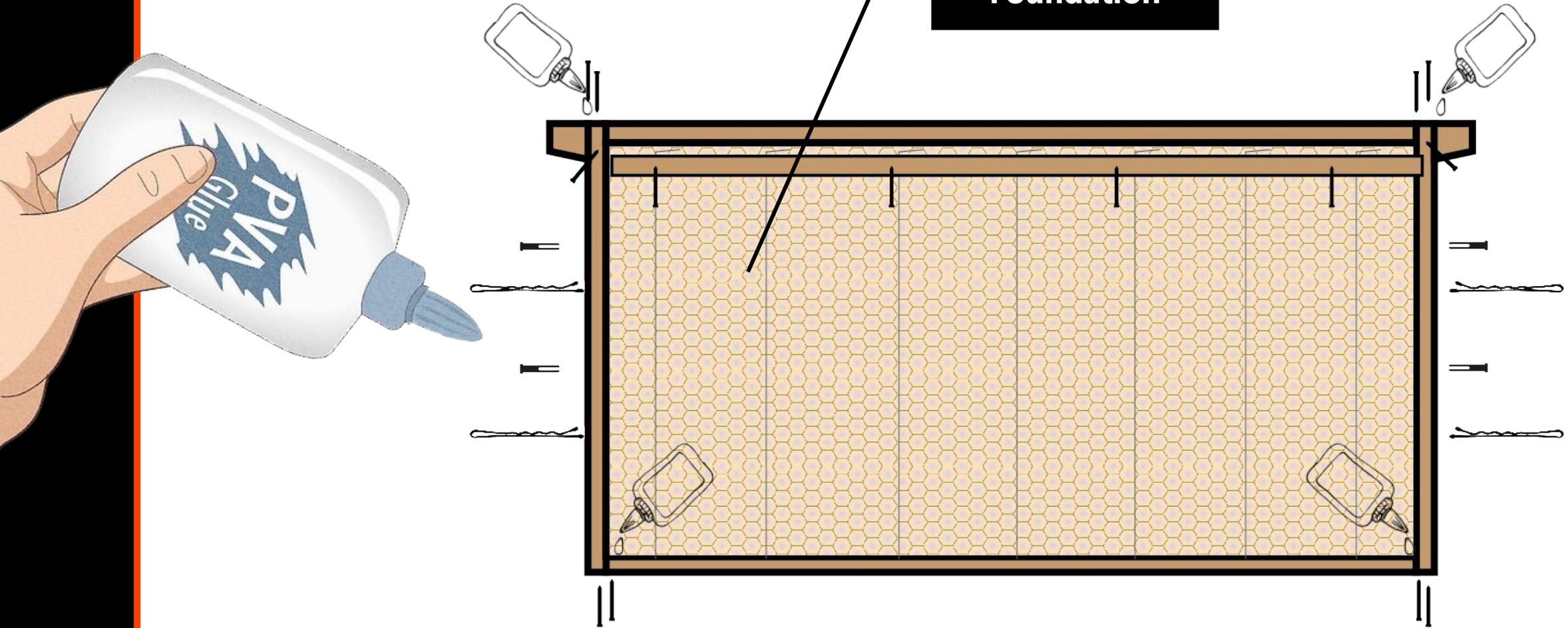
**Put the wrong size in You  
get banana comb**

**This is extreme for illustrative purposes, but it is not uncommon to see mismatches.**



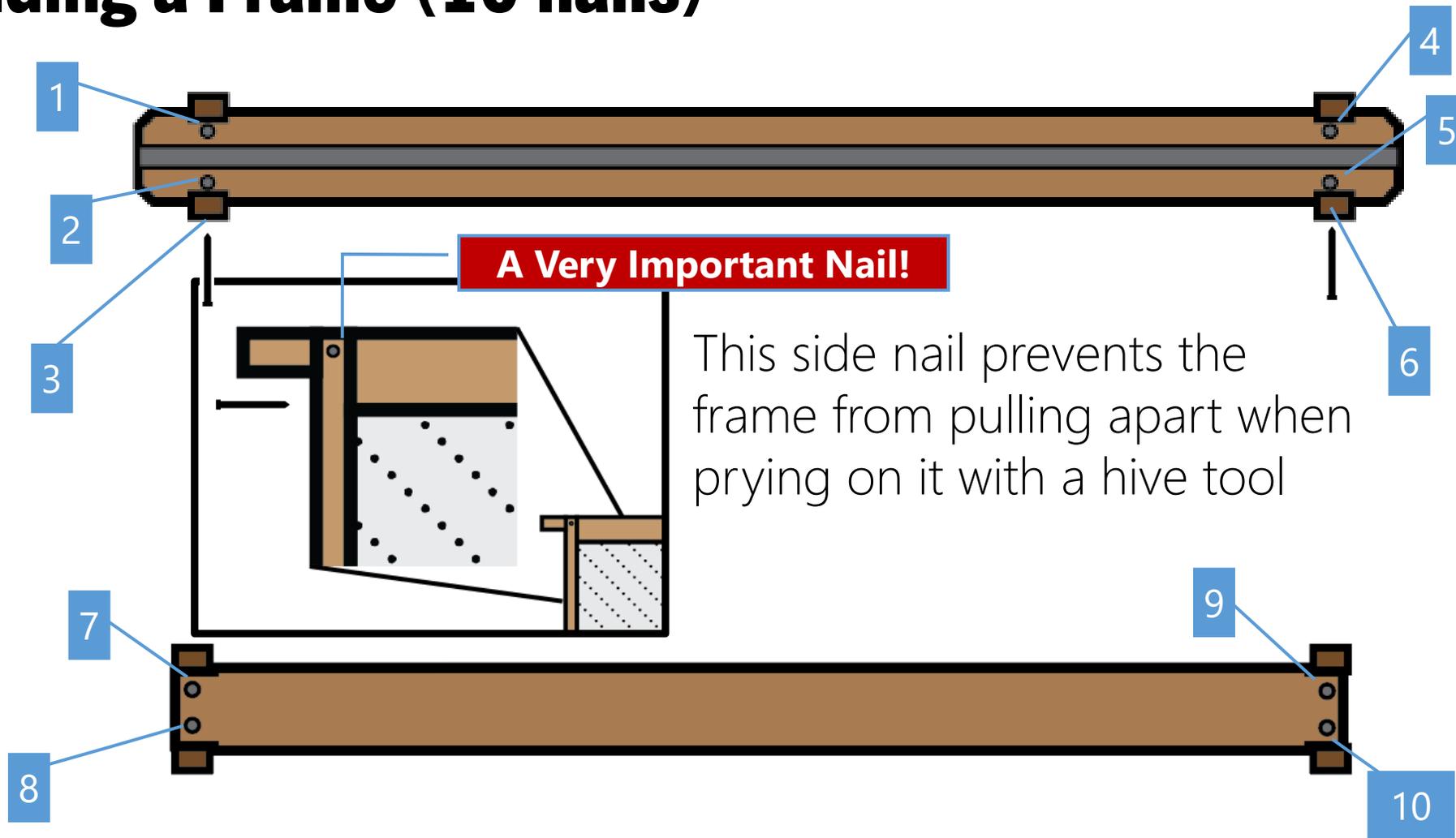
# Nail & Glue Guide

This is Crimp Wire Foundation



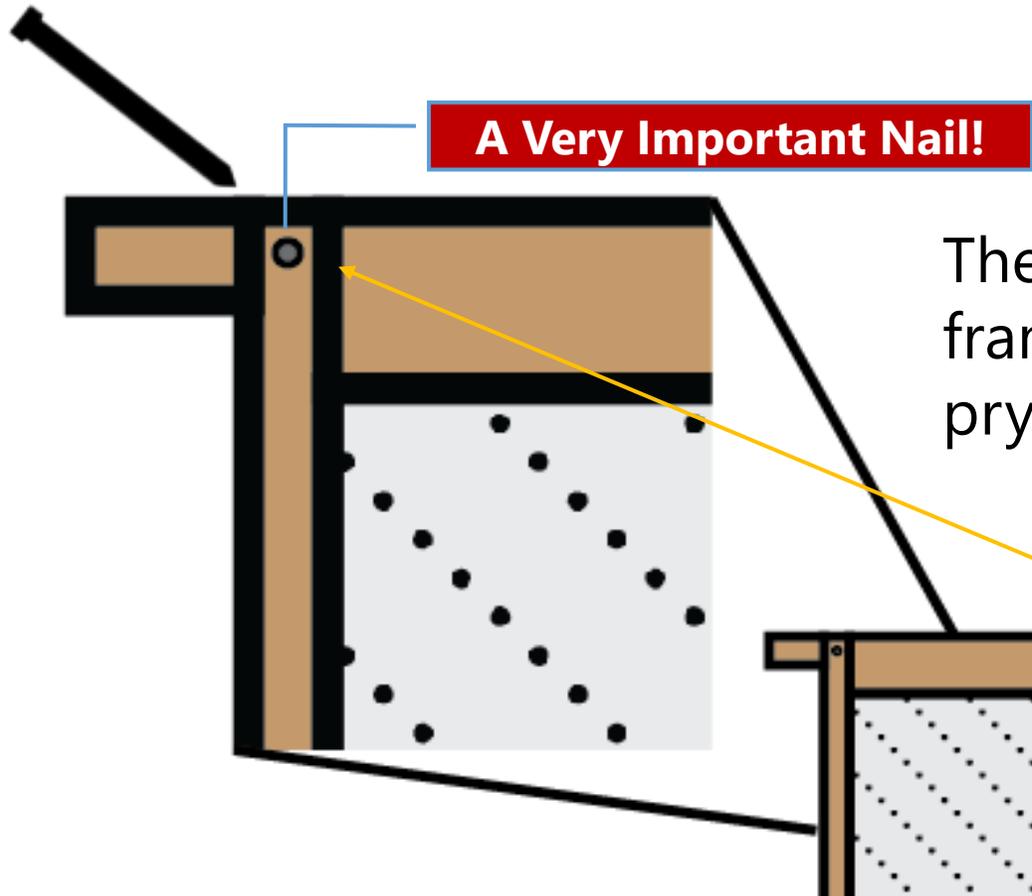


# Building a Frame (10 nails)





# Side Nail Expanded

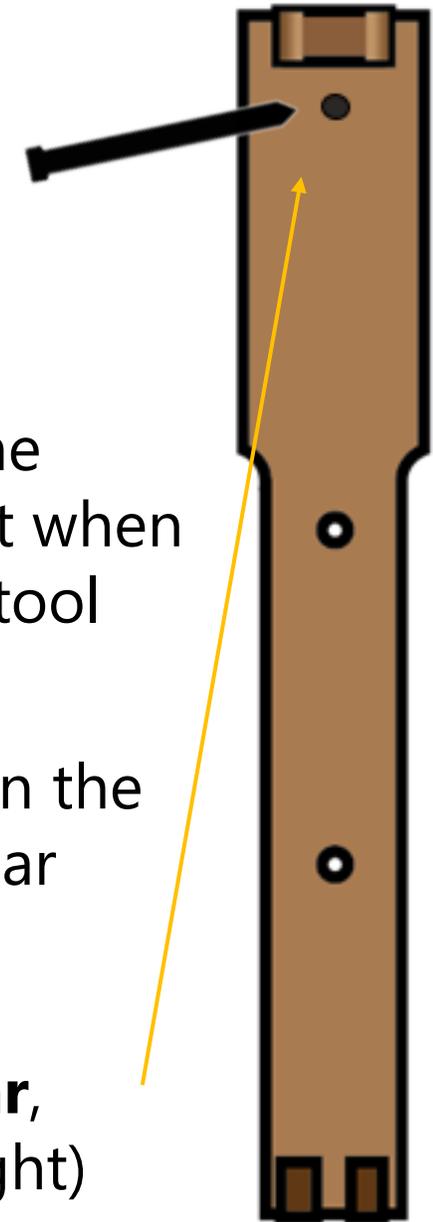


**A Very Important Nail!**

The side nail prevents the frame from pulling apart when prying on it with a hive tool

It can be placed in the ears of the side bar (left),

**Or in the end bar,**  
under the ear (right)





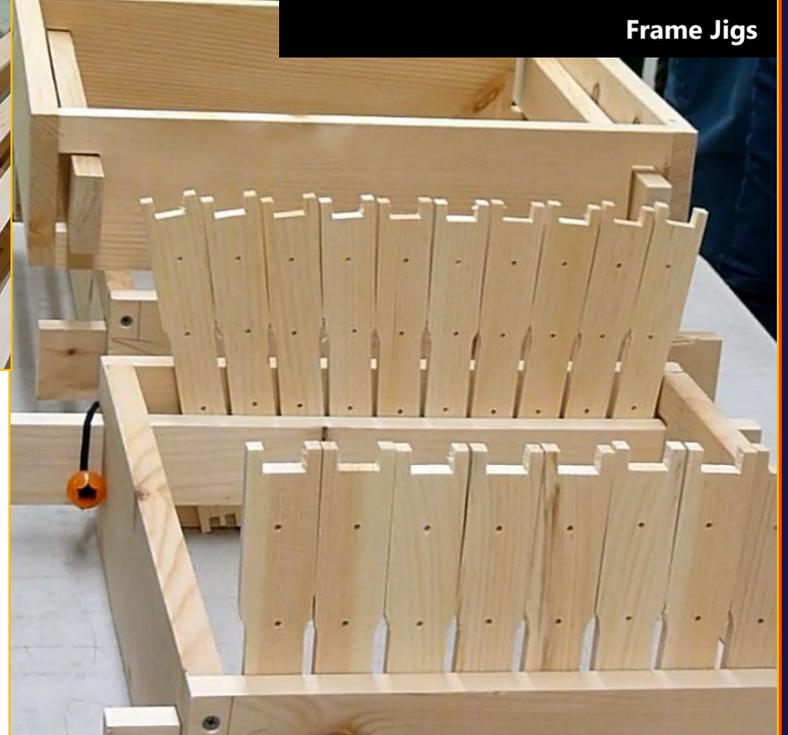
# Air Guns – Nails/Staples

- **Nail Guns and Fastening Staples are an option**
  - Pneumatic air guns and staples are another option
  - Many do not have this kind of setup, but if you do, it is a viable way to go
    - Be sure to calibrate the pressure for driving the staples





# USE A JIG!



## Frames out of square can also cause space problems

- *Twists cause distortion gaps and raised bottom bars*

## Source a Frame Jig

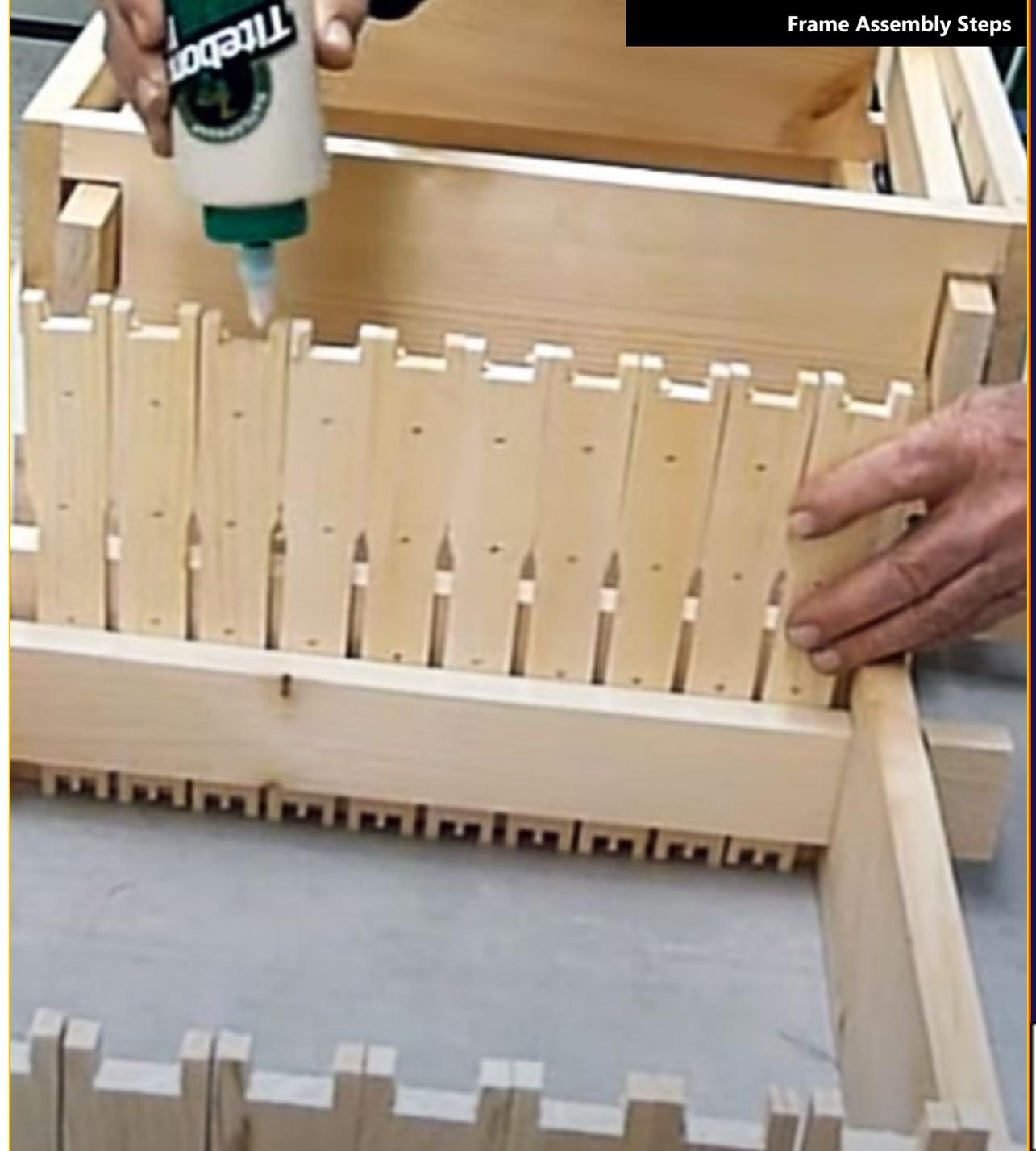
- *They are really a good way to go*
- *Available in most catalogs these days*





# Glue the Top Bar

- **Glue the inside edge**
  - Ensure the glue covers each of the surfaces that meet up between the side bars
  - Glue both the top and bottom of the side bars





# Insert the Top Bar

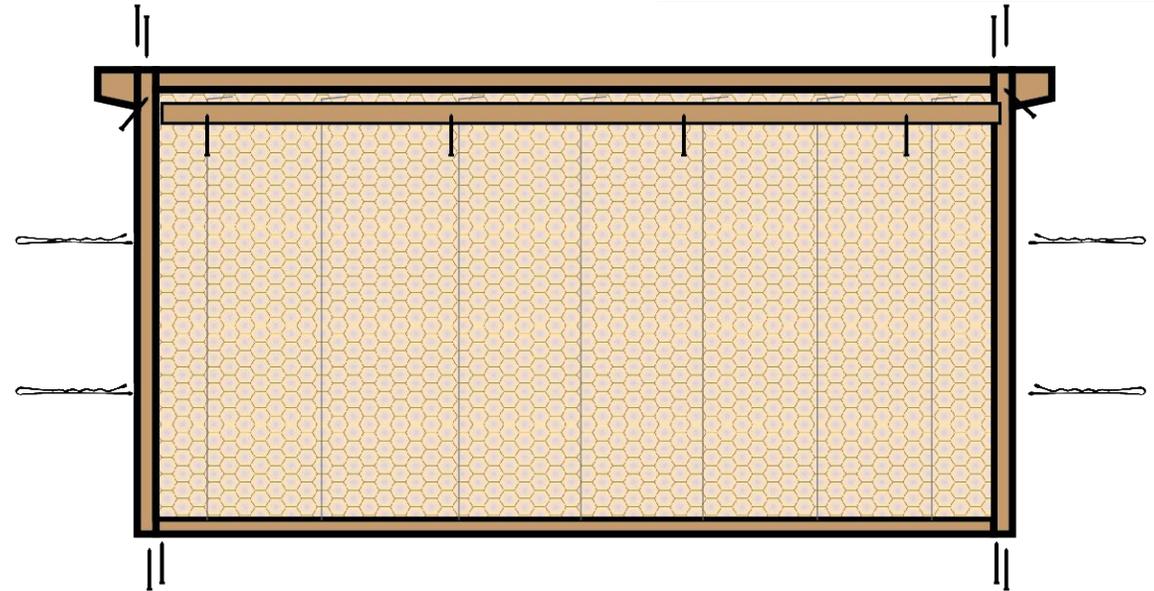
- **Insert the top bars in all of the frames**
  - Set the top bars down into the glue.





### Each Frame (Wedge Style)

Top Bar	(4) - 1 1/4" nails
Bottom Bar	(4) - 3/4" nails
Side Nails	(2) - 5/8" nails
Wedge Nails	(3) - finishing nails



## □ Nail Size and Formats

### ■ Nail Types

- The size of the nail is dependent up on the design of the frame
  - The sizes shown here are considered conventional
  - Manufacturers can choose how 'beefy' their top bars are, how thick the side bars are, the design of the bottom bars; all of the dimensions will have influence what nail you will need
  - If in doubt, source the nails from the manufacturer where you buy your frames.



# Nailing Technique & Hammering

- **Set the nail softly, then drive them in**
  - A recommended way to nail
    - Tap the nail until it holds the piece in a few places
    - Test for square and true; proceed to drive the nails until set.
      - Medium blows with the hammer to start, soft focused blows for finally setting the nail.
  - Hammer
    - **Light** sized hammers for frame building
      - Provide the right force, and dexterity, for the smaller nails used for frames
      - Rubber band on pliers can help hold the nail

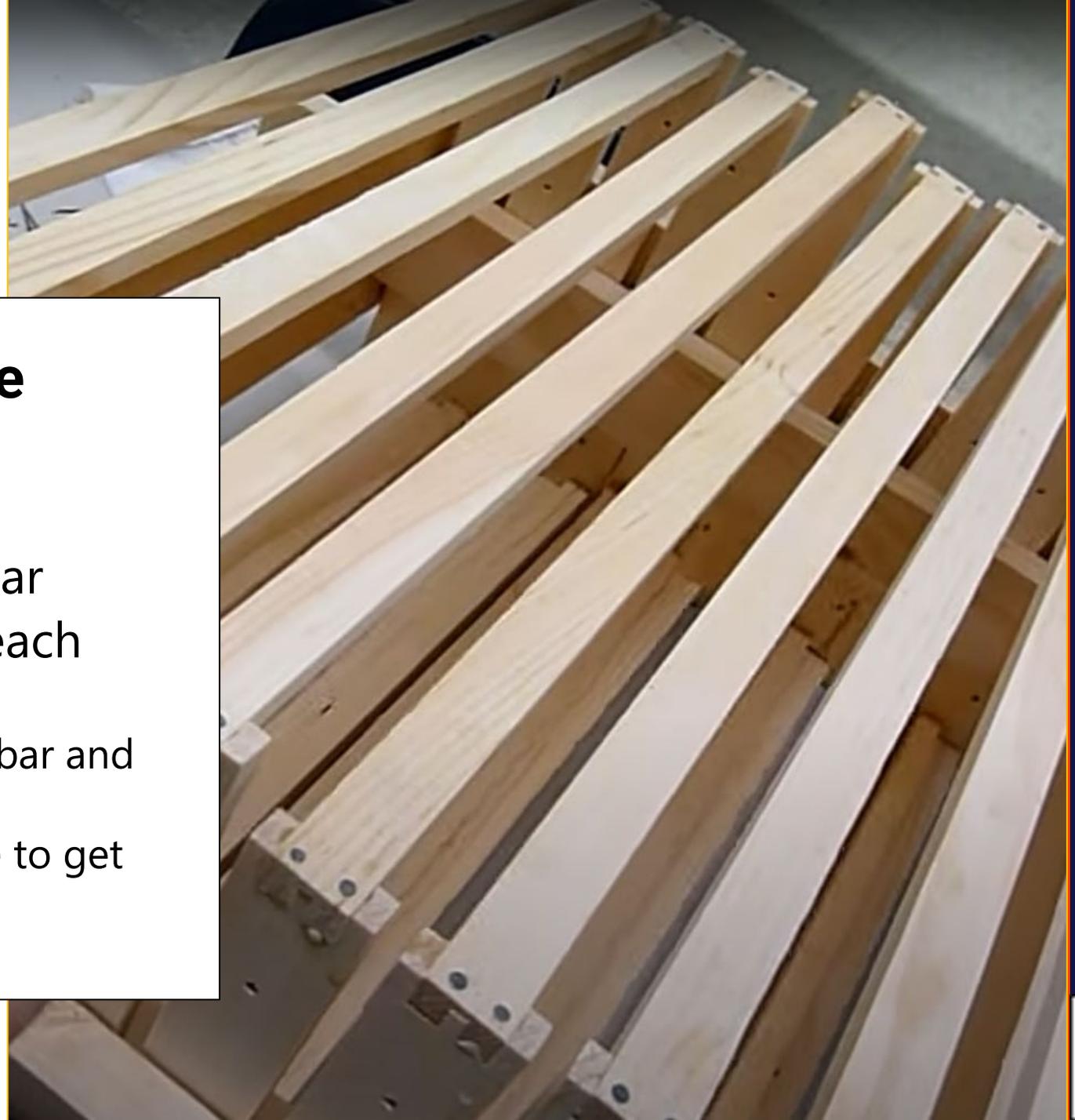


Pre-Setting the Nails is another way to go.



## Insert Bottom Bar

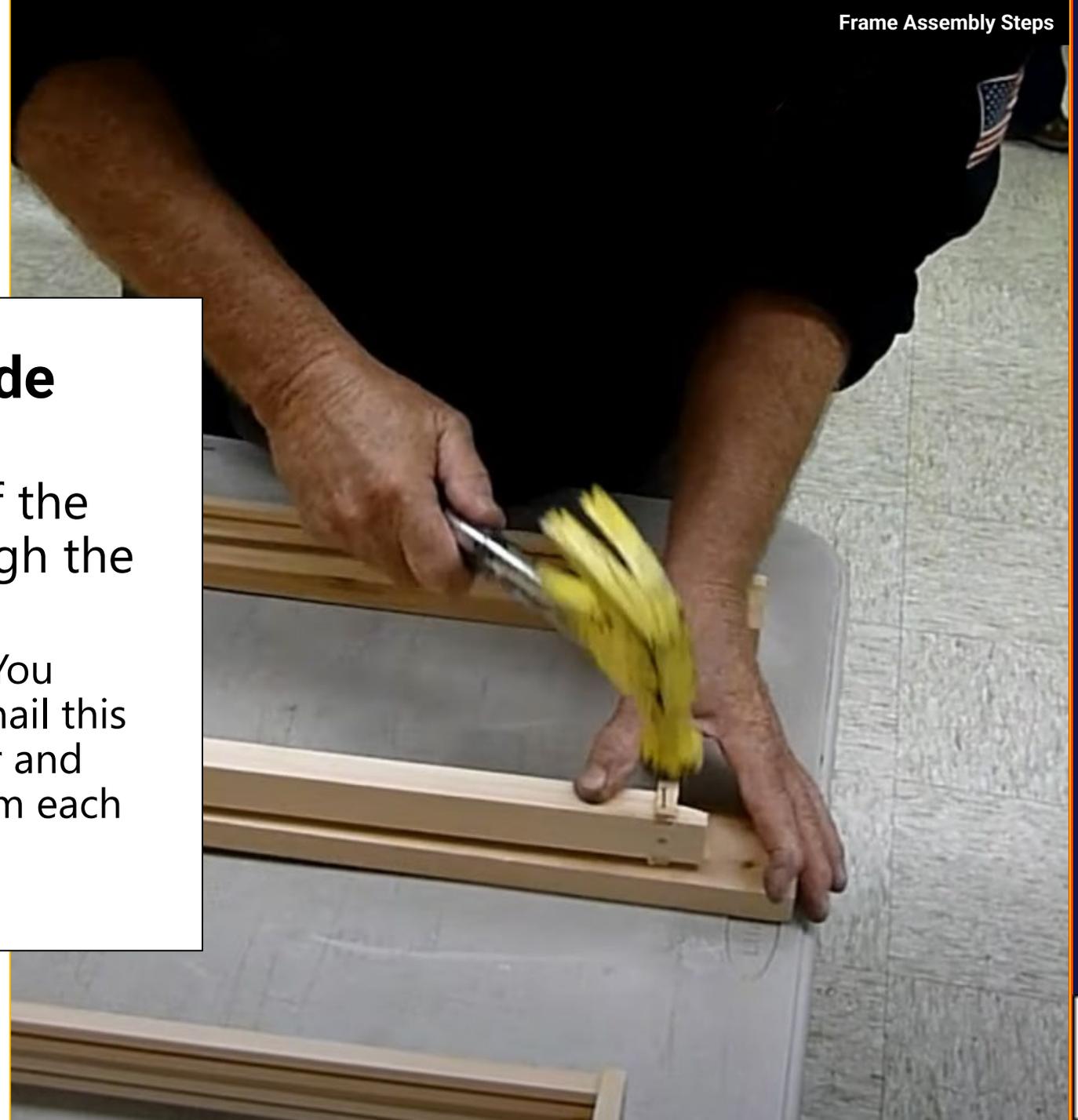
- **Two nails, each side**
  - Turn the Jig over
  - **Glue the joint**
  - Insert the bottom bar
  - Drive two nails on each side
    - Through the bottom bar and up into the sidebars
    - Again, Take your time to get the nails straight





# Nail the Side Nail

- **Two nails, each side**
  - Nail the side nail through the ear of the sidebar and through the top bar.
  - As noted earlier... You could alternatively nail this through the sidebar and into the top bar from each end





# Pre-Built



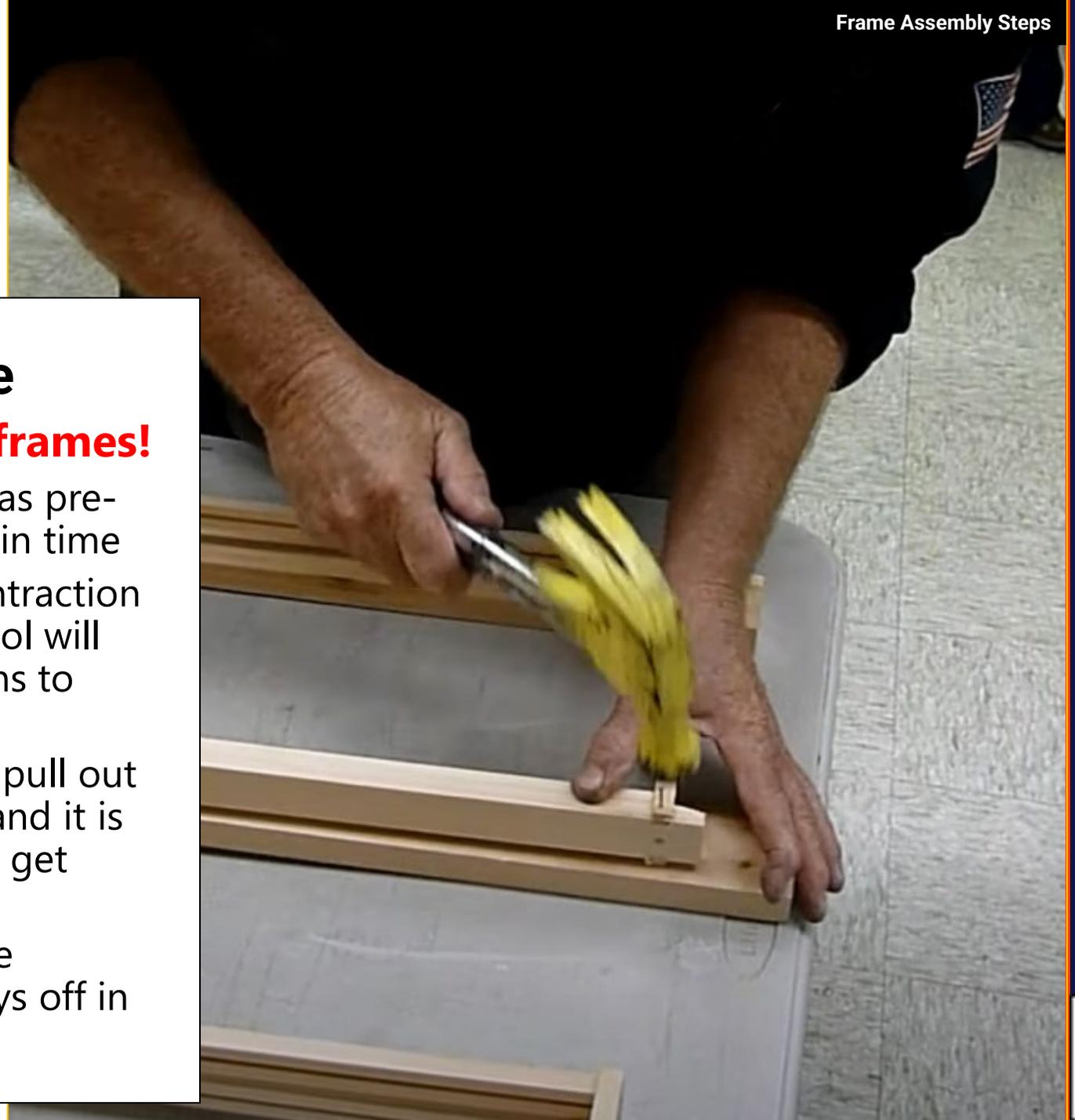
## □ Consider Pre-Built

- Once in your life it would be beneficial to build frames
  - It helps you understand their qualities and design
- You can buy pre-built frames from vendors
  - We recognize that it is a time-consuming task to build frames
    - Keep in mind – 10 frames for each box, usually 4 boxes for a single stack (2 deeps [20], and 2 mediums [20])
    - Save labor, but consider that there are shipping costs
    - Manufacturers often assemble with staples – not a concern, but it is a difference.



# Nail the Side Nail

- **Two nails, each side**
  - **Even for pre-built frames!**
    - We recommend this as pre-built frames may fail in time
    - Wood expansion/contraction + Prying with hive tool will yield failure in seasons to come
    - The long staples can pull out after a few seasons, and it is really complicated to get them to go back in
    - By doing this....A little insurance to start pays off in the end





# Mark your Frames

- **Manufacturer and Year**
  - Consider using a sharpie to mark your frame tops
    - In this case BM was the Manufacturer (Brushy Mountain) and the 14 was the year (2014)
    - It is helpful to keep frames from a single manufacturer in a box (in case you did not follow the guidance to use only one manufacturer)
    - It also provides a reference from where to reorder your foundation in the future
      - It is recommended that you switch out your wax every once in a while for healthier colonies. For this you install replacement foundation



**Tip:** When you build your frames, put the manufacturer *and* year on them.



# Drone Brood Frames



## □ Integrated Pest Management

- Drone brood frames are part of an integrated pest management program
  - The frames are typically a single piece, and are often green in color
    - You use two per hive – swapping one out when the other is capped
  - The cell sizes are bigger, drone size, which results in bees building solid drone comb on these
    - When cells are capped, you pull the frame and cull the bees. This discards the drones as well as the mites inside the cells
    - Mites prefer drones – and this is a proven way to lower the mite counts in your hive.



# Bettercomb



- **Fully Drawn Wax Foundation**
  - These frames come from the factory with perfectly drawn honeycomb.
    - The wax is not from bees, but from a proprietary manufacturing process.
    - The purpose here is for use in emergency, or to get ahead.



# Bettercomb



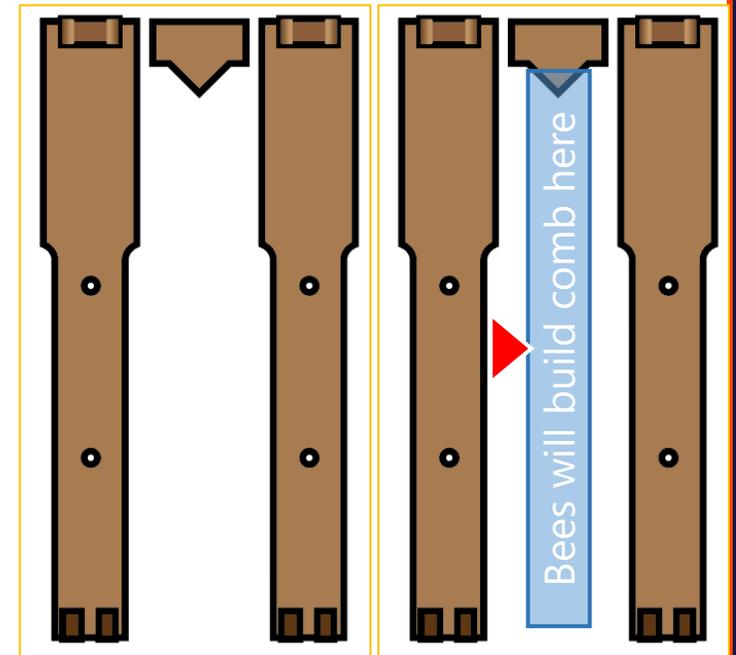
## □ Fully Drawn Wax Foundation

- Mixed Reviews and some controversy
  - It has been said that the bees take to it well
  - We have seen that in some instances, the wax does not hold up, and sags under weight and in the heat of the interior of the hive. They are working on tweaking the formulations to resolve this.
  - Some do not like that this wax is in with honey and food products
    - Bees recycle wax in the hive for whatever use they have, They may take some from one area and move it to another for whatever needs they have.
    - Consider that they can take this wax from say a brood frame, and use it to cap the honey in the honey box above.
    - This also has an implication for harvesting wax for *pure* wax candles.



# Foundationless Frames

- **Popularized by Kelley Beekeeping**
  - These frames provide a guide for bees
    - They use the guide to affix the comb with no foundation
      - The benefit is pure comb, 100% built by bees. No recycled wax, sourced by manufactures, that could have contaminants in it given it is used.
  - In use – provide drawn comb as a guide
    - A foundationless frame is nestled between two drawn frames
      - This prevents the bees from building errant comb.
  - Other Choices Exist – Frames with guides and starter strips





A Beginner's Guide to Keeping  
Bees Thriving in the Boston Area

# Beekeepers School

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**BABA Beekeeper's School 2026**



# BABA Beekeeping School

## Painting Hive Equipment

Lesson | Hive Paint Systems

# What is Covered in this Lesson

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Preparations – Set up the Space & Tools

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Paint, Brushes and Rollers

---

Paint Prep Work

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Painting Process

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Assembled vs. Unassembled

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Suspending Boxes for Painting

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# A word about painting

- **Some love to do this, and some loathe it**
  - Painting can be a fastidious tedious task
  - If you have ever watched someone that was good at it, do it, it is a thing to behold
  - It is one skill that will server you a lifetime and with a little patience and knowhow it can yield great results
    - Open your mind to the lesson and make your way to becoming a good painter



# Why Paint?

- **Wood degrades quickly when left unprotected**
  - Unpainted wood will develop surface flaws, be subject to absorbing moisture leading to rot, and flat surfaces will often warp and become misshapen
  - Adding a protective layer of primer and paint works to avoid these issues for much longer than bare wood alone can manage.
    - Primer serves as the binder to seal the wood and create a surface that the paint will better adhere to



# Hive Equipment Painting Workspace

## □ Muster and Setup

- Collect or assemble your tools and equipment
  - Source, Gather and organize your painting tools – paint brushes, rollers, stirrers, etc.
  - Clamps, Hammers, screwdrivers, rags, drop clothes, scrapers, sandpaper, nails, glue and other tools and hardware can be considered.
- Choose your painting space
  - Pick a place that is clean, and large enough to paint and set pieces to dry where they will not be subject to foot traffic that could stir up dust
  - Choose a place that is temperature controlled, will not cause problems from paint odors, and be subject to any other impacts while occupying the space.



# Workspace Hygiene

## □ Workspace Basics

### ■ Vacuum and Sweep, Wait > then Wipe down Surfaces

- If you are working in a place that could be considered dusty, or just for good hygiene, consider a quick clean up to take contaminants out of the space
  - Vacuum or sweep the space, then leave the air to settle.
  - Once things settle, use a damp cloth to wipe down the surfaces of any dust that deposited due to being disturbed from vacuuming and/or sweeping....
- This extra step often is the difference between a paint job that that a smooth admirable finish or one that has a disappointing dust appearance in the finished product

Say in the garage where the vehicles track in dirt each time they come in off the road.



# Temperatures and Ventilation

- **For best Results, Paint within temperature ranges**
  - Each product will spell out the functional temperature range for painting.
    - Most times, room temperature is a good rule of thumb (70°F)
- **Air Movement**
  - Ventilation, but not drafty
    - It is beneficial to have some ventilation to allow vapors to dissipate, but you would want to avoid drafty conditions that move dust around and cause uneven drying.



# Stir Your Primers and Paint

- **Keep Stirring, Continuously**
  - Even if you just got it home from the store, and they had shaken the cans from you, stir it just before painting
  - Periodically stir your paints and primers throughout the process.
    - This ensures the best protection and finish for your painted equipment.
      - When a paint (or primer) is thoroughly stirred, the paint additives within are thoroughly distributed throughout the paint at all times
      - This gives you the best performance of the paints in both coverage ability and adhesion.
      - How long? Stir just a little bit longer than you think you need to so it is fully mixed.



# Source your Primer & Paint

When buying paint, peek at the 'return' section of your box store

## □ Common House Exterior Paints and Primer

### ■ Paint Systems

- Most common house paints sold in box stores or at your local center do just fine. In our testing, we like **Benjamin Moore** for longevity, but Behr, Glidden, and other common brands are also suitable for the job.
- Primers: You can buy the primer systems for the brand you choose (Glidden Primer with Glidden Paints for example) or you can choose dedicated brands for primers. We like **Zinsser 1-2-3** brand, and **Exterior** primers for example.
- If in doubt talk to the person at the counter and tell them what you are doing, and they can make recommendations.





# Paint + Primer Products?

- **What of Paint and Primer, all in one products?**
  - We are not a fan, but if you want you can give it a try
    - The rigors of environment for a hive box are two-fold.
      - You have the exposure to the elements from the outside
      - And the assault of moisture coming through the wood from the atmosphere of the bees via the inside.
    - It is our experience that a two-part system is a superior package
      - There are however plenty of accounts of beekeepers who saved money by going with an all-in-one product and the allure is compelling.
      - Call us old school, but we have success with primer/paint systems and suggest that you are better off going this way, especially for an exterior facing paint solution.

We prefer  
Primer/paint  
systems for  
coverage and  
durability



# Brush and Roller System

- **Painting with a Brush, and or, a Brush + Roller**
  - You can paint the whole kit with a handheld paintbrush.
    - But for speed, and for a better finish, especially for anyone unaccustomed to painting, a brush and roller might be a better choice
    - If using both, the brush is used to paint the intricate areas (handholds, finger joint areas, and such). The roller provides fast work for flat surfaces and does a very good job at distributing the paint evenly.
  - Work in small batches
    - If using a brush + roller, work in small batches. This ensures the brush remains 'wet' enough to keep coming back to. Only do a few pieces at a time.



# Brush and Roller Recommendations



- **4-inch roller – 1 to 2-inch brush**
  - Painting is personal preference
    - A brush that is wide enough to cover panels
    - But small enough for detail is best.
  - Short-nap synthetic rollers do a good job
    - They clean out well, are reusable, and provide a good finish
    - Stay with a nap that is not too deep
    - Use a roller with a matched painting tray

CHOOSE A ROLLER WITH THE RIGHT NAP FOR YOUR SURFACE





# Foam Brushes

## □ Foam Brushes

- These are an 'ok' choice
  - They are inexpensive, and they are disposable, so they simplify clean up
- Disparity Quality
  - The quality of these brushes vary in the marketplace.
  - Primarily where they differ is in the quality of the foam.
    - Cheap version have open matrix of cells, are stiff, and are not very easy to paint with
    - Better ones have a **tighter foam matrix** and a softer surface





# Show – Walk through only

- **This next section is for later**
  - I am going to preview what is here
  - You should look at it WHEN YOU ARE GEARING UP TO PAINT
  - It has details that will make a difference in a quality pain job
  - It is too detailed to cover now, and you will forget it by then
  - But when it comes time to do the paint job – Read it and follow the guidance for a better outcome



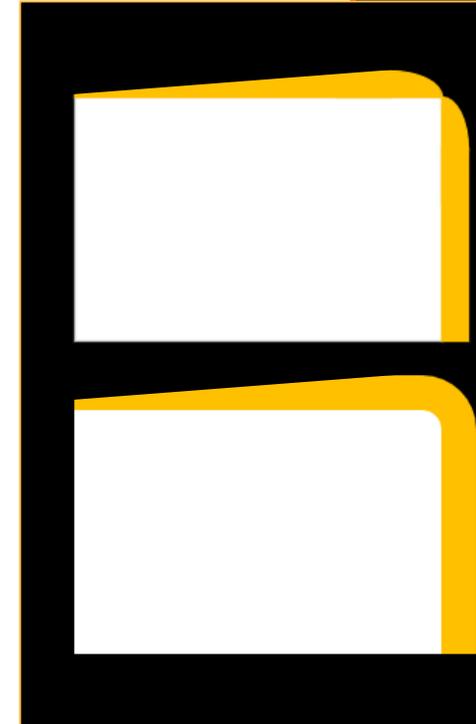
# Preparation

- **Prep is short for Preparation**
  - When painting, one word that is synonymous with the practice is **prep**.
  - Prep work comes in a few forms and can be thought of as the steps to 'make ready'
    - Sometimes this means to assure the piece is ready for a paint application – cleaning off errant shavings, dulling sharp corners, etc.
    - Other times it is the simple process of final prep to clean a surface off before laying down a coat of primer or paint
    - Whatever the use, it is without question one of the most important steps and should always be executed with utmost diligence



# Prep the Blank Corners

- **Round off the sharp edges**
  - An optional step, but recommended
    - Before painting, and as a last step of fabrication, **consider 'knocking off' the sharp edges of woodenware with a piece of sandpaper** affixed to a sanding block or small scrap of wood.
    - Rounding off sharp edges allows for paint to flow contiguously from one plain on the wood to another
      - Naturally, when corners are left sharp, they present thin spots in the wood that can be marred and open areas where water can get behind the paint and challenge its hold over time.
      - This comes into play for roofs, bottom boards, and hive body pieces if you want to give them a light touch.





# Prepping the Surface directions

- **Wipe in a linear fashion**
  - How you wipe the panel is important
    - Start at the top and wipe in one direction.
    - Wipe across left to right, right to left, it does not matter, as long as you are not using a repeating pattern
      - What that means is do not wipe an area over and over again.
      - Wipe one section of the piece in one direction and do not wipe back over it.
        - Re-Wiping redeposits what you wiped off.
    - Wipe the dried surface down between coats with a dry rag. Consider a damp cloth wipe if they sit for a while (say if you took a long break, or stopped- then restarted the next day)



# Prepping the Surface directions

- **Wipe dry, then wet**
  - Wipe dry to get loose particles off. Then wipe wet (damp) to dislodge surface contaminants and stubborn debris
    - Wipe dry with a clean cloth, or tack rag (aka Tack Cloth)
      - Tack cloths are optional. They can be purchased at a store.
      - They are probably overkill here as you are working with new lumber.

## *Term*

**Tack Cloth** A tack cloth or tack rag is a lint-free material—often gauze-like—impregnated with a tacky substance used to remove dust and dirt from wood prior to finishing/



# Prepping the Surface directions

- **Wipe dry, then wet**
  - Wipe dry to get loose particles off. Then wipe wet (damp) to dislodge surface contaminants and stubborn debris
    - Wipe with a dampened rag
      - The wet wipe, with a rag wet with water and rung out thoroughly, will remove stubborn dirt and remove contamination from the surface – such as **oils from your hands**
      - Wipe the dried surface down between coats with a dry rag. Consider a damp cloth wipe if they sit for a while (say if you took a long break, or stopped- then restarted the next day)

## *Term*

**Tack Cloth** A tack cloth or tack rag is a lint-free material—often gauze-like—impregnated with a tacky substance used to remove dust and dirt from wood prior to finishing/



# The Brush and Roller Process

- **Paint the Intricates first, then paint the panels**
  - 'Cut in' the handholds and intricate areas with the brush.
    - Painting with the brush is not dab, dab, dab, dab.
    - Keep the brush moving and sweep it along the surface.
    - Dab if needed to get all the complicated hard to reach places, but use a sweeping motion in to finish.
  - Once you have the brush areas complete, roll the flat surfaces
    - Roll across the flat planes of the panels, blending in any areas that were painted with the brush.
    - Sweep the brush for long thin areas where a roller cannot go; roofs for example



# Loading the Brush and Roller

- **Charging the Brush and Roller with Paint**
  - 'Dip the brush only halfway'
    - Don't sink the brush past half of its depth.
      - Dipping halfway loads the paint into the base of the paint, without overloading it
      - Overloading paint causes a mess and leads to drips and runs
  - Tap Tip
    - Do a 'tap' on the inside of the can to set the paint and avoid drips
      - Tap the tip of the brush on the inside of the can, or on the can lip. This motion tip was recommended as a way to drop off excess paint and lock the paint in the brush while you carry it from the can to the piece.



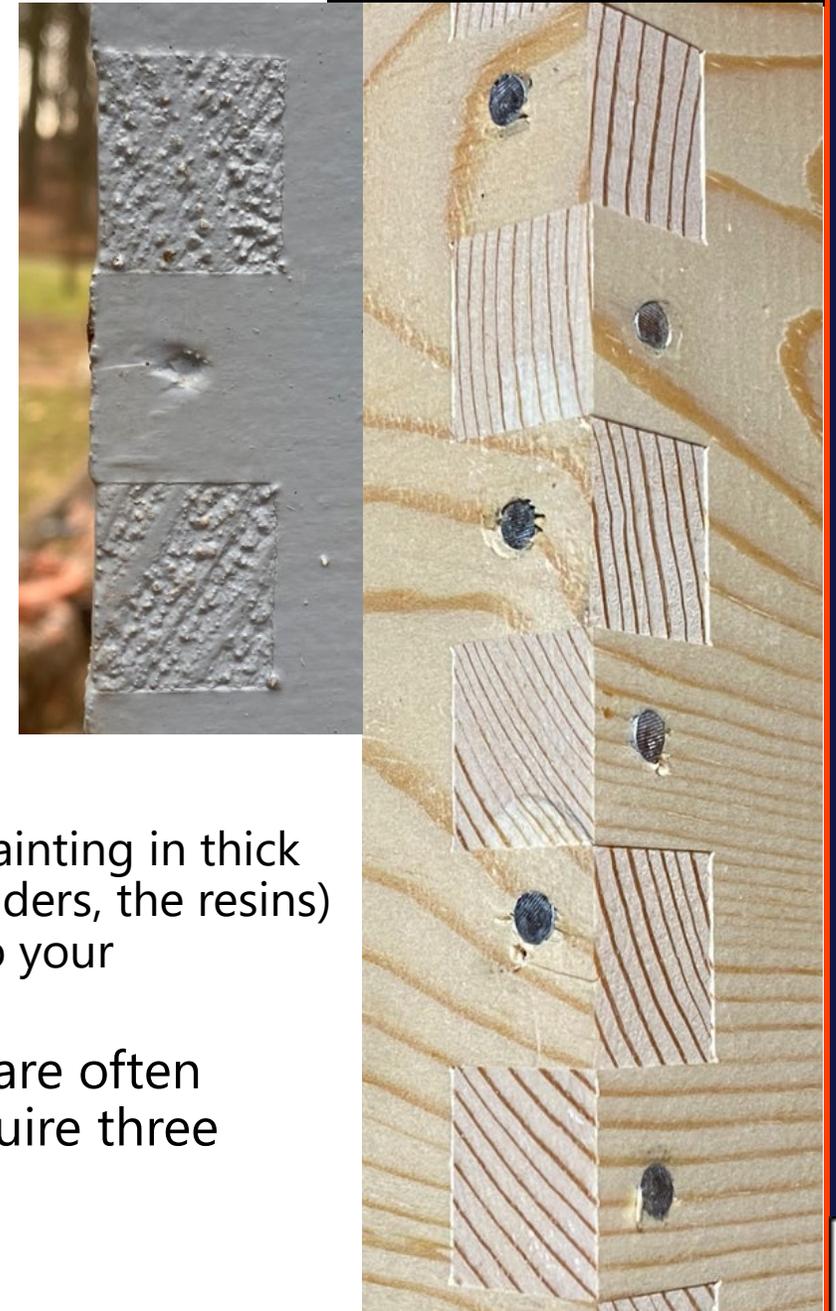
# Loading the Tray and Roller

- **Adding Paint to the tray, and loading the roller**
  - Avoid pouring the paint out of the can,
    - This results in spilled paint, paint in the rim of the can, and other undesirables
  - Hold the tray over the can, and use a paint stirrer to add paint
    - Dip the stirrer, pull it up over the can, slide the tray under, and let the paint fall into the tray. It is somewhat tedious to do this, but you'll the hang of this.
    - Don't flood the tray
  - Lightly load the roller
    - Place the roller in the paint, and pull it up to the flat, rolling it to load.
      - Repeat this as necessary until the roller is charged, but not saturated.



# Initial Primer

- **Initial coat application**
  - Prime intricate places first with a brush, then roll the flat surfaces with a roller to distribute the paint evenly
  - We recommend two thin coats
    - Thin coats distribute the paint additives and allow them to set up quickly.
      - Like paint can separate in the can if left still, painting in thick coats may allow the additives (the oils, the binders, the resins) in the paint to separate on the surface prior to your primer/paint fully drying.
    - Pay attention to the finger joint ends. They are often porous and will absorb more. They may require three coats of paint to seal off with primer.





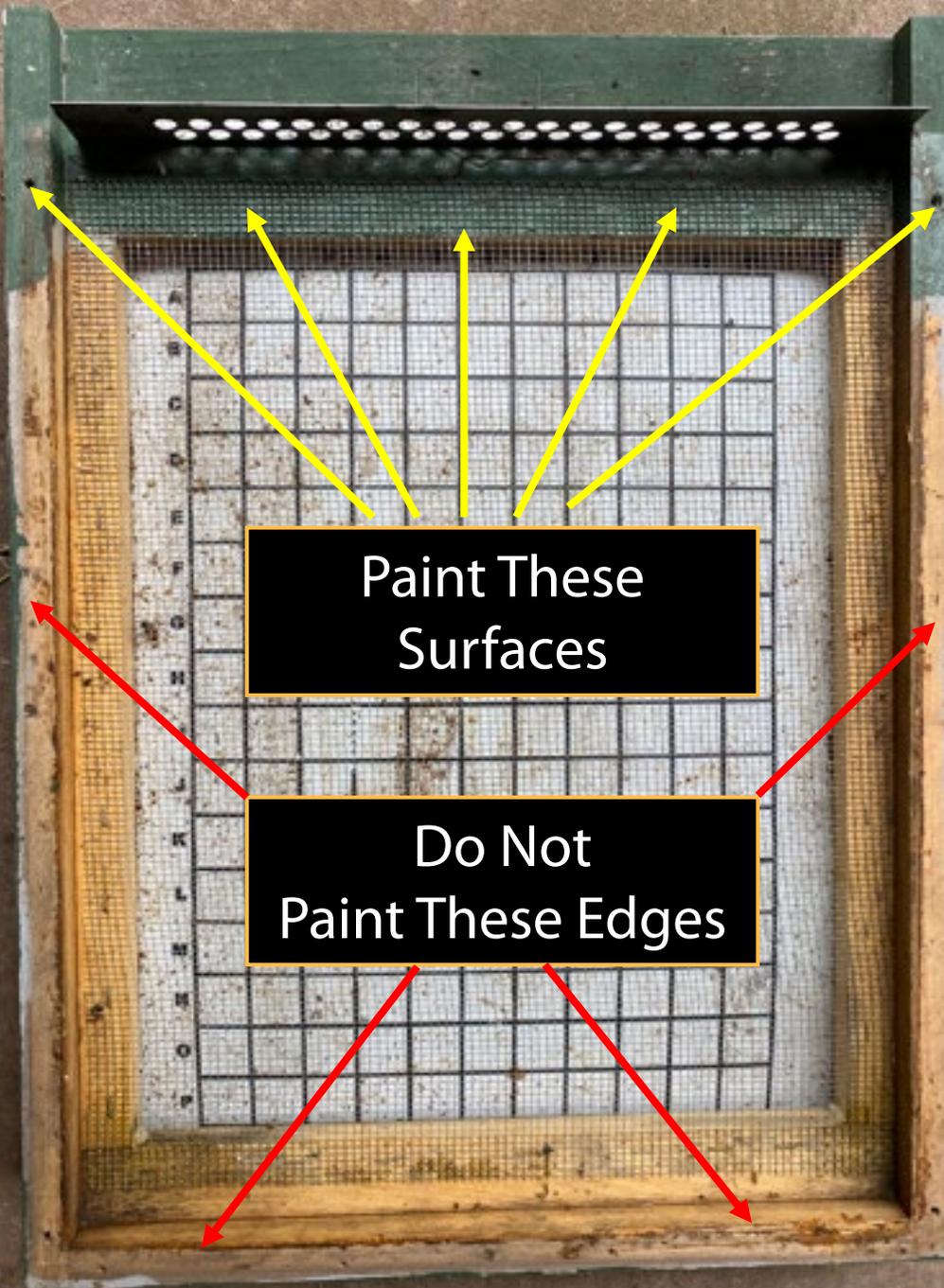
# What gets painted?

- **Anything that is externally facing**
  - Think about the board faces, and what is going to be out in the open air. The underside of the roof edges for example
    - Not to be confused the roof interior; but the edges that will hang over the boxes.
  - Painting the bottom board.
    - Paint the landing, paint the edges that stick out of the front, and the underside
    - The bottom of the bottom board will not be out in the weather, but it will be subject to moisture and will benefit from being painted.



# Things you do not paint

- **Some surfaces / equipment does not get painted**
  - Do not paint the inner cover and the metal part of the outer roof
  - Do not paint the box top or bottom edges
    - Some argue this point, but if you do happen to paint them, and the paint is not chemically dry, they can stick together when the surfaces come together when placing one box on another. Our guidance, Skip it.
  - Bottom Boards
    - Do not paint the top edges of the bottom board where the hive boxes rest
    - Do not paint the screen, of a screened bottom board.



## □ Visual of what to paint

- Paint the landing
- And parts that extend out past where the box will sit on the top edges of the bottom board rim
- Paint the full underside too



# What you don't want to paint - protect

- **Blue Painter's Tape and/or "Frog Tape"**
  - Liberally make use of blue painter's tape to mask off anything you don't want to get paint on.
    - One common thing to mask is the metal of the outer cover.
  - Use clean dry low lint rags to remove paint where it does not belong
    - A clean rag, pressed with force, in one direction – this will often remove any errant paint that you might have deposited in a place you did not want it.
    - If what you want to wipe away has dried, use a damp cloth to wipe it away.



# Inspect before Final Topcoat

- **Look for any problems and correct**
  - Drips, runs, errors
    - If you had any drip, runs in the paint, errors, fix them before starting the top coat.
    - Some can be wiped away and lightly sanded, some require a knife to scrape off and you will have to patch the spot with primer.
      - When you cut off a drip with a knife, you sometimes find that it was wet underneath. Wipe the drip spot with a damp cloth to wash off errant paint and soften any ridges before patching.
    - Correct these problems as you go.... You will not be able to correct them once the final topcoat is applied.



# TopCoat

- **Two Coats of Topcoat paint**
  - Again, Apply two thin coats
    - Monitor for drips and runs. Comb out any brush marks with long sweeping strokes.
- **Paint Drying**
  - Leave enough time for paint to fully dry before putting into service
    - Bees may be impacted by the fumes of the paint drying.
      - The bees are super sensitive to the odor paints give off while drying.
    - Ideally the painting will be done in time to allow the paint to cure fully.



# What of Spray Systems?

- **Yes, if you know how**
  - You can use spray systems to paint beehives,
    - Very rarely do people have this equipment, and the expertise of how to use it, so it is not covered here
    - Incidentally, spray can paint is not going to work, so do not use that method
  - If you have the know how, go ahead.
    - Just be sure that you get the right coverage when spraying out and we would recommend that you shoot multiple coats, just as if you were painting with a brush. Low volume procedures are recommended.



# Assembled vs. Unassembled

- **You can paint unassembled**
  - There is no rule that says you must assemble your equipment before painting
    - If you think through the process, you can paint pieces unassembled, then fabricate (with some touchups required to seal the nails after fabrication)
    - A benefit to this choices is each piece can be laid flat on the work surface which makes it a little easier to paint for some.
      - You do have to come back with a paintbrush and touch up any nail heads
      - They must be encapsulated with paint to prevent corrosion and rust from forming after exposure to the weather.
    - Most beekeepers choose to assemble boxes, and then paint.

- Suspend the boxes on a rail. This lets you rotate the hive boxes, painting each side as you go. It also takes up less space.

## Rail System



# External Graphics

## □ Sure, go ahead

- Beekeepers are a creative bunch, and many do some amazing art on the exterior of their hives
- Have fun with this...
  - Use suitable exterior paints
  - Keep in mind while doing this that some management practices call for rearranging the boxes
  - Know that you end up moving frames to keep boxes depicting scenes intact





A Beginner's Guide to Keeping  
Bees Thriving in the Boston Area

# Beekeepers School

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**BABA Beekeeper's School 2026**



# BABA Beekeeping School

Keeping Bees where you live

Lesson | Beekeeping is Local

# What is Covered in this Lesson

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The Concept of Local

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The Influence of Weather

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Local Climates

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Cultural Influences

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# The concept of Local

- **Every situation is different**
  - In beekeeping there are typical ways of doing so many things.
  - Many factors make each beekeepers situation unique.... literally the yard the bees are kept in.
  - Learn early that no two beekeeping operations are alike.

## *Term*

**Local** belonging or relating to a particular area or neighborhood

# Factors in Locality

## Influencing a beekeeper's approach

- Potential differences in an operation that could influence unique ways in managing bees:
  - Weather Patterns
  - Amount of Sunlight
  - Elevation – Slope of Land
  - Soil Conditions
  - Humidity
  - Forage Availability
  - Number of Hives present
  - Wind
  - Precipitation Patterns
  - Temperature Variation
  - Water Availability
  - Storm Prevalence
  - Building Density
  - Cultural Practices

# One Big Equation

- **Understanding your LOCAL situation**
  - Factoring differences, it becomes evident that each location is uniquely different
- **Variation in Factors**
  - Some are important, others are mere considerations
  - There are a few that are unlike the others – cultural differences for example, that will be unpacked in a moment.
  - This calls out that it is not just weather related, and each beekeeper has to decide what is right for them.

## Why does any of this matter?

- **Instruction is not universal**
  - This program has its origins for the Mid-Atlantic area of the United States
  - As such, much of the instruction applies to beekeepers in the northeast.
    - That being said, if someone comes upon these instructions from Texas as an example, they will find that these instructions are often unsuitable due to the distinct different of location.
    - Pragmatically, this rings true for some of the instructions for those nearby, even within the Mid-Atlantic.
      - Those in the mountains of Pennsylvania may have to adjust instruction to accommodate for some differences.

# So which factors matters?

- **Primarily Weather**
  - When it comes to bees, beekeepers need to understand their local climate.
    - Our local weather, in Central NJ, is 5°F different from the broadcasts coming out of New York City.
      - We know that because we follow local weather stations
  - Follow the biology and behavior of the bees
    - Bees will generally operate at certain temperatures
      - Meaning for example that they will go out and forage once the temperature exceeds a certain range.
      - The difference of a few degrees might factor in what you are doing for the day.
  - **Temperature** is a leading factor for locality

# Weather Patterns

- **Rain, snow, sun, clouds, storms, etc.**
  - Each location has norms about what occurs there.
    - Going back to the Mid-Atlantic, the weather is somewhat consistent for the region but a snowstorm, rainstorm, or other weather pattern, might impact the whole region or part of it.
  - Beekeepers need to pay attention to the **forecasted weather patterns**.
    - This seems patently obvious right!?
    - In this day of Facebook and other far-reaching outlets, **beekeepers are constantly bombarded** with other beekeeper reports in real time.
      - Some manage based on what they see others doing and do not take a proper account of what is outside their window.

## Keep Attuned to locality

- **Understanding ‘constants’ that are differences for you**
  - A beekeeper needs to take stock of certain conditions that are consistent, but unique to the location.
    - A beekeeper that lives in a valley has a different, but constant, difference when contrasted against someone who lives at a higher elevation.
    - Consider your unique situation and keep that in mind while considering how to conduct operations.

# Follow the biology

## □ Learning Colony Dynamics

- In time, and with experience, you will come to know more about how the bees operate
- We will coach you to be **biology-driven beekeeper**
  - We will teach you different things about the bees as a superorganism
  - When you grasp the ins and outs of how a colony operates, you can apply that to your planned interactions
  - Fundamentally this is a key difference from a 'bee-haver' and a beekeeper