



The Managed Mentoring Program on getting started in beekeeping.

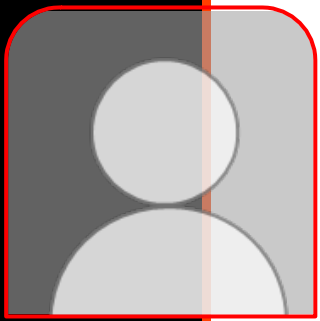
Managed Mentoring



Managed Mentoring

Guidance on what other
equipment to consider

Lesson | Other Beekeeping Equipment



What is Covered in this Lesson



Essential Equipment

Optional Equipment

Kit Recommendations

Not Recommended



Essential Equipment

Common Kit Tools and Equipment



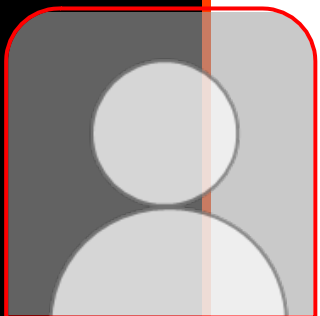
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Equipment Purchases – Beyond Hive Kits

In the next set of slides, we will cover essential and recommended equipment

□ Equipment Requirements

- *Essential and Recommended*
 - Some are essential, some are required, and others are recommended
- *Adjunct Equipment*
 - Beside the hive equipment that houses the bees there are a number of things that you will need to support the bees
- *Optional and Eventual*
 - There are of course many things that are optional and are personal preference – and some that will be needed in time to support the operation



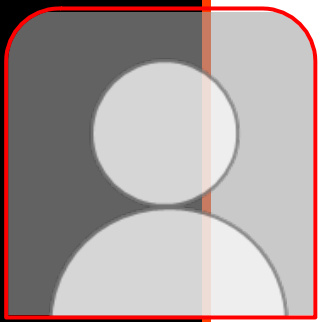
Show, not tell...*yet*

A quick note...

For brevity we will focus on what equipment to source for now. Do know that we promise to give more detail of *how to use it* at a later time.

□ Introduction, not usage

- *Some of the equipment being discussed will require some understanding of what it is, how to use it, etc.*
 - When we get to management practices, the details of how to use some of these will be covered.
 - Just know for now that we will have more in-depth discussion about the equipment and its use; but know that:
 - If we are covering it as mandatory – you should source them.
 - If we are saying recommended – you should source them if you can
 - If we are saying optional, we will leave that to your discretion, but we use this stuff...

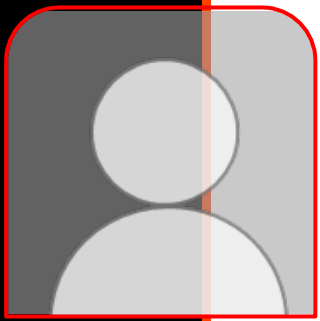


Smoker

Note the
classification

Smoker Sizes

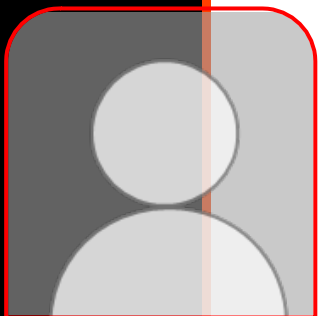
- They come in different shapes and sizes. What you buy is personal preference. Typically, **a mid-sized** one is a good choice to start.
 - Small ones can burn through the fuel before you are finished with a session
 - Big smokers are sometimes awkward to work with, especially if you have not developed the dexterity to work with one through experience.



Hive Tool

□ Hive Tools

- *Hive tools come in many shapes, designs, sizes, and colors.*
 - We recommend you have at least one or two common brightly colored hive tools in your kit.
 - Start with the basic design first, until you get the sense of how to use it.
 - There are some unique and useful designs. Given a hive tool is something that is very personal (it is akin to how you touch and work a hive) do consider trying out other variations in time to see what works best for you.



Varroa Easy Check

□ Varroa Mite Sampling Tool

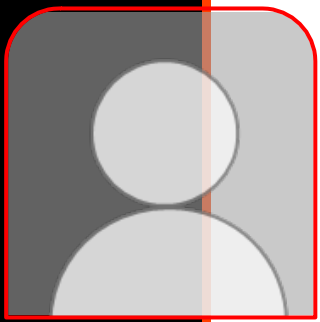
- *We request you get one of these for your kit.*
 - When you place your next order, do purchase this specific device > Varroa Easy Check – by Veto Pharma
 - Every catalog sells these now.
- *We will provide instructions later this season on how to use it to monitor for varroa mite infestations*
 - The instructions we provides specifically call for this exact device.



Feeders

□ Feeder Formats

- *Honeybee Feeders come in several form factors and are used to deliver either solid or liquid foods. More commonly feeders are purchased to deliver liquids.*
 - Three types are the most common, but there are *many* other designs
 - "Boardman Style" Entrance Feeder
 - Interior Frame Feeder
 - Top Feeder



Feeders

□ Inner “Division Board” Feeder

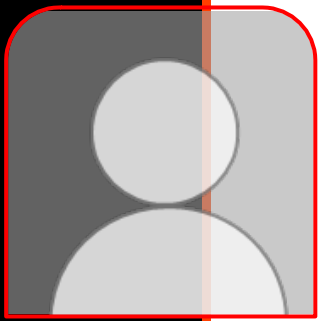
- *One inner feeder for each hive recommended*
 - These deliver food in close proximity to the bees.
 - They are useful in cooler weather as sometimes the warmth the liquid warm enough to consume.
 - They do require opening the hive to refill.
 - Buy ones with internal ‘ladders’ or textures channels so that something to grip too
 - If the inner tunnels are smooth, bees fall in and drown.



Feeders

□ Top Feeder

- *One Top feeder for each hive recommended*
 - These deliver large volumes
 - They sit under the top cover and seal the hive closed from above when in use.
 - As such bees do not escape and you can feed without having to open the hive.

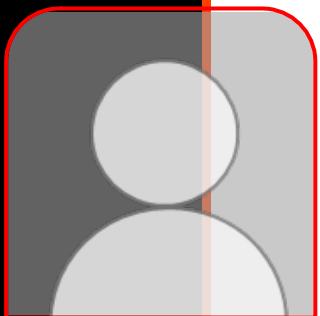


Feeder *not to use*

❑ Front Entrance Feeder

- These are **NOT RECOMMENDED**

- They incite attacks at the entrance of the hive by drawing robber bees from other colonies to the front entrance.
- Can be used for water, but do not feed with them
- Shared here because these are inexpensive and often included in bee catalog kit bundles. If they came with your kit, we recommend you do not use them for feeding.



Veil

The full complement of personal protective equipment options will be covered in the next module

□ Helmet Style Veil

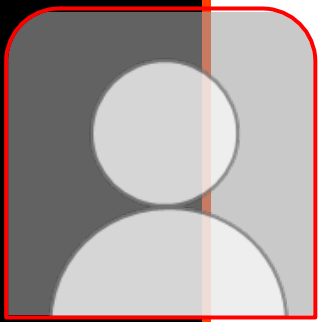
- *We consider this particular piece of equipment as a required addition to a beekeeping kit.*
 - There are dozens of styles of veils on the marketplace.
 - We recommend the helmet style veil for beginners as it affords more protection than a cloth-based cap.
 - Whenever in the apiary, it is recommended that a veil, or some form of bee suit, be used for head protection, and especially eye protection.



Bee Brush

□ Bee Brush

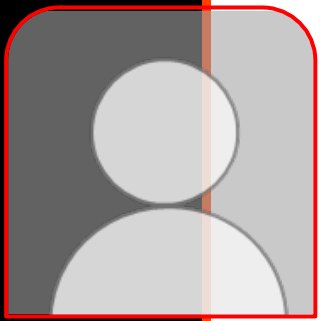
- *Commonly used tool to 'flick' bees off a frame*
 - Sold in bee supply catalogs, they come in many shapes and sizes.
 - Some premium one indicate they have softer bristles and such.
 - Buy what suits you. In our experience, even the moderate cost ones are usually suitable for the job.
- *Tip!* Flick, don't brush or sweep.
 - Flick the bees off when using this, do not sweep across the frame like you are wiping crumbs off a table. That motion 'smooshes' bees. Flick at them and they will jump off.



Toolbox – Equipment Holder

□ Be Organized

- *This is very much a personal preference*
 - There are many ways to hold your beekeeping tools and equipment.
 - Buckets, toolboxes, trays, bags, whatever keeps things at hand and keeps you organized.
- *Yard Cart*
 - This is often paired with a yard cart or wagon of some type to move things in and out of the apiary.



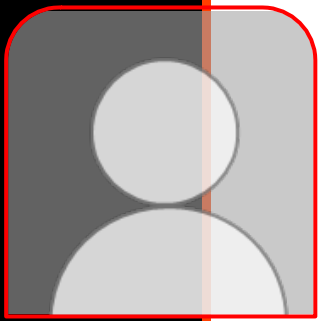
Bear Fence (Situational)

□ Bear Fence Barriers

- *Bears are in every county of NJ*
 - It is commonplace in some areas of NJ to have bears ever present
 - It is not unreasonable for anyone in the state to consider a plan to implement, or deploy in rapid fashion, a bear fence solution



The information is raised here, but the guidance for a fence system, and how to maintain it is beyond the scope of this session. Ask on the side for guidance



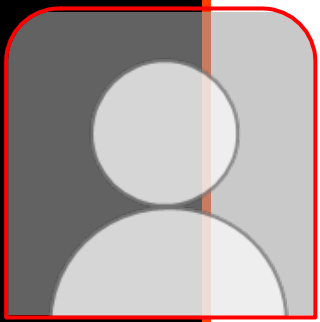
Entrance Reducers/Mouse Guards

□ Wooden or Metal Entrance Guards

- *These serve two purposes*
 - Keep mice out in the colder months, and close the entrance off to prevent drafts from creating too much air exchange during cold weather
- *Which you choose is personal preference*
 - Wooden is more conventional
 - Metal can be left on all year
 - Consider buying one of each and try one on one hive and the other on the second hive.



How to use them will be discussed in later modules



Stick Lighter and Smoker Fuel

- ❑ Each kit requires fuel for the smoker
 - *One of the most common smoker fuel is pine needles*
 - *Other options include wood pellets, cardboard rolls, burlap cloth and others*
 - *What you are looking for*
 - No toxicity when burned (for the beekeeper or the bees)
 - Readily Available
 - Produces a cool white smoke and will remain lit when burned



Frame Hanger (aka Frame Perch)

□ Used to hold one or more frames

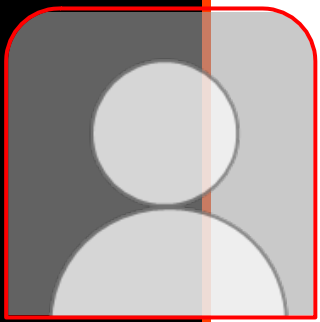
- *When doing hive inspections, the first frame is set on this device*
 - The frame hanger is designed to hang on the side of a Langstroth box
 - During inspect you pull one frame to create a gap and this is better than placing the frame somewhere on the ground.



Frame Jig

□ Building Frames with Efficiency

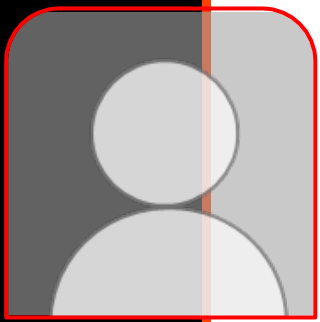
- *A Frame Jig allows assembly of 10-Frames at a time*
 - This is a tremendous time saver
 - It also helps you to build frames that are square and true
- *Construction*
 - Frame sides are loaded and glued. Tops are set and nailed.
 - Device is turned over and bottoms are glued and nailed
 - Frames are removed and you finish each frame with the side/set nail



A Nucleus Kit

□ Nuc Box with Frames

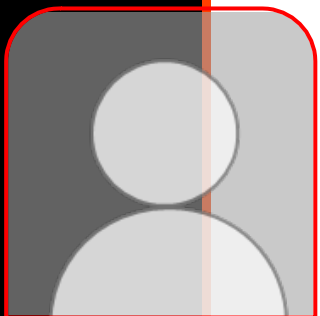
- *Have one on hand; painted and ready to go*
- *There are so many reasons to have a Nuc setup or two in reserve*
 - They can be used for splitting hives into smaller hives for swarm prevention
 - They can be used for hosting captured swarms
 - They can be used for a place to put frames during inspections (a technique sometimes called a quiet box [more on this at another time])
 - Used for colony transport and/or purchase



Respirator (PPE)

□ Face Respirator

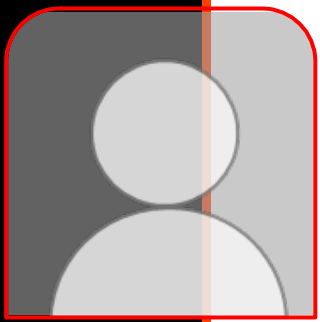
- *These are required when applying some mite treatments*
 - This is here to say, protect your health
 - Read the product labels and follow the protective equipment recommendation
 - Several beekeeping treatment products require a respirator and eye protection when in use



Queen Marking Kit

□ Queen Marking

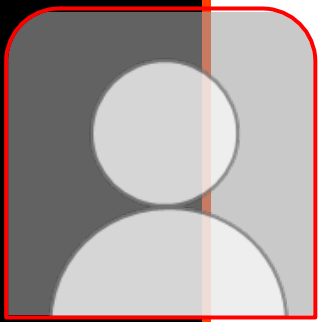
- *In Beekeeping Queens can be marked with paint*
 - Paint colors are used to represent queen age
 - Certain colors represent certain years
 - White (0,5) | Yellow (1,6) | Red (2,7) | Green (3,8) | Blue (4,9)
 - The year 2022 ends in 2 > Red,
 - The year 2023 ends in 3 > Green
 - Painted queens are easier to spot
 - Lack of a Painted queens are telltale if you had one and find one that is not... that the queen has been replaced by the colony



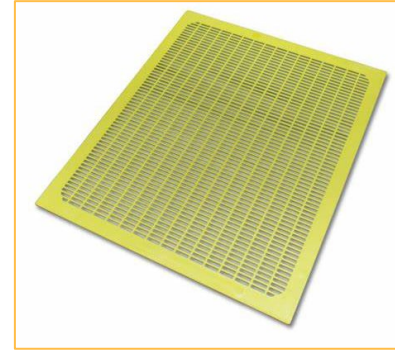
Yard Cart

❑ Tools and Hive Transport

- *Some type of cart to convey equipment in and out of the apiary*
 - Preferably it would be sturdy and big enough to carry hive equipment
 - Yard Carts, and large wheel wagons make good choices

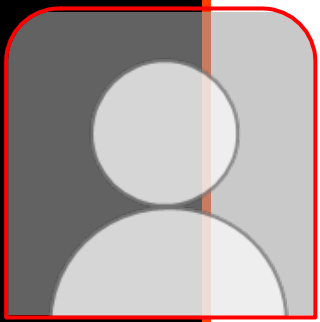


Queen Excluder



❑ Plastic or Metal Queen Excluder

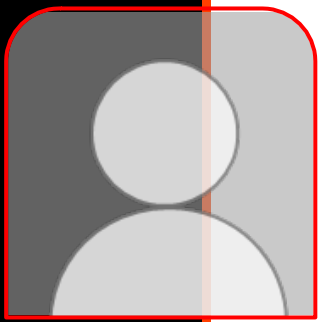
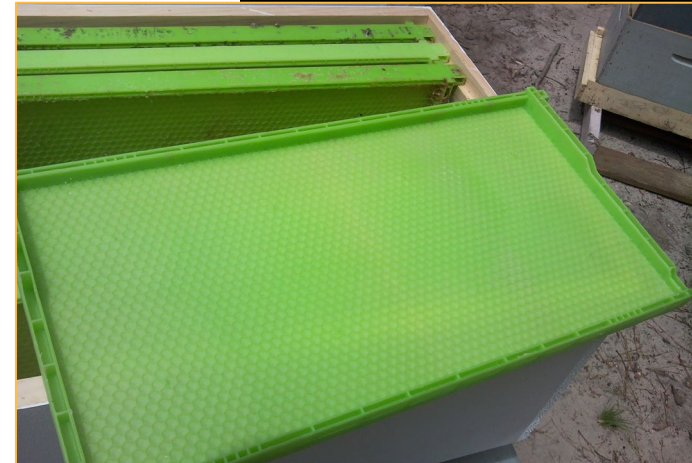
- *These are used to isolate queens to some part of the hive*
 - Traditionally they are used over the brood chamber to keep the queen from coming up into the honey storage area above.
 - ❑ Use of the excluder keeps the queen from laying eggs in frames you want to harvest
 - More conventionally, beekeepers use the device to isolate the queen for management practices
 - ❑ Finding a queen is a lot easier if she is isolated to one box



Drone Brood Frames

□ Used as part of an IPM approach

- *Integrated Pest Management is a concept that combines a multi-pronged approach to Varroa Management*
 - Varroa mites prefer (biologically) developing drones
 - The way this frame is used is you allow the bees to cap all the drones, and before the mites emerge with the bees you pull the frame and cull the developing bees, thereby negating the mites entering the population.
 - It does mean sacrificing the drones; which has been deemed as not overly detrimental to the colony
 - Typically, you would buy a pair for each hive. When you pull one, you replace it with the other.



Other Kind of Feeders



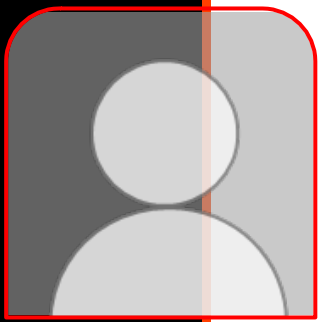
❑ Feeders are Personal Preference

- *We recommend you start out with internal feeders and top feeders.*
- *There are, as mentioned, many ways to feed bees.*
- *Optionally, you might want to explore other methods and use what suits you.*



Other types include:

- Pail, and Jar Feeders
- Bucket Feeders
- Poultry Water Delivery Devices
- Zip Top Bags (with slit)



Blue Painters Tape

□ Blue (and/or other colors) Tape

- *There are a 1001 uses for blue tape in your kit*
- *Do buy the high-quality stuff*
 - The glues of cheap brands will pull your paint off if it is left to sit for any appreciable time in the weather
 - This is generally not true for 3M Scotch Brand high quality tape glues



Isopropyl Alcohol & Hand Sanitizer

□ Isopropyl Alcohol



- *Used for a number of purposes in beekeeping*
 - Cleaning hive tools and equipment / Sterilizing
 - Use 70% or stronger
- *Hand cleaner (With Ethanol)*
 - This is quite effective for cleaning propolis from your hands and tools, which is hard to do sometimes

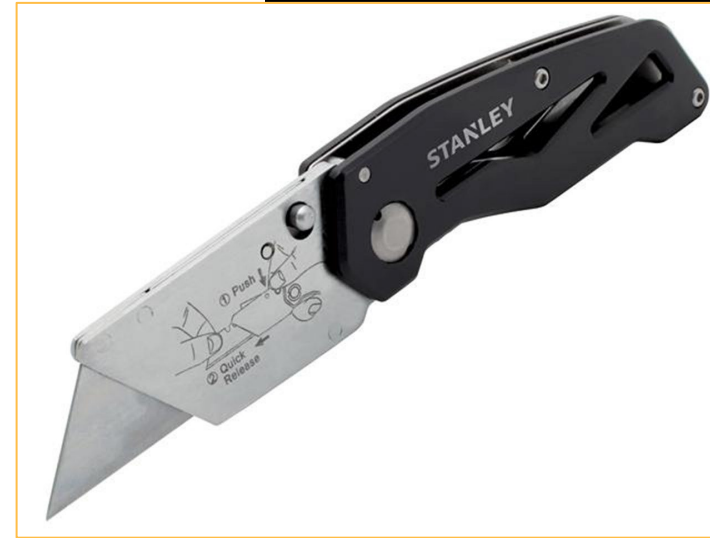


Miscellaneous Tools



□ Typical Toolbox Add-ins

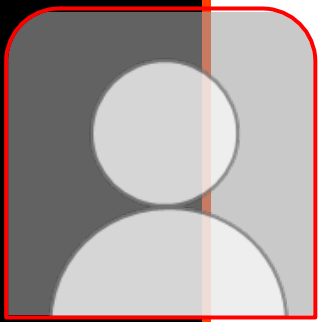
- *Medium sized Flathead and Phillips head screwdriver*
- *Box Knife*
- *Sharpie Marker – Pen, Pencil*



~~Frame Grip (Grabbers)~~

❑ Used to pull frames

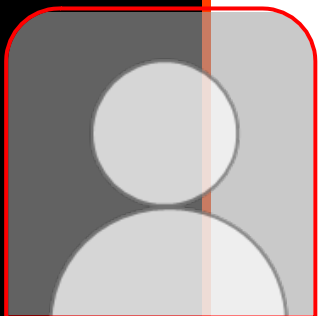
- *Grasping the handle pinches the top bars and you can pull to release the frame*
 - These are awkward to use, and not very effective
 - ❑ When the frame is up over the hive, the hold of this tool is very awkward when trying to inspect the frame. It also slows you down.
 - If you learn to use a hive tool properly (we will teach you) this is not a tool that you will use
- *Disclaimer*
 - Some beekeepers use and like this tool. Preferences are not universal. Want to try it, go ahead, but we do not recommend it.



EVEN MORE Equipment

□ That's enough for now, *but...*

- *In time you will need some additional equipment*
 - *We will present this in a future module*
- *What's missing?*
 - *We did not talk about extraction equipment, insulation, swarm boxes, and other pieces of equipment that will likely be a part of a regular operation over time.*
 - *Our next module speaks of Protective Equipment – which you will need right away.*



Closing Comments

■ Customary Close

- Where we stand, where we are going...
 - *This lesson closes out other beekeeping equipment to consider for startup.*
 - *Our next topic moves to the protective clothing and gear you will need for your kit:*
 - **Sourcing Protective Equipment** for the Beekeeper
 - Primer on **Building Frames**
 - Guidance for **Hive Fabrication**
 - **Painting Hives**, Tips and Tricks



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.*

