



# Beekeeping

## Equipment

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JANUARY 2023

# Equipment

## Parts of a Beehive



- 1 **Telescoping Top Cover** - Prevents The Rain From Getting Into The Hive
- 2 **Inner Cover** - Used For Feeding, As A Top Entrance & To Control Ventilation
- 3 **Medium Honey Super** - Bee Box That The Bees Store Honey In
- 4 **Queen Excluder** - Creates A Barrier Between The Queen's Brood & The Honey Supers
- 5 **Deep Brood Box** - Bee Box That The Queen Lays Her Brood Eggs In
- 6 **Solid Bottom Board** - Bears The Weight Of The Entire Hive
- 7 **Entrance Reducer** - Helps Your Bees Defend Against Predators
- 8 **Oval Bee Escape** - Used To Evacuate Bees From Bee Boxes When Harvesting Honey
- 9 **Mouse Guard** - Prevents Mice From Chewing Their Way Into Your Bee Boxes
- 10 **Deep Frame & Foundations** - Coated In Beeswax, Black To Help Inspect The Eggs
- 11 **Medium Frame & Foundations** - Coated In Beeswax, Yellow To Inspect The Honey

# Equipment

**Various Grades Exist**



**Select**



**Commercial**

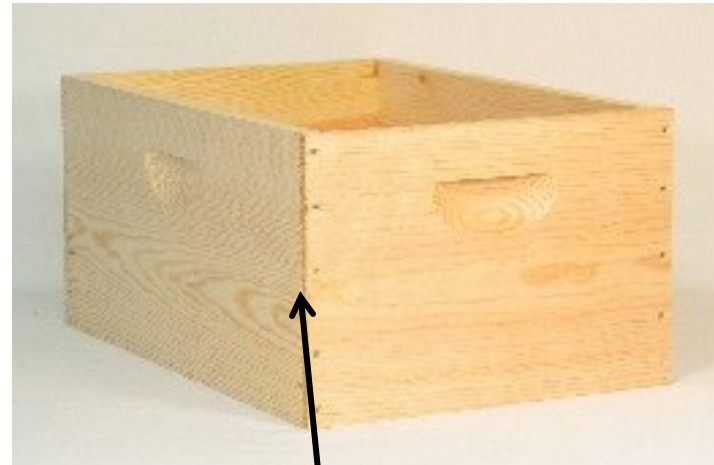
**Economy**

# Equipment

**Various Construction Methods Exist**



**Box or Dovetail Joint**



**Dado Joint**

# Equipment

**Various Materials Exist**



**Pine**



**Plastic is also an option**



**Cypress**

**Do not use pressure treated lumber**

# Equipment

**Various Standard Sizes Exist**



**10- Frame**



**8- Frame  
Lighter  
Weight**



**5- Frame  
“Nuc”  
Nucleus**



# Equipment

## Hive bodies – “Super” sizes



“Illinois”



Frames must be  
correct size for super



Wedge Top  
Grooved Top

Deep  $h=9 \frac{1}{8}$ ”

Medium  $h=6 \frac{1}{4}$ ”

Shallow  $h=5 \frac{3}{8}$ ”

# Equipment

## Hive –Painting



- Can use Water Seal on end grain, all corners
- Paint ONLY outside
- Can prime first and use latex Paints (exterior paint)
- Lighter colors are best -- cooler in summer
- Check Lowes and Home Depot for customer “rejects”



# Equipment

## Bottoms



**Screened IPM**

“Integrated Pest  
Management”



**Solid**



**Bottom Stand**

# Equipment

## Inner Covers



**Solid**



**Ventilated**

# Equipment

## Telescoping / Migratory Covers



**Telescoping**



**Migratory**

No Inner cover  
used, in this case

# Equipment

## Frames & Foundation



**Crimped wire**



**Duraguilt (a trademarked plastic core)**



**Pure Wax unwired**



**Plastic**



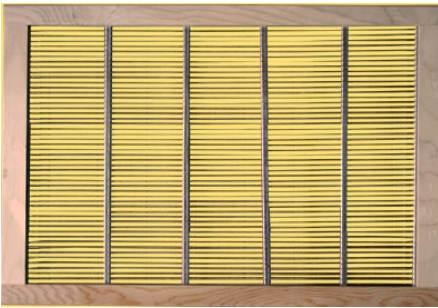
**Plastic Frame / Foundation**



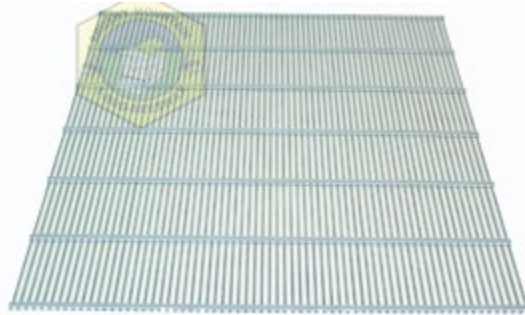
**Drawn by bees**

# Equipment

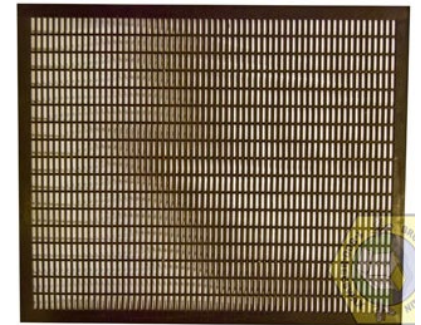
## Queen Excluders



**Wood Bound Metal**



**Metal**



**Plastic**

- Optional
- Used to keep the Queen from laying in surplus honey storage
- Should be removed if not collecting Honey
- MUST be removed in winter

# Equipment

## Entrance Reducers

Simple or fancy

Can be full open in spring / summer

Medium opening in Fall

Small opening in winter or when robbing





# Equipment Entrance Protection

## Mouse Guard

- ½ inch mesh wire to prevent mouse entry
- Also can use small opening setting on entry reducer



## Robber Screen

- Large screen with single small opening that can be protected and reduce robbing bees entry

# Feeders / Methods of Feeding

**DO NOT feed when Honey supers are on for Collection**

## Boardman Feeder:

- Not recommended for fall or winter feeding.
- Can initiate robbing



## Hive Top Feeder:

- Can feed a large volume of syrup in winter



# Feeders / Methods of Feeding



## Division Board Feeder:

- Used as a frame
- Can leave in year round
- Avoid over filling as can be contaminated by hive beetle larva
- Hard to access in winter on hives with supers without risk of chilling brood



## Gallon Baggie Feeder:

**Cheap, but NOT RECOMMENDED**  
**due to risk of collapse and**  
**drowning/chilling bees**

# Feeders / Methods of Feeding



## Pail Feeder:

Used on top of hive, usually covered with an empty deep super



## External Feeder:

- For communal feeding
- Locate away from hives to avoid the start of robbing

# Equipment

## Minimum for 1 hive:

**Deep Hive w/frames**

**2 Medium supers w/frames**

**1 for brood**

**1 for honey**

**Bottom**

**Inner cover**

**Telescoping Cover**

**Queen Excluder --- Optional**

**Entrance reducer**





# Equipment

## Considerations:

## Weight when full of honey

### Eight Frame vs Ten Frame

Deep –	70 lbs	85 lbs
Medium -	50 lbs	60 lbs
Shallow –	45 lbs	55 lbs

8-Frame Super Box





# Equipment

## **The Price of 8-Frame Hives vs 10-Frame Hives**

8-frame boxes are generally cheaper than 10-frame boxes. The price difference can add up over time.

## **The Hive Body Size of 8-Frame Hives vs 10-Frame Hives**

8-frame boxes have a narrow hive body which is generally more natural to bees as they often build upwards and not side to side. They often nest in hollowed-out trees and an 8-frame is similar to the nest they'd build in the wild.

## **The Winter Conditions of 8-Frame Hives vs 10-Frame Hives**

Another 8-frame hive advantage is that they're optimal for winter survival since bee colonies cluster for warmth in winter. The cluster usually takes up the space of 8-frames and this lack of extra horizontal space means bees can focus their energy moving upwards as a group.

## **Faster Filling Boxes: 8-Frame Hives vs 10-Frame Hives**

A disadvantage of the 8-frame box is that with two fewer frames, your boxes fill up faster, meaning you have the additional expense of buying more supers and frames as they fill up.

## **Tipping Hazard: 8-Frame Hives vs 10-Frame Hives**

8-frame beehives generally have more boxes than 10-frame beehives, stacked vertically, so an 8-frame hive poses an increased tipping risk in windy or rainy weather.

## **Equipment Differences: 8-Frame Hives vs 10-Frame Hives**

Since 8-frame beehives are only recently gaining popularity, you may have a harder time finding equipment than if you had a 10-frame hive. Pollen traps and top feeders may be more difficult to find in the smaller 8-frame variety than 10-frame.

# Equipment

## **The Advantages of 10-Frame Beehives**

- *The total height of 10-frame boxes is lower than 8-frame boxes since 10-frames are wider and can store more honey with less height*
- *Bees have more room, two frames more, to make honey and brood in each box*
- *More beekeepers use 10-frame boxes and are familiar with managing bees in 10-frames than 8-frame beehives so knowledge can be shared*
- *With the whole hive in mind, you'll have fewer boxes to purchase*
- *When inspecting the frames, you'll have fewer frames to inspect in the hive*
- *Most hive accessories are made for 10-frame boxes*

## **The Disadvantages of 10-Frame Beehives**

- *10-frame medium boxes of honey weigh up to 15+ lbs more than a full 8-frame beehive box*
- *Honeybees often choose to move up instead of moving outside to create the honey on the two outside frames*
- *The average beekeeper cannot move a full 10-frame deep box by themselves*
- *Lifting boxes that are too heavy can cause injuries to your knees and back*

# Equipment

## **The Advantages of 8-Frame Beehives**

- *An 8-frame hive weighs less which reduces the weight needing to be shifted at one time*
- *You can fit more 8-frame hives in a smaller area of land*
- *You can reduce the risk of injury with less heavy hives*
- *With 8-frame hives, the bees tend to use up more frames per box before moving up*
- *The honey inside the hive is more compact and more accessible to the winter bee clusters*

## **The Disadvantages of 8-Frame Beehives**

- *The hive stack can get dangerously high and pose a tipping risk in adverse weather*
- *You need to purchase more boxes than if you bought a 10-frame hive*
- *Not every supplier has 8-frame hive equipment*
- *Specialized equipment such as pollen traps and top feeders can be more difficult to find to fit 8-frame boxes than 10-frame boxes*
- *You have more boxes to handle and move during honey removal*
- *You have more boxes to inspect*

# Equipment Examples

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**Protective clothing for  
working with bees:**

**VEIL**

**JACKET**

**SUIT**

**GLOVES**

**Tools for working with  
bees:**

**SMOKER**

**HIVE TOOL**

**ETC.**

**MITE TREATMENT**

**HIVE BEETLE CONTROL**

**SUGAR for feed**



Round Wire Veil with Drawstring  
\$16.50 from GloryBee Foods



Ventilated Beekeeping Jacket with Fencing Veil  
\$99.95 from Humble Bee US



Aerated Beekeeping Veil with Fencing Hood  
\$39.95 from Humble Bee US



Aerated Beekeeping Veil with Round Hat  
\$39.95 from Humble Bee US



Costway New Professional Cotton Full Body Beekeeping ...  
\$35.98 from Walmart - Costway



Little Giant Farm and Ag Hveil White Beekeeping Veil with Ha  
\$16.89 from 25+ stores



Bee Vest with Fencing Veil  
\$21.95 from GloryBee Foods



Polycotton Beekeeping Veil with Fencing Hood  
\$29.95 from Humble Bee US



Drawstring Veil with Attached Hat  
\$9.95 from GloryBee Foods



Polycotton Beekeeping Veil with Round Hat  
\$29.95 from Humble Bee US



Heavy-Duty Bee Jacket with Round Veil  
\$39.99 from GloryBee Foods



Humble Bee 510-L Polycotton Beekeeping Smock with Round Veil  
\$59.95 from 25+ stores

# VEIL OPTIONS



Ventilated Beekeeping Jacket  
with Fencing Veil  
**9.95** from Humble Bee US



Ventilated Beekeeping Jacket  
with Round Veil  
**\$99.95** from Humble Bee US



Polycotton Beekeeping Jacket  
with Fencing Veil  
**\$69.95** from Humble Bee US



Heavy-Duty Bee Jacket with  
Round Veil  
**\$39.99** from GloryBee Foods



Bee Jacket Hooded  
**\$49.99** from Qspray.com  
★★★★★ (7)



Polycotton Beekeeping Ja  
with Square Veil  
**\$69.95** from Humble Bee I



Heavy Duty Youth Bee Jacket  
**1.99** from GloryBee Foods



Beekeeping Coloured Bee  
Jacket, Cappuccino - All Sizes  
**\$34.99** from eBay -  
simonthebeekeeper-global



Beekeeper Jacket with Veil - All  
Sizes - Bee Thinking  
**\$50.00** from Bee Thinking  
★★★★★ (6)



Heavy-Duty Bee Jacket with  
Fencing Veil  
**\$39.99** from GloryBee Foods



Polycotton Beekeeping Jacket  
with Fencing Veil  
**\$69.95** from 3 stores



Hat / Veil Combo Jacket -  
Medium V01220M  
**\$63.34** from Dadant

## JACKET OPTIONS





Basic Beekeeping Suit  
\$9.95 from Mann Lake



Pro Vent Beekeeping Suit - Large  
\$142.36 from Mann Lake



Professional Beekeeping Suit  
\$64.04 from Mann Lake



Economy Beekeeping Suit  
\$71.16 from Mann Lake



Ventilated Beekeeping Suit with Round Veil  
\$9.95 from Humble Bee US



Ventilated Beekeeping Suit with Round Veil  
\$129.95 from Humble Bee US



Ventilated Beekeeping Suit with Fencing Veil  
\$129.95 from Humble Bee US



Heavy-Duty Bee Suit with Fencing Veil  
\$54.99 from GloryBee

## FULL SUIT OPTIONS



Cow Leather Beekeeping Gloves with Reinforced & Ventilated Cuffs  
**\$34.95** from 3 stores  
 More style options



2 x Beekeepers Protective Beekeeping Gloves Goatskin With Vented ...  
**\$10.00** from Wish



2x White XXL Beekeeping Goatskin Cape Gloves Long Sleeve ...  
**\$9.00** from Wish



Pair Protective Beekeeping Gloves, Goatskin Bee Keeping with ...  
**\$9.01** from SuntekStore



Glove Beekeeping Adult Large,  
**\$16.99** from 20+ stores  
 ★★★★★ (6)  
 More size options



1 pair Vented Long Sleeves Beekeeping Gloves  
**\$11.05** from Newegg.com - Saima



Sodial 1 Pair of Gloves with Protective Sleeves Ventilated ...  
**\$8.08** from 10+ stores



Protective Beekeeping Gloves Goatskin Bee Keeping With Vented Long  
**\$5.86** from eBay - buyincoins\_au



Beekeeping Gloves Medium - 3 Pack  
**\$90.99** from Jet.com  
 More size options



Bee Gloves  
**\$17.99** from Qspray.com



Large Outdoor Work Protective Beekeeping Gloves Goatskin Vented Long  
**\$4.88** from eBay - wayinhouse



Honey Rite Safety Work Protective Beekeeping Glove: X-Large  
**\$17.77** from Jet.com  
 More size options

## GLOVE OPTIONS



CO-Z Bee Hive Smoker  
Stainless Steel with Heat  
Shield Protection ...  
**\$16.00** from Walmart -  
Banyan-Inc



Domed Smoker M01944  
**\$24.21** from Dadant



Hoot Commercial Grade Bee  
Smoker For Beekeeping ?  
Heavy Duty  
**\$12.95** from 5+ stores



Smoker 4 x 10 Stainless Steel  
w/ Shield M00928  
**\$44.24** from Dadant  
More size options



Beekeeping Smoker  
**\$49.00** from honeyflow.com



Beehive Stainless Steel  
Smoker with Heat Shield  
Beekeeping Equipment  
**\$17.99** from 5+ stores



Ware Manufacturing Inc.  
Beekeeping Metal Smoker,  
**\$127.96** from Walmart -  
Wayfair



Electric Bee Smoker Hive  
Stainless Steel Large Smoke  
Fume Machine  
**\$27.99** from eBay - home\_deal



American Style Bee Smoker -  
Beehive Smoker  
**\$38.00** from Bee Thinking



Bee Hive Smoker Stainless  
Steel with Heat Shield  
Beekeeping Equipment  
**\$15.00** from Wish



Bee Hive Smoker Stainless  
Steel With Heat Shield Calming  
Beekeeping  
**\$9.99** from eBay - home\_deal



Buzz Beekeepers Complete  
Starter Kit - Suit, Gloves  
Stainless Smoker  
**\$99.99** from eBay -  
simonthebeekeeper-global

## SMOKER OPTIONS



9in Standard Hive Tool | Bett...  
betterbee.com



Stainless Steel Beekeeping Hi...  
amazon.com



Beehive Tool Beekeeping ...  
amazon.com



Amazon.com : Bee Hive Tools Steel ...  
amazon.com



Hive Tool 7" - Hudson Vall...  
hudsonvalleybeesupply.com



Amazon.com : KINGLAKE ...  
amazon.com



Honey-B-Gone J-Hook Hive Tool For ...  
honeybgone.com



Economy Hive Tool  
beeweaver.com



VIVO Steel J-Hook, Hive Tool ...  
amazon.com



10in Hook-End Hive Tool | ...  
betterbee.com



Stainless Steel J Hook Bee ...  
glorybee.com



10-Inch Hook-End Hive Tool - ...  
perfectbee.com



Bee Hive Foam Bee Hive T...  
alibaba.com



J' Hook Frame Lifter Hive ...  
honeyandthehivenc.com

## HIVE TOOL OPTIONS





Beekeeping Beekeeper Equipment Starter Kit Beehive Supplies Tool Set  
\$15.89 from eBay - auss32



A Set Of Starter 7 Pcs Bee Tool Kit Kit Beekeeper Beekeeping Equipment  
\$26.99 used from eBay - duncan\_mcd



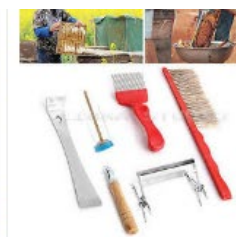
Warre Hive Beekeeping Starter Kit - Bee Thinking  
\$329.00 from Bee Thinking  
★★★★★ (2)



Hive Tool Kit  
\$44.99 from GloryBee Foods



Ware Manufacturing Home Harvest Hive Tool (Set of 4)  
\$67.96 from Wayfair



A Set Starter 7 Pcs Bee Tool Beekeeping Equipment Tools Catcher Hive  
\$14.44 from eBay - qualitystore4u



Bee Hive Tool  
\$3.99 from 25+ stores



10000pcs Beekeeping Tools Bee Nest Box Nest Hole Copper Wire Frame Eye  
\$29.50 from AliExpress.com



7 Pcs/ Pack Queen Catcher Hive Tool Bee Brush Beekeeping Equipment  
\$16.50 from eBay - spring20110629



3 Pcs New Disc Anti-bee escape Beekeeping Tools Hive bottom Yellow  
\$10.28 from AliExpress.com



Set Beekeeping Protective Jacket Veil Suit + Bee Brush Tool Equipment  
\$22.31 from eBay - storeshopping2014



7 Pcs/ Pack Beekeeping Equipment Tool Include Bee Brush Uncapping Fork  
\$16.00 from eBay - chunlei0828



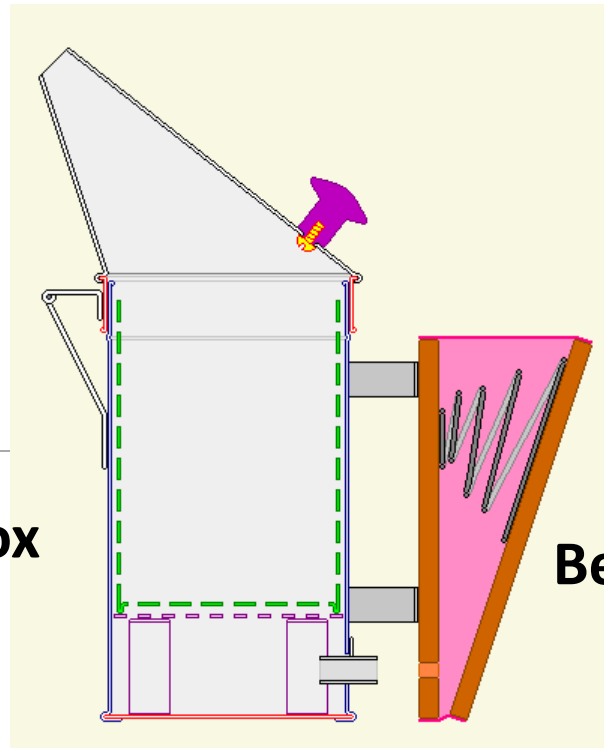
# AN OVERABUNDANCE OF OPTIONS

# Bee Smoker

**Chimney**

**Fire Box**

**Bellows**





These will be covered in detail in future classes . . .  
(but you need to consider cost in budget)

**Your philosophy of beekeeping must be considered prior to purchasing your equipment, this includes treatment of pests:**

### **VARROA MITES:**

**>Oxalic Acid treatment \$10-\$400**

**>HopGuard 2 \$50**

**>Apivar \$50**

**>Thermal treatment \$300**

**> Chemical treatments \$50**

### **HIVE BEETLES:**

**>Beetle Blasters or other mechanical methods \$1-\$30**

# Medications for Illnesses that bees get . . .

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Again, your philosophy of treatments must be considered

**NOSEMA**

**PARALYTIC BEE PARALYSIS**

**CHALK BROOD**

**TRACHEAL MITES**

**EUROPEAN FOUL BROOD**

**More on Treatment for Diseases in another Lecture**

# Top Bar Hive

Solid Bees & Combs  
in a 5-foot long TBH hive

Last Comb Covered with Bees

5 feet long

WAM



# Top Bar Hive

**Does not use frames like Langstroth**

**Bees must draw all wax**

**Top Bars can be more challenging to handle**

**Comb must be destroyed to collect honey**





# Questions

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JANUARY 2022