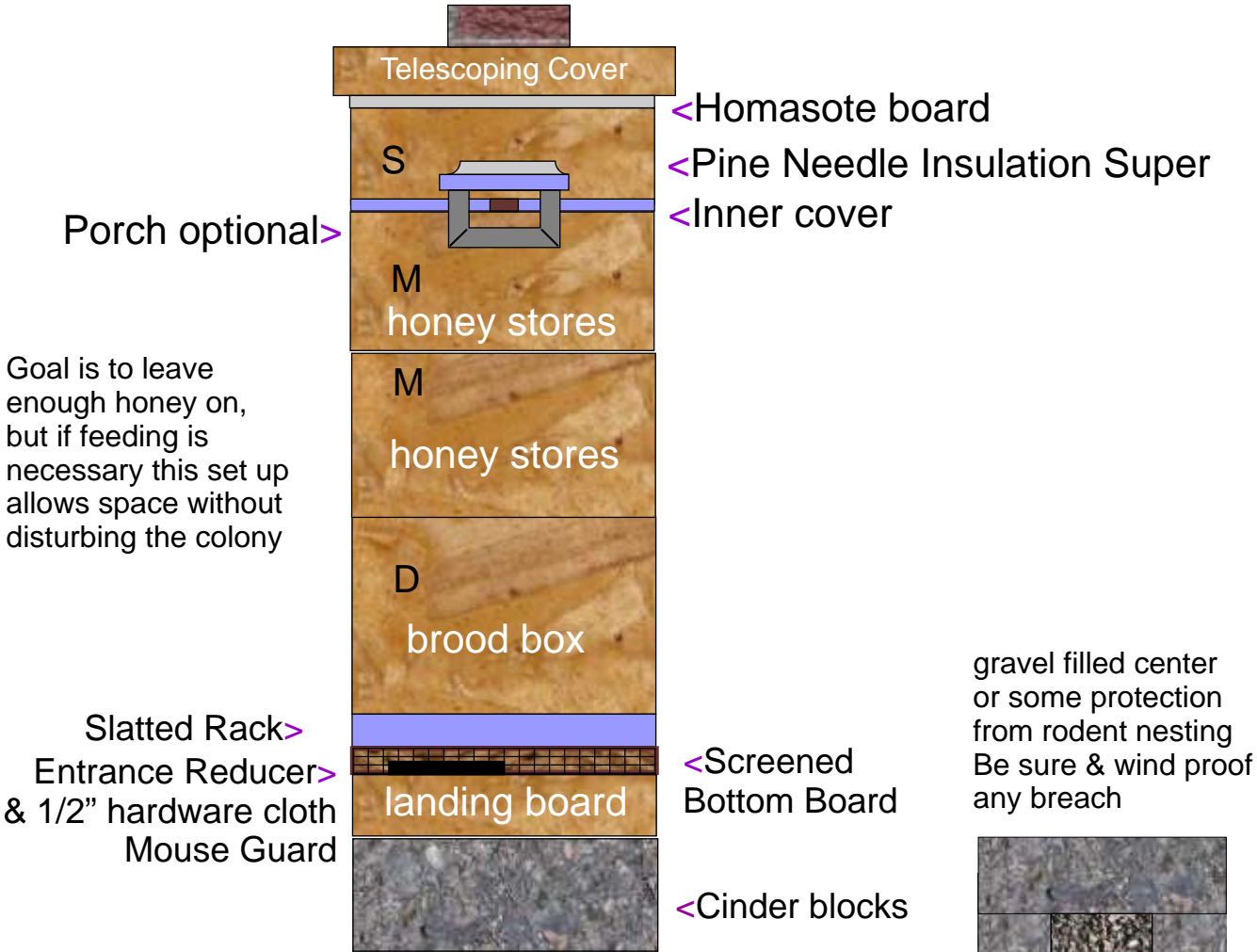


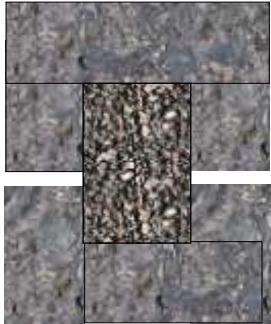
# 8 or 10 frame, Winter setup



Slatted Rack acts as a buffer between the screened bottom board and the brood box. Allows room for large colonies to get out of the weather, die in large numbers over-winter without interfering too much with air flow. It is also easier to clean out in the winter without disturbing the cluster. Leave on year-round.



Base: Chimney Stones or cinder blocks. Lower center of gravity protects tall hives from strong winter winds, allows screen to be left open for fresh air.

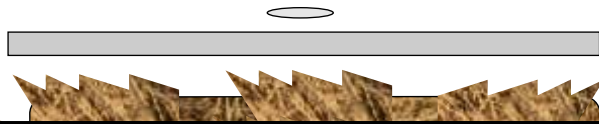
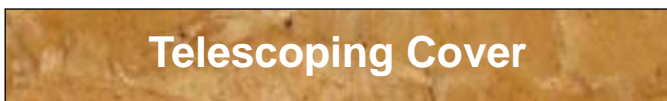


Some cultures call this a quilt system. The goal is to help the colony regulate the moisture in the hive over our very long New England winters by allowing space for moisture to be stored over-head where they are likely to be able to access it as needed, without the danger of moisture raining down on the colony cluster thus endangering them with hyperthermia.

Many different materials can be used with success. My personal preference is to maintain as natural an environment as possible for the colony so I choose simple homasote, and pine needles from the woods around the hives. I prefer not to use any laminates like plywood and luan boards for any hive components. The glues used could add off-gasses that I'd rather my bees not have to deal with. Laminated woods also peel when exposed to the colony's respiration over-time and compromise the integrity of the hive. Natural woods have their own issues, however.



Weight or tie-down



< Homasote board w/ small stone on top to allow wicking air flow between covers.



< Inner cover

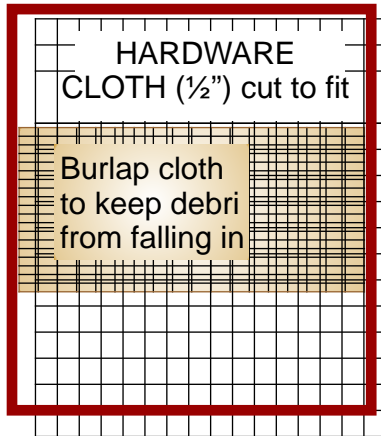


I can reach in, bend the basket up & insert fondant or a boardman feeder on top of the inner cover as may be needed. Needles act as insulation & a moisture trap. Homasote insulates & wicks moisture away.

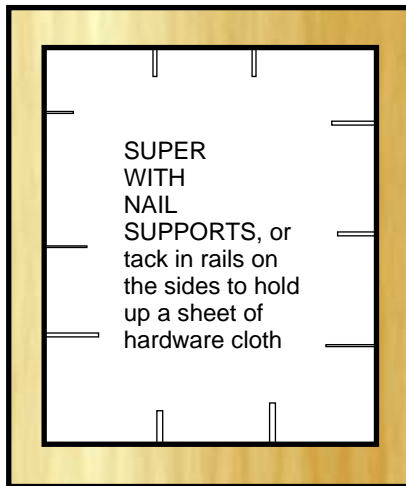


< Quilt box kit now available in the shop. Call first: 603 733-7736

Shake out the pine needles to lessen debris. Don't pack too tight. I attach a length of burlap where the inner cover hole centers to keep debris from falling in. I've tried making a burlap pillow of pine needles but it did not work as well and was hard to change out for dry needles.



cut size 3/8" or size 1/2" hardware cloth into a basket. This holds the pine needles from dropping down on bees & 3/8" is large enough to allow bees to come up to access the moisture that collects there. Use nails tapped into an empty super to support basket above bee space.



Inner cover, notch up. Bees & their respiration come up through center hole, collecting into pine needles & homasote board wicks it out.

Strap hives down with large dog anchors. Cinch hives up with a twisted strap. Twisted straps avoid vibration noise from winds.



This black roofing tar is the light weight version to add a breathable windblock with solar gain.

My hives get full sun in the winter with the leaves off the trees. If the hives are in shade in the winter insulation boards may be an option, but research this carefully.

Some beekeepers just paint their hives dark and add tape around the seams of the boxes in winter.

I leave the front open so bees out on a warm day can recognize their hives and not get lost under the paper. That is sad to find in the spring. This hive is still in need of wind & critter protection at the base.



Wrap sides & back with roofing felt or tar paper. Just staple on, making sure the top is up under the lid to protect from snow or rain running down inside Staple front well to avoid lost bees underneath.



south facing -->

garden behind apiary -->



Solar powered fence



Level the hives.



Thyme-->

Adapted From Rusty Burlew's [HoneyBeeSuite.com](http://HoneyBeeSuite.com) & [athenasbees.blogspot.com](http://athenasbees.blogspot.com)

## How to prepare your hives for winter: a checklist

How you prepare your hives for winter depends on where you live, so some of the suggestions below may not apply to you. Nevertheless, the list may give you some ideas. Although the calendar still shows September, those long, dark, cold days of winter are just around the corner. It's time to get busy when temperatures are still warm enough to go into the hive... but wait until colonies are clustering to wrap for winter.

- Remove empty supers. Make the space inside the hive work with the size of the colony. If necessary, reduce the hive volume with follower boards, especially in a top-bar hive. A proper interior size is less drafty and less likely to harbor intruders.
- Check for a laying queen. You should see at least some brood in your hive. If you don't, order a queen as soon as possible.
- Check for colony size and combine small ones. Come spring it is better to have one live colony than two dead ones.
- Check for honey stores. If your hives are too light, it's time to start feeding with a vengeance.
- Assure that the honey frames are in the right place, that is, they should be on both sides of the cluster and above it in a Langstroth hive. Move frames around if necessary. In a top-bar hive, put the cluster at one end of the hive and put the honey frames next to the cluster on the other side. This way, the colony can move laterally in one direction to find food.
- Reduce hive entrances if you haven't already. It's time for mice and other small creatures to find a snug and warm overwintering place—one filled with honey is especially attractive.
- Remove weedy vegetation from the base of the hive. Vegetation is a convenient hiding place for creatures who may want to move into the hive and it can be used like an entrance ramp or stepladder.
- Use an inner cover under your outer cover for greater insulation.
- Put a slatted rack in your hive if you don't already have one. The slatted rack adds space between the bottom of the cluster and the drafty hive opening.
- If you live in a wet area, make sure your lids will keep out the rain. Make any needed repairs now.
- If wintertime moisture is a problem in your hives, add a quilt box above the brood boxes.
- Provide ventilation for your hives: air must be able to come in through the bottom and out through the top. I like to use a screened bottom board all winter long.
- If high winds are a problem you may consider adding a skirt around the base of your hive to reduce drafts. Although you want adequate ventilation, you don't want a wind tunnel.
- If high winds are a problem, secure your lids with heavy stones or tie-downs.
- If high winds are a problem, you may want to shield upper ventilation holes from side winds.
- If high winds are a problem, consider providing a windbreak.
- If extreme cold is a problem, consider wrapping your hives with insulation or tar paper . . . but, again, don't forget the ventilation.
- If winter flooding is a problem, move the hives to higher ground now while the weather is still dry.

### Feed for bees in the winter:

- Northern hardy bees eat about ten pounds of honey a month when confined.
- Southern bees will consume twice that or about 15 to 20 lbs of honey per month when confined.
- If your bees have not over-wintered, or if there is any doubt about them having adapted to your climate, error on the side of leaving the maximum honey per month confined.
- Plan for 6 months of too-cold-to-forage confinement.

### Frames hold this much honey:

- One medium frame = 3.5 lbs honey. An eight frame medium super with eight fully capped frames = 28 lbs. Two medium supers = about 56 lbs.
- One deep frame = 7.5 lbs honey. A deep brood box may only have a few frames being used for storing honey and pollen. Keep in mind the cluster takes up space on the frames.
  - An 8 frame deep box used as a honey super will hold 8 x 7.5 lbs or 60 lbs.
  - A ten frame deep box used as a honey super has the potential to hold 10 x 7.5 or 75 lbs of honey.



### Math Quiz:

This is a thermal image on March 1<sup>st</sup> showing a cold quilt box on top of a medium super of honey (28 lbs), on top of a cluster of bees, on top of a cold super. It is 13.8 degrees outside. Bees move up following the heat generated by the cluster to consume above honey stores. The first pollen & nectar in my area begins in late April. If my bees consume 12 lbs of honey a month, how many pounds of honey do they have left when spring confinement is over around May 1<sup>st</sup> ?

Answer: 4 lbs