Top Bar Hive Narrative R3
25 March 2007
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The purpose of these drawings and this text is to assure that resources can be transferred from hive to hive and apiary to apiary. There is nothing worse in beekeeping than to have to stop and modify a top bar or comb when thousands of bees are angry and in the air. If each person within a community makes the hives according to these dimensions all combs can be shared universally.

The dimensions in the drawings, including angles have been carefully established thru experimentation and input from many top bar hive users. The 60 degree side-wall angle is especially important as the bees tend to not attach the comb to the side-wall thereby making harvest and maintenance much more pleasant.

The top bars have been designed with correct bee space and correct side to side clearance such that the bar ends will not interfere with placement of the top. These particular top-bars have been chosen so at to be able to use standard 1X2 dimensioned lumber. Poplar makes a very nice spline. Once the spline is glued in place and cured it is preferable to coat the spline with clean beeswax. A crock-pot and small paint brush work nicely for this task.

The drawings allow for a fixed number of top-bars as shown. From time to time it will be necessary to use a small spacer in lieu of the last top bar because the bees will add propolis, the bars will warp a bit, and of course will swell a bit due to the interior humidity of the hive. When making the top bars make a few spacers and keep them handy in the apiary.

The preferred material for the hive is fresh new white or yellow pine. Other dimensioned lumber will work just as well. Plywood is not to be used if avoidable due to the out-gassing of the

chemicals in the glue layers. What effect would the glue have on the bees? These hives were first conceived as the Kenyan Top Bar hives with the purpose of using readily available used material for the construction to insure low cost construction. If new material cannot be sourced, certainly try clean unpainted (on the inside) used material. The Langstroth hives favored by commercial operators require a large capitol investment for the hives and for such things as the extractor. Capitol intensive in other words, the TBH is labor intensive, but modest with regard to capitol cost.

The top cementatious siding material has been chosen for a number of reasons, it is fairly heavy for wind stability, it is waterproof, doesn't warp and it takes paint well. In the matter of paint the better lasting solution is oil based primer on all outside surfaces, after the primer has cured completely, scuff sand, and finish with two coats of oil based enamel. It is good to add unique geometric patterns to the front of each hive to aid the bees in returning home to the correct hive. It is a good idea to provide a means of securing the top of the hive to the main body. Gate hooks work just fine, as do bungee cords.

The combs that the bees will produce in these hives approximate the combs that the bees produce in a natural setting. The traditional Langstroth hive will produce more liquid honey per season than will a TBH. The honey from the TBH is of superior quality, and of course the beekeeper gets the wax from the combs. It takes ten pounds of honey for the bees to make one pound of wax.

The design of the large hive is such that either end of the hive can be the front or rear, and that service work can be performed away from the front landing board. Some users will prefer the window on the left side, others on the right side, and some will want a window on the left front on one side and the right rear on the other. Other users may not want a window at all. The windows are a

handy feature allowing an inspection without disturbing the bees. The inspection is best performed at night with a flashlight. Good way to spot swarm cells or crowded hives.

Clearly the nuc could be built as a double construction by making the side rails twice as long and producing a very simple topbar hive suitable for seasonal production. If that is to be done leave a 3/8" gap at the bottom front for a landing board in lieu of the round hole shown on the nuc. For transportation of the nuc with bees installed, a simple perforated metal door can be fabricated that swings closed over the opening, and can be swung open for use at a location if the bees are to be allowed to come and go as they please. A similar opening at the back of the nuc covered permanently with the perforated metal allows for extra air.
The extra material on the nuc bottom board allows for easy use of a "C" clamp or two when hiving a swarm on top of a ladder or a shelf constructed between two ladders.

The construction detail of the main hive makes clear the use of two machined 2X4 parts that serve to permit the use of the screened bottom board or the solid bottom board depending on local circumstances (the two parts are interchangeable). The two 2X4s make the hive very strong and suitable for mounting on structures such as saw horses for ease of harvest and maintenance. The screened bottom board is a better choice where veroa is a problem. The design allows for removing and replacing these features at the back of the hive, away from the guard bees. Probably done better at night. When making the sliding parts be certain that the parts are free to move and are not warped, a loose fit here is preferable to allow for moisture growth and warping.

When the TBH is placed in the apiary, it is usually preferred to have the top of the hive at waist level for the beekeeper. Saw horses work well for this. When the hives are set up, arrange the hive so that it is level from side to side, and about one half bubble

low to the front to allow excess moisture to roll out. Given a choice the hive entrance should face east, or south.

The honey is extracted from the combs by putting the honeycomb in a large container (a five gallon plastic bucket is excellent for this) and converting the entire product into a mash. Ladle the mash into a colander that is arranged such that the colander drains into one of the honey processing buckets (including the nylon mesh bag filter) mentioned in Beekeeping Basics. The honey then flows into the bottom pail that includes the installed honey gate. As the honey drains down over a period of days, the honey can be dispensed directly into glass jars for use. Raw honey will eventually crystallize from the water that is in the honey. Use the honey in the thickened state, or place the container in hot water for a while to cause the honey to become liquid again. Best not to use the microwave for this effort as the honey can get to hot.
After all of the honey is drained from the mash, the wax can be processed with the Solar Wax Melter as called out in Beekeeping Basics. The wax from the TBH is highly prized by those that make cosmetics, soap, and candles.