



Alternative beehives

Lancaster Beekeepers advisory leaflet No 5

Conventional bee hives are designed for frequent manipulations and honey production. Alternative bee hives are designed to provide bees with the most natural environment possible and minimal interventions.

Long hives

In the wild, honey bees seek out hollows in trees or cracks in cliffs to build their nests. Any dry cavity of not less than 1.5 cubic feet, which has an entrance that can be defended and is preferably 10ft or more above ground will do. If the cavity is in the trunk of a tree the bees will build a long vertical nest whereas in the bough of a tree or crack in a cliff, they will build a horizontal nest. The reality is, provided it meets their basic requirements of being sufficiently large, dry and defensible, honey bees will adapt to their surroundings and build a nest that suits.

Whilst conventional hives are designed to house vertical nests, long hives have many advantages that should not be overlooked. These include:

- having the entire hive at a convenient working height – a considerable advantage for shorter people and those in wheelchairs
- lifting is limited to individual frames
- two independent colonies can be maintained in one hive
- there is no need for additional brood boxes, supers etc.
- the hive can be used for conventional frames or top bars
- ability to accommodate deep and very deep frames.

All the manipulations that can be carried out in a vertical hive can be achieved in a long hive, although the methodology is different. The only disadvantage of a long hive is that once set up, it cannot be easily moved.

Insulation

A natural bee nest in a hollow tree is insulated by 3" to 6" of wood resulting in very low heat transfer through the wood. This means that the bees do not need to expend great amounts of energy in keeping their nest warm in winter and cool in summer.

Conventional hives have wooden walls of less than 1" thickness resulting in high levels of heat transfer, in and out. Incorporating effective insulation into the construction of the hive significantly reduces the bees' work load and more closely replicates the natural state.

Foundation

Commercially produced foundation regularly includes imported bees' wax, some of which contains traces of pesticides. Sheets of foundation sheets are impressed with a standard cell size which the bees tend to follow. If allowed to draw their own comb, honey bees will draw out at least five different sizes of cell although their different purposes are not clear. The potential risk from residue pesticides is also avoided.

Frames and top bars

In nature, bees will attach their combs to the roof of the cavity they inhabit. If they were to do this inside a hive, it would be extremely impractical to extract the comb from the hive without causing significant damage to the comb. The answer is to provide suitable attachment points which can be safely removed, and this means top bars. All bee hives have top bars, but some have frames as well!

The purpose of the frame is to add strength to the comb to enable it to be handled with less risk of being damaged. (The technique for handling naturally drawn comb is very different from that of handling comb from wired foundation in frames.) In a shallow long hive, a simple top bar is quite adequate. In a deep long hive such as a Zamok or DZ, frames are necessary to strengthen the comb.

Honey extraction

Due its fragility, honey cannot easily be extracted from natural comb by means of spinning the frames in a honey extractor. Also, the frames in deep long hives are too large for most honey extractors. The answer is to cut the comb from its top bar of frame and use a honey press to press the honey from the wax. This method results in a cake of wax which can be used to make foundation, candles or other wax products.

Biological sumps

In the wild many bees nest in hollow tree trunks. Over time, the bottom of the hollow gets filled with wood shavings, wax droppings, dead bees etc which then acquires a population of organisms. Whilst the benefit of the wood shavings in helping the bees to control moisture levels is well documented, new research is beginning to show that the organisms and micro-organisms in the debris create a beneficial symbiotic relationship with the bee colony

Lancaster Long Hive

Suitable for conventional or alternative approaches to beekeeping, the Lancaster Long Hive features the very latest thinking in modern hive technology.

With cavity wooden walls, floor and roof insulated with wood, this hive ensures minimal heat transfer.





The Lancaster Long Hive features a hinged, insulated roof, to avoid lifting. It also comes with long legs that you can shorten to ensure that the hive is at a comfortable working height.

The Lancaster Long Hive can accommodate 28 standard brood frames, 14" x 12" frames or simple top bars. It can also be divided into two with each half being amply large enough to house a full colony of bees.



A unique feature of the Lancaster Long Hive is its biological sump which is built into the floor of the hive adding to the insulation. The floor itself is hinged to allow easy access to the sump.



DZ Hive



The DZ (Durox-Zamok) hive is effectively a Russian Zamok (the word means palace) hive built with Larfarge-Tarmac's incredible new construction block. This block allow virtually no heat transfer through the walls, is impermeable, extremely light and easy to cut.

Inside the hive is divided

into two completely independent compartments, each containing 14 frames each measuring 19" x 19", although these could be run as one if necessary.

The DZ hive utilises a top entrance, which is more effective in preventing any undue heat build-up and incorporates a biological sump.



Warré Hive



Designed by Abbe Emile Warré for French bee keepers after the second World War, and original named The People's Hive, the distinctive Warre hive is popular in France, Australia and with alternative bee keepers in the UK. Small in comparison to other alternative hives, it is ideal for the bee keeper who only wishes to look inside the hive once or twice per year.

Lancaster Beekeepers maintains colonies in each of these types of hive at the Club Apiary