



Selecting a conventional beehive

Lancaster Beekeepers advisory leaflet No 4

In Europe wild bees live in hollow trees and cavities in cliffs, which provide them with protection from predators, honey thieves and the weather. Medieval man kept bees in straw skeps, often set in purpose built insets in walls. Although effective, it meant that the whole of the bees' nest had to be destroyed in order to harvest a honey crop.



The "modern" bee hive, with its separate compartments for brood and honey, and moveable frames, was invented by an American priest, Rev Lorenzo Langstroth in 1851. Hives based on Langstroth's original design are the universally accepted standard throughout the developed world – except in Britain!

The key to Langstroth's design was the discovery of "bee space". Basically bees will seal any spaces smaller than 6 millimetres with propolis, a sticky resin. Spaces wider than 9 millimetres are filled with brace comb. Anything in between is left open for the bees to travel around their nest.

After Langstroth published his beehive design there was a proliferation of designs in Britain, all based on variations of Langstroth's designs. Today only two survive in common use in England and Wales, the WBC and the National, although in Scotland, the Smith remains a popular choice.

All three designs are basically the same comprising a floor, an entrance, a brood box containing frames for the raising of brood, a queen excluder to prevent the queen from laying eggs amongst the stored honey, a super containing smaller frames for the storage of honey, a crown board and a roof.

The main differences lie in the number of frames each will hold and the position of the bee space at either the top or bottom of the frames.

The WBC Hive

The WBC is named after its designer, Revd William Braughton Carr.

It comprises:

- a floor which incorporates a stand to keep it off the ground
- a brood box which holds 10 standard "deep" frames
- a queen excluder
- a super which holds 10 standard "shallow" frames
- a crown board, to help retain warmth
- an independent sectional outer wall, known as "lifts"
- a gabled roof.

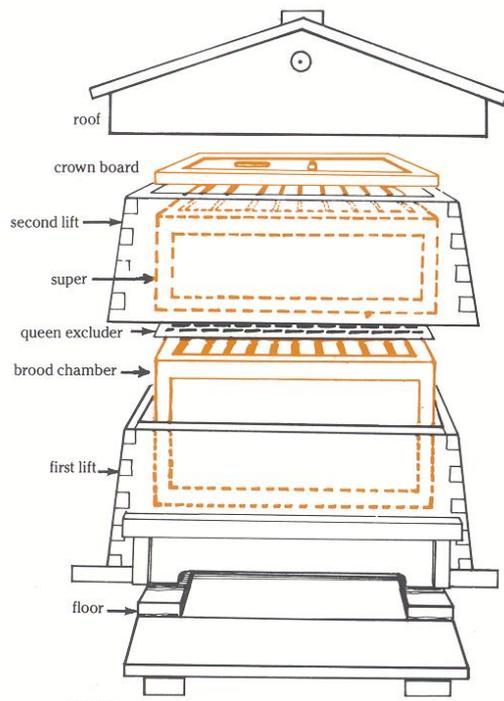
The WBC, often painted white, is the traditional hive of the cottage garden, and is regarded by most beekeepers as having the most ascetically pleasing appearance of all hives.

Its double walled design and gabled roof provides more protection for its inhabitants in exposed positions, although the additional work in removing the outer walls for inspections is regarded by some, as tiresome.

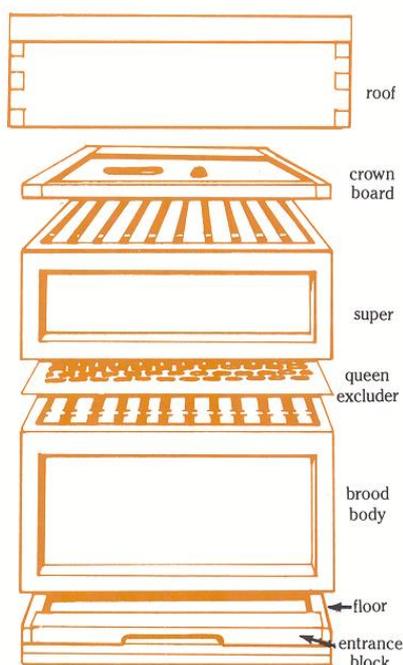
The WBC was designed for the native British Dark bee, which is less prolific than most of the Italian and other southern European strains of bees commonly kept today. However this can be overcome by using a deep brood box or two standard brood boxes.

The WBC was designed to be a "static" hive and does not lend itself to being easily moved. This is a decided disadvantage to those wishing to practice migratory beekeeping and move their bees from location to location to take advantage of commercial flowering crops.

Like all other designs, the WBC was designed with a solid floor. However, newly designed mesh floors are available which more than adequately cater for the needs of varroa management.



The NATIONAL Hive



The British Stand National Hive, as it was originally termed, was designed in the 1930s and intended to become the national standard for British beekeeping. It comprises:

- a flat floor
- a brood box which holds 11 standard "deep" frames
- a queen excluder
- a super which holds 11 standard "shallow" frames
- a crown board, to help retain warmth
- a flat roof.

Being a single walled hive, there is no additional work involved in removing outer walls for inspections although some feel that this reduces the degree of protection provided.

The National does not have an integral stand and, as it is not desirable to place a hive directly on the ground, some form of stand will be needed.

The National is larger than the WBC having one extra frame in both brood box and super.

The National was designed with migratory beekeeping in mind and is by far the easier of hives to seal and transport.

Since the original design was published a range of derivatives have appeared, such as the "modified national" and the "commercial national". All follow the basic design but incorporate larger and/or deeper brood boxes and larger supers to accommodate the more prolific strains of bees commonly available today.

Although migratory beekeepers are a minority amongst amateur beekeepers, the National hive is used by around 70% of all beekeepers in the United Kingdom.

Comparisons at a glance

	National	WBC
Advantages	<ul style="list-style-type: none"> ▪ Single walled so fewer parts ▪ Cheaper to buy ▪ Slightly larger brood box ▪ Easier to move with bees 	<ul style="list-style-type: none"> ▪ Double walled provides better protection and ventilation ▪ Looks better
Disadvantages	<ul style="list-style-type: none"> ▪ Tends not to look attractive ▪ Air circulation not as good ▪ Not as weather proof ▪ Parts are heavier 	<ul style="list-style-type: none"> ▪ More expensive to buy ▪ Difficult to move with bees ▪ More parts to move during inspections

Other factors to consider

In making your choice of hive several, further factors need to be taken into account:

- decide which design you want and stick to it. Apart from frames, hive parts are not interchangeable
- find out which design local beekeepers use – you might need to borrow or exchange parts
- WBC and National parts are often available second hand. Other designs rarely are!

The cost of hives

The cost of a new hive depends on the materials from which it is made and whether it comes in kit form (flat pack) or readily made up.

The most expensive material is Western Red Cedar which looks attractive, needs no preservatives and is likely to last a lifetime.

Hives made from cheaper timbers and plywoods are often available and care needs to be taken in choosing appropriately. Whilst the lifts of a WBC can be painted, timber that

comes into direct contact with the bees should neither be painted nor treated with preservatives. This undoubtedly shortens their usable life.

A recent development has been to manufacture National hives in polystyrene. These are both cheap and light, although the outsides do need to be painted.

www.lancaster-beekeepers.org.uk
