Popular Hives in the UK

By

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www.fdbka.co.uk
Intro

Modern Beehives
Hives are a convenient way of containing a colony of bees while protecting them from the elements and predators, they enable the colony to build up and maximise honey production without in any way being detrimental to the bees. Hives are made to precise measurements so all the parts within the outer shell fit properly and give a suitable space for the bees to suit the local weather conditions and climate.

I have listed a lot of info here about the most common types of hives, but from a bee's perspective it really doesn't matter.

Which then leaves the bee keeper with a few choices of which hive would suit them best. All the hives listed apart from the Warré and Top Bar use frames and foundation. They are managed roughly the same over the course of a season so it really doesn't matter which hive type a new bee keeper starts with but I would recommend they use the same as other bee keepers within their association and if possible start with two colonies in case one colony has a problem.

To some bee keepers its not the amount of honey or the size of the colony that matters, they believe there are many problems with the conventional methods and its better to allow the bees to act as if they were in the wild creating their own brood nest instead of being given a sheet of embossed wax held in a frame. I won't go into some of the other reasons but needless to say the bees are perfectly capable of looking after their own brood nest without the need for frames or foundation.

As you may well hear a few times ask some bee keepers one question and will get back several different answers. If it was possible to ask a honey bee the question what would she want?

I like to think her answer would be this simple

Some where dry and draft proof, free from disease and all other types of pests. Plenty of pollen and nectar to gather and of course lots of warm weather so they can do what they are best at which is making honey.
All modern 'framed' hives contain the same basic parts:

- **Roof**
- **Crown board**
- **Super**
- **Queen Excluder**
- **Brood chamber**
- **Floor**
- **Entrance block**

### The Floor

The **Floor** or hive base is a vital piece of the hive, most floors are made from a solid sheet of wood to help contain the internal temperatures and keep the frost out, more recently with the problems of Varroa an optional open wire mesh floor could be used to help remove the unwanted mite from the hive. In addition the mesh provides ventilation which some say it allows you to keep a narrow entrance fitted all year around which is easier for the bees to defend. A good size of mesh has holes of approx 4 mm large enough to allow the Varroa to fall through but small enough to keep the hive secure from unwanted pests.

### Entrance Block

**Entrance Block** is fitted to reduce access to the hive during the winter time to help keep the warmth in and unwanted visitors out, during the spring and summer it can be removed when the colony is of a suitable size to defend a larger opening and thus gives the flying bee's easier access directly into the hive. The entrance block should be refitted if the hive is being attacked by another colony or if the weather is poor for that time of season.

### The Brood Box

**The Brood Box** is the largest chamber of the hive, this is where the queen lives all year round and lays her eggs, the colony will also store pollen, nectar and honey for themselves in this chamber so its within easy reach. The maximum colony size is determined by the size of this chamber which is different depending on the type of hive. During the spring through to summer when the colony size has built up bee keepers will commonly split a colony, by removing some of the frames from the brood chamber which contain plenty of sealed brood, pollen and honey to start up a new colony in another hive nearby, then replace the frames. This is a good method to stop the colony from swarming.
The Queen Excluder is either a thin sheet of either steel or plastic with slots or holes cut in it. The holes are big enough to allow a female bee through but too small to allow the slightly larger queen or drone through. This then allows additional chambers or supers to be placed above which will only be filled with honey as the queen is kept from laying in this area.

The Super is the box of smaller frames for the bees to store excess honey, which the bee keeper will remove when its capped over and is ready to be extracted. When the weather has been favourable bee keepers will stack 2, 3 or even 4 supers on top of the brood box and queen excluder. The supers are removed at the end of the season to reduce the total space of the hive to just the brood box to help the bees keep warm.

Crown Boards is a flat sheet of wood with a hole in the centre and are used primarily as a cover on top of the brood chamber. The board creates a barrier to separate the different chambers of the hive and can be fitted with a bee escape or used to support a feeder.

The Roof some hives have either a plain felt or a metal sheet covered roof, they are a good weight to stop them being blown off in strong winds and help to trap the warmth in the brood box for winter time.

Hive Summary – Conversions to metric only shown on this table.

<table>
<thead>
<tr>
<th>Hive Type</th>
<th>Dimensions</th>
<th>Brood Chamber cells</th>
<th>Bee Space Brood Comb area of both sides</th>
<th>Full Super Weight (Approx)</th>
<th>No of Brood Frames (Brood Frame size)</th>
</tr>
</thead>
<tbody>
<tr>
<td>National</td>
<td>18 1/8” x 18 1/8” 460 mm x 460 mm</td>
<td>50000</td>
<td>Bottom 199 sq. in</td>
<td>25 lbs 11.36 Kgs</td>
<td>11 (14” x 8 1/2”) 356 mm x 216 mm</td>
</tr>
<tr>
<td>Deep National</td>
<td>18 1/8” x 18 1/8” 460 mm x 460 mm</td>
<td>70000</td>
<td>Bottom 292 sq. in</td>
<td>25 lbs 11.36 Kgs</td>
<td>11 (14” x 12”) 356 mm x 305 mm</td>
</tr>
<tr>
<td>Dartington</td>
<td>36 1/4” x 18 1/8” 920 mm x 460 mm</td>
<td>70000</td>
<td>Bottom 292 sq. in</td>
<td>NA</td>
<td>11 (14” x 12”) 356 mm x 305 mm</td>
</tr>
<tr>
<td>WBC</td>
<td>19 7/8” x 19 7/8” 505 mm x 505 mm</td>
<td>45000</td>
<td>Bottom 199 sq. in</td>
<td>25 lbs 11.36 Kgs</td>
<td>10 (14” x 8 1/2”) 356 mm x 216 mm</td>
</tr>
<tr>
<td>Commercial</td>
<td>18 5/16” x 18 5/16” 465 mm x 465 mm</td>
<td>70500</td>
<td>Bottom 275 sq. in</td>
<td>25 lbs 11.36 Kgs</td>
<td>11 (16” x 10”) 407 mm x 254 mm</td>
</tr>
<tr>
<td>Langstroth</td>
<td>20” x 16 1/4” 508 mm x 413 mm</td>
<td>61400</td>
<td>Top 272 sq. in</td>
<td>30 lbs 13.64 Kgs</td>
<td>10 (17 5/8” x 9 1/2”) 448 mm x 241 mm</td>
</tr>
<tr>
<td>Smith</td>
<td>16 3/8” x 18 1/4” 416 mm x 463 mm</td>
<td>50000</td>
<td>Top 199 sq. in</td>
<td>25 lbs 11.36 Kgs</td>
<td>11 (14” x 8 1/2”) 356 mm x 216 mm</td>
</tr>
<tr>
<td>Top Bar</td>
<td>36 to 48” x 16 to 19” 914mm to 1219 mm x 407 mm to 482 mm</td>
<td>Varies</td>
<td>Bottom Varies</td>
<td>NA</td>
<td>NA (varies per hive)</td>
</tr>
<tr>
<td>Rose</td>
<td>18 1/8” x 18 1/8” 460mm x 460mm</td>
<td>35000</td>
<td>Bottom 175 sq. in</td>
<td>30 lbs 13.64 Kgs</td>
<td>11 (national frame cut down)</td>
</tr>
<tr>
<td>Dadant &amp; Langstroth Jumbo</td>
<td>20” x 16 1/4” 508 mm x 413 mm</td>
<td>85000</td>
<td>Top 340 sq. in</td>
<td>40 lbs 18.18 Kgs</td>
<td>11 (17 5/8” x 11 1/4”) 448 mm x 286 mm</td>
</tr>
</tbody>
</table>
The National Hive
1920's

The National Hive is the most popular hive in the UK because of this it makes life easier for bee keepers to buy colonies on frames or exchange equipment with other bee keepers. Although some Bee Keepers think the national brood box is too small for a prolific queen.

The supers are the smallest of all hives and so the weight of a full super is the lightest of all hives

Frames
The standard brood body is 8 7/8" deep and takes 11 frames. The most popular brood frames are the DN4 and the DN5. Both have the Hoffman side bars, which means the side bar is wider at the top and narrows towards the bottom. The DN5 has a wider and stronger top bar than the DN4.

These frames are favoured because they are self-spacing and do not require any extra equipment to keep them the correct distances apart. The bevelled edges at the top of the side bar allow the bee keeper to see clearly when pushing the frames together to help avoid any bee's getting trapped and killed between the frames. Additionally there is a smaller contact surface area between the frames for the bees to glue together with propolis.

A complete hive comprises: standard floor, brood body with eleven brood frames, a queen excluder, a super with ten super frames, a crown board and a metal sheet metal covered 4" roof.

Most National hives are made from Cedar, which do not require any preservatives as cedar has its own "camphor" type preserving oils. This natural oil protects it from the weather and discourages insects. Cedar wood is an ideal timber for hives in the British climate and will last over 15 years naturally so there is no need to paint the hive as this would seal up the grain which will cause mould and condensation problems on the inside.

How many frames in each box
11 Hoffman (self-spacing) frames in either a brood body or super. Although it is possible to fit in 12 frames, it is easier for manipulation to use 11 frames and a dummy board.

11 frames on narrow ends in the brood body
10 Manley frames in the super
9 or 10 frames on castellated spacers in the super
8 frames on wide ends in the super

Summary
This is an excellent hive for all bee keepers as it is a reasonable size, easy to manage and transport. The colony size needs to be carefully monitored during the early spring as a strong colony build up or if the queen has no-where to lay (honey bound) will lead to swarming problems early in the season.
The Deep National Hive
1946 revised in 1960

The Deep National Hive is becoming a very popular hive in the UK. Some Bee Keepers have either modified their National hives into a Deep National or they have bought a replacement Deep National brood body to allow for the prolific queens. The supers are the smallest of all hives and so the weight of a full super is the lightest of all hives. The Deep National hive is the same size as the National hive apart from the depth of the brood chamber which allows for deeper frames to be used. The 14”x12” frame greatly increases the total number of cells per frame for the queen to lay in and also for the colony to store greater amounts of pollen and nectar in.

Frames for the deep national hive are called 14” x 12” frames. The frames for super are the same as in the National hive.

I modified the above National hive with a home made 90mm eke to allow the use of 14” x 12” frames in the brood chamber.

Summary
This is an excellent hive for all bee keepers as it is a good size, easy to manage and transport. Once modified to fit the 14” x 12” frames the colony during the spring build up has more space to expand into which will delay a colony from swarming very early into the season and it is very unlikely the queen will become honey bound.
National & Deep National

Since these hives are now the most common in the UK for their ease of transferring equipment between bee keepers and the fact commercial sellers of nuc's, packages and queens now also use this hive as it has simplified many of the problems bee keepers face.

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<td>18 1/8” x 18 1/8”</td>
<td>70000</td>
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With a prolific queen who can lay between 2000 and 3000 eggs a day the number of free cells in the National brood chamber is considered to be too small, careful attention is required during the spring time to avoid the colony swarming. The Deep National is considered an almost perfect sized hive and the 70000 cells should be more than enough space to prevent early swarms.

Even when a standard national sized frame is used within a deep national chamber the bees will make good use of the space and will build fresh comb downwards from the bottom bar. Commonly the cells are made slightly larger for drone brood as the bees are not forced to follow the embossed pattern on a sheet of foundation.

Circled in red are normal worker cells the other cells around these are larger and will be used for the drone brood.

This then saves the colony from having to modify their existing worker cells for this propose, this is also is an advantage for the bee keeper to assist in dealing with the Varroa mite as the added comb can be cut off the frame and removed from the hive as it is likely to contain the highest levels of the Varroa due to the drone bee taking on average 24 days from egg to male bee. Tens to hundreds of Varroa are removed in one go without the need for toxic chemicals, Its a win win for bee and bee keeper.

Another feature many bee keepers like about the National hive is the entrance block which can be turned 90 degrees to give a different entrance size, or during the main honey flow removed. Although you may well read some conflicting advice it is generally recommended a small entrance size is kept in place if a mesh floor is used throughout the season and only increased for a few weeks a year during the honey flow.

During the winter time when we tend to suffer higher wind speeds and driving rain and the treat of woodpeckers it is worth securing the hive with a cargo strap and cover the hive with a wire mesh like chicken wire or pin plastic bags on all four sides making sure the entrance is kept clear.
Top Bar Hives

Design advantages compared to a 'normal beehive'

- less heat loss thus less disturbance to the bees during inspection
- the whole colony is allowed to free range through the hive
- fully adjustable in size to suit the time of year and colony size
- only 1 hive needed, even when ‘splitting’ (with this design of TB)
- no lifting of heavy boxes
- bees build their own natural comb to the sizes they require
- no need to buy frames or wax foundation
- no extra hive equipment needed
- floor design enables easy Varroa monitoring and ventilation adjustments by the bees

How does it work? The same principles of bee keeping apply to this as any other hive though there is less equipment needed because it is horizontal and is therefore a simpler system. Colonies are inspected in the same way, assessing their needs for space and food, health and swarm checks.

No frames or foundation? The top bars have special wax covered comb guides that encourage the building of a straight comb. The combs can be removed and handled almost the same way as a frame.

No queen excluder? The capacity of this 4 ft hive with 26 bars is about the same as 3 National boxes. The brood nest is established at the front and honey is stored at the back (just as it is in nature). Queens will only lay in the brood nest area, not randomly all over the place, so all the colony is allowed to be ‘free range’. This allows the full spread of queen pheromones (including her footprint pheromone) throughout the hive, reducing swarm and supersedure impulse. It also means that adult drones do not clog the brood nest as they would in a National with a queen excluder. More importantly is that the bees are allowed to fully exhibit their natural behaviour without hindrance.
How are bees put in? This hive can be populated with a natural swarm, artificial swarm, shook swarm or 'package' (that already has a viable queen) as these will naturally 'want' to make comb. Combs from National frames can also be transplanted onto bars by a 'cut and twine' method. Combs are cut from frames (use the dummy end board as a template) and laid next to a top bar. Twine, for example, is then tied to the bar and wound and around the comb and tied again. The comb is only cradled by the twine but within days the bees will have attached the combs to the bar and then the twine can be removed.

How to feed? It is however important to feed the new colony to assist them in building new combs quickly so the queen can start to lay and pollen and nectar can be stored. Most bee keepers will add an internal feeder for the first few weeks which the bees will use to build lots of new combs.

How to harvest? Honey combs are taken from the hive (and replaced with empty bars) throughout the year, when they are surplus to the needs of the colony. This allows the bees to always be able to make wax and build comb (as they are more likely to swarm when they can't). It also helps prevents any chances of accumulating diseases on old comb as each comb is removed within 1-2 years. Honey is best eaten in the comb and best stored in the comb. Freeze any surplus. However separating the honey and wax is simply done by mashing the comb and allowing it to drain through a coarse strainer overnight.

How to control swarming? The same standard artificial swarm techniques are used. Instead of using a second hive though, this type of hive simply uses the space at the back and the dummy end board to split the colony and a rear entrance is opened. Less equipment to store, less hassle.

What are they? Top Bar hives are not a new idea, their use pre-dates all 'frame' hives (like the National hive invented in the 19th and 20th centuries) by millennia. Bar hives in various forms are still used by many bee keepers around the world today. Although many conventional bee keepers may frown at their use for various reasons, but this type of hive is the closest match to a feral colony in a tree truck in the wild.

'Frame' hives like the National and their frames and wax foundation are all 'Victorian' inventions solely based on maximising yields and the economics of large scale commercial production of honey. The Top Bar hive is not. TBH's are one step away from a feral colony found in the wild.

Wax foundation (made with wax from who knows where) is embossed with a uniform cell size (some 'Victorian' thought that larger cell size means larger bees and larger honey yield, and it is still made this way today). Both the cell size and the uniformity are different to what the bees do in nature. It is interesting that one method of bee communication is vibrating the cell rims of the comb like a guitar string. Wooden frames dampen and inhibit this natural communication. The Top Bar hive allows the bees to build their own comb to their own natural specifications.

I intend to start a colony in a TBH in 2010, and would be glad to show this hive to any one who is interested, but I would strongly recommend a new bee keeper learn as much as you can first with a conventional hive. It is also worth noting this hive does not produce a large volume of honey in one go like conventional hives with a super. So if you want lots of honey this may not be the right hive for you.

Disadvantages compared to a 'normal beehive'

- The combs are only held from above so they are considered fragile
- Reduced amounts of honey as the bees make fresh comb
- Fewer Bee keepers use this type of hive so expert advice limited
- Top Bars hives tend to be made in different sizes so equipment tends to be bespoke

Construction top bar hives can be made from almost any suitable weather proof container from flower pot planters to recycled barrels and thus the whole hive can cost as little as a few pounds.
I have made a few over the last year of different designs.

This was the first of the top bar hives I made. It was far too big unless the colony was very strong they would have had problems generating enough heat to keep the internal temperatures stable. This hive has now been recycled and used to make the base of the Dartington long hive I made.

This next hive design was a copy of a hive I saw when the association went to visit Tony Herbert near Salisbury. I have since modified the folding doors by adding another layer of wood but this has caused the doors to warp, so I will need to rethink and redesign the doors. I also made a super to fit this hive which can also be used to hold a feeder under the roof and hopefully the colony will use the frames in this super to store any excess honey.

This excellent TBH was designed by Phil Chandler of www.biobees.com and although it looks very small it is in fact four feet long and has a greater volume than a national hive. This will make an ideal hive to raise queens and make splits from a colony. The design is very simple and uses follower boards to divide the hive into different sizes depending on what is required. Several different entrance holes can be used when a colony has been split or when raising a new queen.

This hive is based on a similar 36” long design by www.backyardhive.com the chamber in this hive is much bigger than the hive above and also has an viewing window with a removable cover to allow the bee keeper to quickly peer inside without removing the roof. This design also uses a follower board but only to keep the chamber slightly bigger than the colony needs at the time to help conserve the heat, but it is not capable of holding two colonies like the hive above. Once a colony has had time to build up this hive could hold a colony of over 90,000 bees and still have plenty of space.
This is my home made version of the Dartington Long Hive, accentually this hive is a double length Deep National hive, although the brood chamber can be divided in half if two colonies need to share.

The Dartington Hive is not a common type of hive in the UK as once it is in place it is far to cumbersome to move with a colony in it. Robin Dartington describes this hive as a break-away from the conventional approach to bee keeping. Focusing instead on understanding the life urges in the colony, centred on the queen, rather than the mechanical colony behaviour. His book New Bee keeping in a long deep hive (pub. 1985) Is an excellent guide to the management of this type of hive although the principles for each season are the same as a standard hive, until the colony is preparing to swarm when the owner just needs to make a few simple adjustments to satisfy the colonies needs without needing to have on-hand a whole new hive and a complete set of hive equipment ready.

In recent years the Dartington concept has taken a twist and they are now being aimed more at the urban bee keeper by www.omlet.co.uk although omlet charge about 10 times more than what it cost me to build my Dartington long hive, and no doubt this hive will last many years longer.
Named after the inventor, William Broughton Carr, the WBC has become an iconic and highly recognisable beehive design. It is based on the same principles as the Cheshire and Cowan but with an extra outer wall. This provides the bees with additional insulation and quickly became popular for its looks. However, it was rarely used commercially because it was complex and costly to make and also inconvenient to use as the outer covers had to be removed each time for inspection.

William Broughton Carr was a man of many talents and during his time he introduced the metal ends used for spacing frames and also the shallow frame size which is by far the most used frame in supers still today.

The WBC hive is still the iconic symbol of British beekeeping and is widely used throughout the UK and makes a lovely feature in any one's garden who wishes to keep a small number of these hives.

<table>
<thead>
<tr>
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<th>Full Super Weight (Approx)</th>
<th>No of Frames in the Brood Chamber (Brood Frame size)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WBC</td>
<td>19 7/8&quot; x 19 7/8&quot;</td>
<td>45000</td>
<td>Bottom 199 sq. in</td>
<td>25lbs</td>
<td>10 (14&quot; x 8 1/2&quot;)</td>
</tr>
</tbody>
</table>

With a prolific queen who can lay between 2000 and 3000 eggs a day the number of free cells in the brood chamber is considered to be too small, careful attention is required during the spring time to avoid the colony swarming.
Smith

This hive was named after Mr W Smith of Innerleithen, Peebles, Scotland who designed it with Scottish weather conditions in mind, it is based on the American Langstroth design but kept to the basic concept of 11 or 12 British standard frames. Its box shape construction was kept simple compared to the National and the frames used have short lugs which rest on a rebate cut into the top of each box. National frames can be used in this hive although the end lugs will need to be cut down to fit.

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</tr>
</thead>
<tbody>
<tr>
<td>Smith</td>
<td>16 3/8” x 18 1/4”</td>
<td>50000</td>
<td>Top 199 sq. in</td>
<td>25lbs</td>
<td>11 (14” x 8 1/2”)</td>
</tr>
</tbody>
</table>

With a prolific queen who can lay between 2000 and 3000 eggs a day the number of free cells in the brood chamber is considered to be too small, careful attention is required during the spring time to avoid the colony swarming, although many Smith hive owners turned to using a brood and half box to get round this issue although this practice solves some problems it does take longer to manage then from this many Smith Hive owners then progressed on to Deep 14” x 12” frames.

Commercial

Commercial hives are exactly the same external dimensions as a National hive, but instead of having a rebate the hive is a simple cuboid. Because of this the frames are larger and have shorter handles or lugs. The brood box is picked up using small hand holds cut into the external wall of the hive. Supers have this same feature, which can make them difficult to hold when full of honey. Some bee keepers therefore use National supers on top of a Commercial brood box.

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<td>Commercial</td>
<td>18 5/16” x 18 5/16”</td>
<td>70500</td>
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<td>25lbs</td>
<td>11 (16” x 10”)</td>
</tr>
</tbody>
</table>

The Commercial is considered a good sized hive and the number of free cells should be more than enough space to prevent early swarms.
Similar in construction and design to the Langstroth, the Dadant hive was introduced in 1917 by Dadant & Sons, the American manufacturers of beekeeping equipment. Charles Dadant favoured the large brood chamber, deeper frames with a slightly wider spacing. The modified Dadant hive is one of the biggest hives in use today with a brood area of almost 4000 sq ins which makes it very popular with commercial beekeepers.

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<tr>
<td>Dadant</td>
<td>20” x 16 1/4”</td>
<td>85000</td>
<td>Top 340 sq. in</td>
<td>40lbs</td>
<td>11 (17 5/8” x 11 1/4”)</td>
</tr>
</tbody>
</table>

**Frames sizes.**
- Top Bars – 19” long
- Bottom bars – 17 9/16” long
- Deep side bars – 11 ¼” long
- Shallow side bars – 6 ¼” long

Brother Adam used this type of hive and noted in his book Beekeeping at Buckfast Abbey (1974) that the three hives Modified Dadant, British Commercial and the Langstroth Jumbo had startling results compared to British Standard sized hives and others with double brood boxes. The larger hives produced approximately double the surplus honey than standard sized hives, and thus he changed all the hives over to Dadant’s.

A MD brood chamber can store over 70 lbs and a super approx 43 lb which is perfect for those who wish to encourage a large colony and in return be rewarded in a good season with plenty of honey, but they are not suitable unless you are comfortable with lifting these sorts of weights.
Langstroth
1850

Named for their inventor, Rev. Lorenzo Langstroth, these hives are not the only hives of this style, but they are the most common. Langstroth patented his design in 1860 and it has become the standard style hive for 75% of the world's beekeepers. This class of hives includes other styles, which differ mainly in the size and number of frames used. These include Smith, Segeberger Beute (German), Frankenbeute (German), Normalmass (German), Langstroth hive, Modified Commercial and Modified Dadant, plus regional variations such as the British Modified National Hive.

Langstroth hives make use of bee space, a characteristic of Western honey bees which causes them to propolize small spaces (less than ¼ inch), gluing wooden parts together, and to fill larger spaces (more than about 3/8 inch) with wax comb, but to hold an intermediate space open for bees to pass through. His cleverly designed hive makes use of bee space so that frames are neither glued together nor filled with burr comb - comb joining adjacent frames.

Langstroth hives use standardized sizes of hive bodies (rectangular boxes without tops or bottoms placed one on top of another) and frames to ensure that parts are interchangeable and that the frames will remain relatively easy to remove, inspect, and replace without killing the bees. Langstroth hive bodies are rectangular wooden or styrofoam boxes that can be stacked to expand the usable space for the bees. Inside the boxes, frames are hung in parallel. The minimum size of the hive is dependent on outside air temperature and potential food sources in the winter months. The colder the winter, the larger the winter cluster and food stores need to be. In the regions with severe winter weather, a basketball-shaped cluster typically survives in a "double-deep" box.

Ten frames side-to-side will fill the hive body and leave the right amount of bee space between each frame and between the end frames and the hive body. Langstroth frames are often reinforced with wire, making it possible to extract honey in centrifuges to spin the honey out of the comb. As a result, the empty frames and comb can be returned to the beehive for use in the next season.

<table>
<thead>
<tr>
<th>Hive Type</th>
<th>Dimensions</th>
<th>Brood Chamber cells</th>
<th>Bee Space Brood Comb area of both sides</th>
<th>Full Super Weight (Approx)</th>
<th>No of Frames in the Brood Chamber (Brood Frame size)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Langstroth</td>
<td>20” x 16 1/4”</td>
<td>61400</td>
<td>Top 272 sq. in</td>
<td>30lbs</td>
<td>10 (17 5/8” x 9 1/2”)</td>
</tr>
</tbody>
</table>
Langstroth Jumbo

This modified Langstroth hive was introduced in 1905 by A. N. Draper in the USA. It uses a brood box deeper by 2 3/16” than a standard Langstroth. In 1968 E. J. Tredwell at Sparsholt College began to advise students to adopt this hive and this practice was continued by Mr John Cossburn who taught Mike Holloway of our association.

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</tr>
<tr>
<td>Langstroth Jumbo</td>
<td>20” x 16 1/4”</td>
<td>85000</td>
<td>Top 340 sq. in</td>
<td>40lbs</td>
<td>11 (17 5/8” x 11 1/4”)</td>
</tr>
</tbody>
</table>

Due to its large brood frames the queen always has plenty of space to lay even during the spring build up when the colony is rapidly expanding. The Hive is treated the same as a regular hive throughout the season, although one or two frames can be replaced with dummy boards to reduce the chamber size for winter time or if the queen is not a prolific egg layer.

Some would argue this hive is to large and would say its not suitable for all bee keepers as its weight makes it to cumbersome to move, but for those keepers who want to move their bees once or twice a season to maximise honey production the colony needs to be strong with a good ratio of foraging bees to young bees.
Warré Hive
(?-1951)

Responding to the obvious decline in beekeeping in France since his youth, Warré experimented with some 350 hives of various designs with the aim of producing a hive that was simple, economical, bee-friendly and assured a surplus for the beekeeper. The result was his People’s Hive (Ruche Populaire) whose construction and operation he described in his book Beekeeping For All (L’Apiculture Pour Tous, 12th edition).

Warré’s hive comprises tiers of identical boxes fitted with top-bars, but no frames. Its essential design and usage features can be summarised as follows:

- hive-body box internal dimensions 300 x 300 x 210 mm, with projecting handles,
- eight 36mm centred 24mm wide top-bars resting in rebates in each box (NO FRAMES),
- wax starter strips under each top bar (NO FOUNDATION),
- flat floor, notched with a 120mm wide entrance, alighting board,
- coarse weave cloth covering the top-bars of the top box,
- 100 mm high ‘quilt’ boxed with wood and filled with straw, sawdust, wood shavings etc., retained with a cloth,
- gabled roof containing a ventilated 'loft' and separated from the quilt by a mouse-proof board,
- the bees build natural comb in the first (top) box and extend downwards into further boxes,
- new boxes are added at the bottom,
- one or more boxes of honey are harvested from the top after the main flow,
- the bees winter on two boxes of comb containing a minimum of 12 kg stores (France),
- honey is harvested by draining, or by centrifuging combs in baskets,
- at the spring visit, the hive is expanded by one or more boxes, containing with starter strips or comb.

A very important feature of Warrée’s method is that the hive is opened in the strict sense only once a year, namely at harvest. In spring the addition of boxes underneath does not necessitate a hive opening in the sense that the heat is let out. The importance of the retention of nest scent and heat for bee health and productivity was discussed by Johann Thür in his book Beekeeping: natural, simple and ecological (1946) which also discusses Abbé Christ’s (1739-1813) hive that is almost identical in concept to Warrée’s.

No frames

Even in early editions of Beekeeping For All, Warré advised against using frames as shown in the 5th edition:

‘Nowadays, I recommend without hesitation the People’s Hive with fixed combs, even for very large enterprises. […] However, out of respect for the freedom of my readers, I will describe the People’s Hive in its three forms: fixed comb, ordinary frames, open frames with closed ends.

This web site is premised on the 12th edition of Beekeeping For All which describes the top-bar version of his hive only. But, for the sake of completeness, we provide a translation of the pages of the 5th edition describing the two versions of his hive with frames, the latter having no bottom-bars.
Present day bee keeping with the Warré hive

The geographical focus of Warré bee keeping is France and the hive was also initially used in Belgium and Switzerland. The first in use in Germany and Russia were populated in 2006. An experiment was started with six modified [www.mygarden.ws/ModifiedAbbeWarreHive.htm](http://www.mygarden.ws/ModifiedAbbeWarreHive.htm) in 2008, bee keepers in Canada, USA (including Alaska) and Spain made Warré hives in readiness for spring 2008. By late 2009, Warré bee keepers were also known in Australia, Austria, Brazil, Croatia, Estonia, Italy, Japan, Latvia, New Zealand, Poland, Romania, Serbia, Slovakia, Sweden and Uruguay.

There is Warré bee keeping thread in the forum at *Top Bar Bee keeping with the Barefoot Bee keeper* ([www.biobees.com/forum/](http://www.biobees.com/forum/)).

Technical drawings for constructing an authentic Warré hive - [http://www.selbstversorgerforum.de/bienen/bilder/Emile_Warre_Technische_Zeichnungen_engl.pdf](http://www.selbstversorgerforum.de/bienen/bilder/Emile_Warre_Technische_Zeichnungen_engl.pdf)

Complete newcomer to bee keeping? Please read the page of advice on - [http://warre.biobees.com/beginner.htm](http://warre.biobees.com/beginner.htm)

**Summary**

If you want to manage your colony and preform inspections and create splits and prevent swarming this type of hive is not for you. Although its principles and design are some thing to be admired.

I would recommend reading the English translation of his book although at times it can become a little confusing but never the less it is aimed more at the purist type of bee keeper who wants to be hands off and allow the colony to look after themselves from year to year, even if the colony builds up and divides by swarming. The principle behind this is to catch the swarm and house them in another hive or use a bait hive to attract the swarm.

Left - Marc Gatineau's transparent Warré hive on to its third box. From [http://www.apiculturegatineau.fr](http://www.apiculturegatineau.fr)

If you saw this hive at a show I would bet it would be the main attraction in the bee and honey tent, although being made out of acrylic or perspex it would need to be kept in the shade and covered when not on display most of the time. Despite the downsides of needing either a hoist or three people to help manage the hive when a new box is added, the purist side of me would love to build this hive.
Rose
One-size-Box-Hives

Rose Hives simply have one box size and one frame size, each box measures 460mm x 460mm x 190mm deep which is the same as a National box but shallower. This allows the bee keeper to interchange any box or any frame in any hive. One minor draw-back is the weight of one of these boxes when full of honey will be 30-35 lbs which is difficult to manage for some keepers.

There is a pdf file on his website which explains how to manage this hive but I will give you a quick summary.

The management of this type of hive is simple, over winter the bees are contained in two boxes, early into the season the first two boxes are swapped around when the brood nest starts to expand then a third box is added in-between the first two boxes and then another box is added again if required up to around June time.

During the season the bee keeper just adds another box on top of the bottom box when required until the end of the season. The bee keeper then takes all but the bottom two boxes away for extraction and the bees are left to build up for winter.

There is no need for a queen excluder as the upper boxes will be clear of brood and by the end of the season the top boxes will hopefully be filled with capped honey.

This method encourages and needs a very large colony to maximise the comb building and the numbers of flying bees to bring in large amounts of nectar and pollen throughout the year.

I like this idea but this type of hive would not be suitable for everyone because of the heavy lifting required. The Rose box is sold at Thorne’s for only £10 a box although you would need to buy National frames (DN4 or DN5) and shorten them.

His website is www.rosebeehives.com

In the picture above one hive has nine boxes the other eight they could hold 7x30=210lbs of honey and 6x30=180lbs of honey if they hold approx 30lbs each. Not counting the bottom two winter boxes.
Which hive is the right one for me?

There is no right answer to this question as you may be given or buy a hive before you know about the other types, you may even read about one hive and it will change your mind. What I hope I have done here is list some of the main types of hives you may see or hear about when talking with other bee keepers or surfing the net.

Consider the following.

- Do I want a large colony and hopefully lots of honey
- Am I capable of lifting this hive if it needs to be moved
- Are spares and replacement parts easy to obtain for the hive
- Do other local bee keepers use the same equipment in case of a problem
- Design or functionality, beauty or beast
- Cheap or expensive
- Storage space for additional equipment

Plus no doubt a few more that I haven't listed, but before you spend lots of money have an idea how much you are willing to spend and remember the additional cost of frames, foundation, feeders, smokers, hive tools and protective gear on top. Bee Keeping doesn't have to be expensive or time consuming unless you want it to be. There is no one method or answer that will suit every one. If your bees are given a fair chance they will hopefully reward you with a small amount of honey. Sooner or later how ever you will have problems, every association will have members who are willing to assist you if you have a problem, most of which are more than happy to answer an email or chat on the phone and some will be happy to visit your hive and advise you first hand.

**Don't be afraid to ask for help as far too many bee keepers give up after one bad season.**

Despite all the advice and help how ever there still remains many problems in the world of bee's. The answer so far as been increase the dosage or potency of the treatments which doesn't solve the problems as they still remain years after they were first discovered and in some cases the true causes of the some of these problems still remains unknown. Varroa, colony collapse disorder and absconding colonies are the worst of these for any bee keeper. There has to be an answer so don't be afraid to try some thing new and if you see a positive result let others know on the various forums like http://www.biobees.com/forum/

As a bee keeper it is vital we all do our part to learn as much as you can, ask the tough questions of our elected bodies, urge them to be open with what they are doing to try and solve these problems for us and our colonies and do your part by checking your colonies are free from disease and Varroa levels are kept low through out the season and then finally let the bees do what they do best. I have tried to be as unbiased as I can when putting this together despite all the problems the humble honey bee faces, as their keepers we owe it to them to do all we can as we take away their hard work each year.

Mike Alsop
Admin@fdbka.co.uk

The information given is from several different sources.
A Case of Hives by Len Heath
http://www.wikipedia.org
http://biobees.com
http://www.thorne.co.uk
Plus a few other sites

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