

Top Bar Hives

Top bar hives are a simple alternative to standard langstroth hives. They consist of a rectangular box with wooden slats laid across the top along which the combs will hang. Foundation is not used but the top bars will ideally have a wax coated ridge to prompt comb building in the proper place. The concept may be several thousand years old. Today there are two main varieties named for their countries of origin: The Tanzanian hive which has four vertical walls and the Kenyan hive which has sides that slope inward. Although the Kenyan hive is more difficult to produce it is superior because it exploits the natural reluctance of bees to attach comb to the floors of their hives. As long as the angle between the floor and the walls of the hive is 120° or greater, attachment of brace comb to the walls will be limited. Advantages and disadvantages of a top bar hive are summarized below.

Pros and cons of using a top bar hive	
Advantages	Disadvantages
Cheapness and ease of construction.	Combs must be crushed and strained to extract honey.
No lugging supers off to get at the brood nest.	Lower honey production.
The lack of gaps between the bars means less of the hive is open at any time.	Less commonly used so it's more difficult to get high quality advice.
Reduced storage requirements because honey supers aren't used.	Difficult to move combs around as they are rarely drawn perfectly.
Harvesting honey produces lots of light beeswax.	Requires more frequent maintenance.
	Comb lacks support of a wooden frame and can be very fragile.

Wooden Equipment

Bee Space Is Important

Traditional hive parts are made from wood. However, plastic and polystyrene are now common materials for various hive parts. The design and dimension of hive parts are based on the concept of bee space. Bee space was first recognized and promoted by the Philadelphia minister Lorenzo Langstroth in the 1850s, when he introduced what is commonly known as the Langstroth hive. Langstroth discovered that bees build excess comb in a space larger than 3/8 inch. Bees will fill any space less than 1/4 inch with propolis. Therefore, a space between 3/8 inch and 1/4 inch is in a range of acceptable bee space, with 5/16 inch an average that is most acceptable by beekeepers. A Langstroth hive would have a 5/16- or 3/8-inch space separating each frame and the frames from all other hive parts.

Parts of a Standard Hive

A standard hive includes a bottom board, a hive body or two containing frames, several honey supers containing frames, an inner cover, and an outer telescoping cover that fits on top. The terms "hive body" and "super" are functionally interchangeable. They are both basically wooden boxes. Normally the "hive body" refers to the larger box placed directly above the bottom board, usually associated with the brood production area. Supers are the boxes that are normally placed above. Supers are available in three sizes; a deep is the largest; a medium, also called an "Illinois," of intermediate size and a shallow, the smallest size. Please see diagrams and figures illustrating these parts and their dimensions.

Area for Brood Chamber and Supers

Two deep or three medium supers are recommended as the best brood-rearing space. One deep and a medium could also be used and one deep plus a shallow would be the minimum amount of brood-rearing space. Three to four supers are usually required for honey production.