

Factsheet #106

BEEKEEPING EQUIPMENT

There are various types of beekeeping equipment in use but it is recommended for beekeepers to use only standardized and common equipment for ease of operation and higher resale value. A comprehensive guide called "Beehive Construction" is available from the Apiculture Office upon request.

Hive Bodies (Supers)

Supers are the wooden boxes that hold the frames of comb. For Langstroth or standard equipment the outside length of the hive is 20" (50.7 cm) and the width 16 1/2" (41.8 cm).

There are three common depths in use:	Standard	- 9 1/2" deep	(24.0 cm)
	Dadant	- 6 5/8" deep	(16.8 cm)
	Shallow	- 5 13/16" deep	(14.7 cm)

Frames

The lengths of the frames are the same for all depths of hive bodies. The depth of the frame varies with the hive body used. The end bar lengths equals the depth of the frame.

Frame depths:	Standard	- 9 1/8" (23.0 cm)
	Dadant	- 6 1/4" (15.8 cm)
	Shallow	- 5 3/8" (13.6 cm)

Beeswax Foundation

Since all frames are the same length, all foundation is also the same length - 16 3/4". Depth varies according to size of frame:

Standard	- 8 1/2" (1.5 cm)
Dadant	- 5 5/8" (14.3 cm)
Shallow	- 4 3/4" (12.0 cm)

Foundation

- Wired foundation is standard. The wiring is vertical and is usually crimped wire.
- Unwired medium broad foundation is available. It is only used for brood frames since it is not strong enough for honey extraction.
- Plastic foundation with coating has become increasingly popular. It is very durable, no assembly requirement, and excellent in disease control.

Types of Frames

- **Standard self spacing Hoffman frames** - most popular - good resale value but difficult to make the end bars.
- **Non-spacing** - i.e. no shoulders on frame; easy to make. Frame spacers are used as frame rests, or staples are sometimes used to provide spacing.
- **Plastic Frames** - labour saving and durable - foundation can be wax-coated to improve acceptance. Excellent for honey supers.
- **Plastic Foundation/Standard Wood Frame** - the same as the plastic frame except that a conventional wooden frame is used with a plastic, wax-coated foundation.

Hive Lids

The telescoping lid with metal covering is standard. Plywood is most often used and is durable when well painted. Lids may also be insulated by using wood shavings, styrofoam or fibreglass within the construction.

Migratory lids are used by some beekeepers. The lid is flat with lips only on front and back which allows hives to be placed close together during transportation.

Bottom Boards

Standard reversible - It has a deep side and a shallow side, for summer and winter use respectively. Designed for use with a hive stand. Most new equipment is not reversible, but has two cleats fastened to the hive floor either crossways or lengthwise to the bottom board. This keeps the bottom board off the ground, and makes for one less piece of equipment to construct, buy or maintain.

Inner Covers

The standard inner cover has a rim around the outside on one side only which makes it reversible; rim side up in summer, rim down in winter. A section can be cut from the rim allowing for an upper entrance and for added circulation.

Queen Excluders

Metal or plastic excluders are used to prevent the queen from moving up into the honey supers. The space between the wires of the grid is sufficient to allow workers to pass through, but not queens or drones.

Bee Hats

A well-ventilated sun helmet is usually used, made from plastic or woven material. Cloth or felt hats should not be used as they cause defensive behaviour in bees.

Bee Veils

The folding wire veil is used in combination with a bee hat. The veil can be folded up when not in use, it is durable and provides for good air circulation and visibility. The nylon net veil is also popular as it can be rolled up and placed in a pocket. It is very good for air movement, but can easily be damaged by sparks or contact with a hot smoker. Some other designs are hat-veil combinations that are zippered onto the coverall.

Coveralls

Coveralls are considered essential. White or pastel colours are most suitable because of coolness. Dark colours cause defensive behaviour in bees.

Smokers

A smoker is essential. Several types and sizes are available. The smoke bomb (an aerosol container) is useful for quick checks and for areas with high (forest) fire hazard.

Hive Tools

A suitable hive tool is essential; several types are available, all made of durable spring steel.

Pollen Traps

Used for short periods of time for the collection of pollen. The Ontario Agricultural College (OAC) type is most commonly used. Construction plans are available from the Apiculture Office.