Queen rearing in top bar hives

Author: Hardison, M.
Language: English
Year of publication: 1994
Number of pages: 0
Type of publication: Article In BfD Journal
Journal: Bees for Development
Edition: 33
Pages in original publication: 3
Publication location: Text on this website

By Marty Hardison

Marty Hardison is a beekeeper in New Mexico, USA. He writes \"It is my vision that top-bar beekeeping will grow. In the small valley where I live there are about two dozen beekeepers utilising this method\". Marty found that this method worked well with his bees, which are of course temperate-zone *Apis mellifera*.

Beekeeping in general is characterised by many variables. Queen rearing is no exception. To raise a good queen requires good sources of nectar and pollen, good weather, worker eggs or one day old larvae, and a queenless hive with an ample supply of young bees.

Besides all this the queen cell-building hive must possess what I call a strong sense of colony They should have functioned together as a queen-right colony before they were put to work to raise queen cells.

The first step is to select the best possible genetic material from which to raise this batch of queens. A comb of worker eggs is taken from a hive chosen for its good qualities. This comb is cut into strips about 2.5 cm wide. One such strip can produce as many as six viable queen cells. The strip of comb is laid flat on a top-bar. The top-bar should not have a centering strip. The comb is attached to the bar using monofilament fishing line which is very fine, nylon line. About a metre of line is needed.

The line is first tied around the strip of comb and top-bar together about 2.5 cm from the end of the piece of comb. Then the line is looped around the comb and top-bar at about 5 cm intervals to the end of the comb and back to the point where the line was first tied.

The line should be tied off at this beginning point This gives a series of monofilament \'X\'s across the face of the comb.

Top-bars prepared in this manner are placed in a queen less hive in the brood area. There should be no combs with eggs present (if there are the bees will draw emergency cells instead of high quality queen cells). Bees will avoid building queen cells near the fishing line and the \'X\'s should ensure that the cells drawn are not all clumped together. In seven to ten days the resulting queen cells should be fully drawn and capped. The cells can be evaluated at this time: any that appear inferior in size can be culled. Those selected can be separated into hatching and mating nucs. (\'Nuc\' is the abbreviation for nucleus hive, a small hive used when raising new colonies.) I prefer to insert at least two cells into a nuc to improve the chances of getting at least one to hatch.

To separate the cells a block of the original comb can be cut off the top-bar. Cuts at the points of the monofilament X on either side of a section containing one to three queen cells and a cut along the top-bar will free a small block of comb with its cell or cells.

A brood comb can be prepared to hold this queen cell block by cutting a small triangle out of it. The queen cell block can be inserted into the brood comb allowing the queen cell to hang in the centre of the triangle where the bees can tend it.

The comb holding the queen cell can be placed between two other combs and placed in a small hive to create a hatching and mating nuc. In two to three weeks the beekeeper can check to see if a new queen has been reared and mated.

The advantages of using this method of queen cell production are several: high quality queen cells are produced;

the technical complexity is minimal; more queens can be raised while utilising less comb from the parent hive; and finally a single source of genetically desirable eggs can be utilised to raise a large number of queens without undue weakening of the parent colony.

[Bees for Development Journal #33]