

MANA QUEEN

ISOLATOR VARROA CONTROL

By placing the queen in a frame isolator cage for a period of 24 days and removing 3 frames at intervals it is possible to capture approx. 90% of varroa mites at the both phoretic and reproductive stage.

BIOLOGY:

Placing the queen in an isolator cage, for the period of 24 days will set a trap for the mites to get caught inside. While the brood outside of the isolator cage is progressively emerging, so are varroa mites. The phoretic mites will want to reproduce at 5-6 days for males and 7-8 days for the females. Mating can only occur in the brood cell.

Varroa are attracted to get caught in the only available open brood cells inside of the isolator. Mites are blind - they orientate via smell of open brood and pheromones.

TIMING:

This method can be used at any time. By appropriately implementing it to your own hive management system at the right time will result in the successful application, even in large commercial operations.

RECOMMENDED:

Late summer application

Isolating queen three weeks before the end of the last honey flow, will result in an 20% honey yield increase. The honey is gathered in the brood box which is an advantage, as afterwards queen has less space to lay and mites have less space to reproduce. Less feeding is required. Bees will live longer and are much better suited to survive the winter as there is less brood to nurse, mites are reduced, and viruses can no longer be transmitted.

Applying vaporized oxalic acid on the last day of the method when colony is broodless, will result in a 99% efficacy and will give a colony best possible start to the new season.



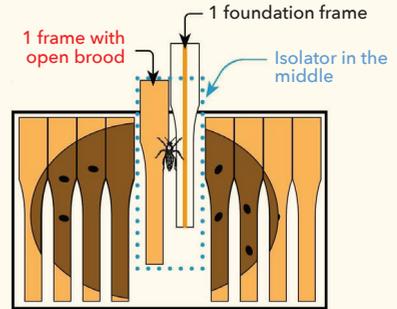
ISOLATOR VARROA CONTROL - TWO FRAME METHOD

What seems to be complicated, is actually very simple. You catch both the phoretic and reproductive mites. This is possible when you isolate the queen in a 2 or 3 frame isolator.

Mites are blind - they orientate via smell (of open brood and pheromones). Mites are attracted to get caught in the middle of the hive where the only open brood is present.

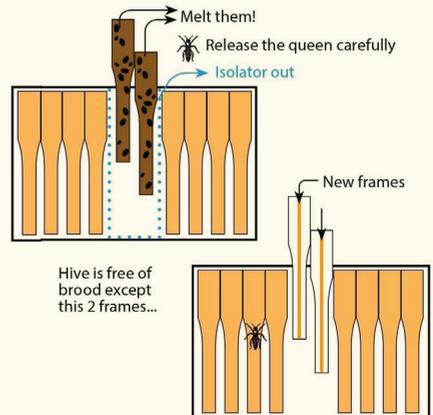
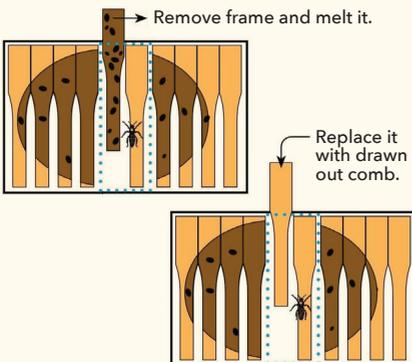
Do not change the details of the method: the efficiency depends on accuracy...

DAY 1: Place the cage in the middle of the brood box. Put one frame with open brood inside, and one frame with foundation. Find the queen and put her inside the cage, close the lid carefully.



DAY 12: On the inside of isolator you have one capped brood frame and one uncapped brood frame. Take the capped brood frame out and melt it. On that spot place frame with drawn out comb so queen can start laying immediately. Check if there is no new brood outside of the isolator. If so, there is a second queen (about 5% have a second queen). Put the second queen also in the isolator and add 12 days to the method.

DAY 24: There are two capped brood frames now. Take them out and dispose. Release the queen. Monitor hives for reinvasion, if so use this method a second time.



These biotechnical methods are being developed and researched by Dr. Ralph Büchler & Team of the Institute of Kirchhain, Germany. Text, graphics and communication are part of the 'Onder arrest-project' of Honeybee Valley / University of Ghent, Belgium, lead by Dr. Ellen Danneels and Thomas Van Pelt.



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