

## ***Why is it more suitable to use Virgin Queen Bees rather than non-tested fertile queens or Queen cells?***

In apiculture, replacing Queen bees at the end of their reproductive life and creating artificial swarms have been successful techniques for many years.

This methodology employs the acquire and introduction of a fertile queen in the hive, replacing the no more productive queen at the end of the career.

The same type of Queen bees are employed to create artificial swarms. An alternative method, which leads to the same goal, is to introduce Queens cells ready to emerge, produced by specialized bee-keepers.

Both methodologies are employed and tested internationally since long time.

However, according to our own experience, both techniques suffer from limitations, especially considering the percentage of fecundity of the just-brought Queen bee.

Luckily, always according to our point of view and experience, other methodologies exist which lead to satisfactory results!

### **We refer to the use of Virgin Queen bees and Breeder Queens which have been selected and tested.**

By the definition of "Selected Virgin Queen Bees" we mean Virgin Queens which are daughters of Breeder Queens which, for at least 12 months, have been expressing certain beneficial traits such as varroa resistance, high productivity, low tendency to teem, high resistance to other pathologies (varroa related diseases, chalk brood, nosema apis, European and American pest, nosema ceranae) Patologie in rosso da correggere da nosema apis in poi.....

Moreover, mating Queens inside your own apiary, has the advantage of assure a percentage of fecundity much higher than the one obtained by breeding them- where queens rearing follows a continuous cycle. This means that in a breeding farm the percentage of drones, compared to the number of mating queens, is lower than the number of drones in apiary, where honey, jelly and pollen are produced.

To this we wish to add that all mated queens are immediately put in cages and sold or, in the worst scenario, left for days in a colony bank before being sold. This prevents a second mating fly to increase their fertility level.

Therefore, by mating queens in your own apiary, the bee-keeper will assure a higher level of fecundity through the use of a large nucleus hive (as one can see in the video). This will affect in a positive way the quality of the queen bee.

Following this method, the bee-keeper will obtain a high-quality product at a low cost.

The usage of selected Virgin Queens allows the creation of artificial swarm

who acts like nucleus hive and let queens mating safely. And this is not the only advantage: this method is also an efficient tool to replace queens which are not productive anymore, into an existing hive.

**Till now (2017), this method has been not largely employed due to the fact that the former procedures of introduction of a Virgin Queen in a existing hive have resulted into a low degree of acceptance and, for this reason, ineffective.**

**Nowadays, these difficulties have been overtaken by our testing methods, described herein.**

**Today the Virgin Queens can be introduced into new colonies, being well received, as it occurs with the introduction of Queen Cells in wire screened cages.**

**So in conclusion, if our above described procedure will be applied, the degree of acceptance of the new Virgin Queens in existing hives can reach a percentage similar to the one of the introduction of Queen Cells in wire screened cages.**

### Next step

It will be to rear families that will descent directly from those and put in practice our lesson and start the selection by your own.

### **How to proceed with the selection?**

By identifying the families which have inherited the selected genetical features and selected from the initial bee-keeper

The queens that one has selected could, in their turn, be employed as breeder queens to create a nucleus hive, artificial swarms and to replace no more productive queens.

Those queens which inherited only some of the desired genetic traits, would be employed, together with their families, and also with the most non-selected bees, to be tested for the before mentioned resistances, as in the case of classic apiculture.

Just mated queens, could procreate other queens which have got both the genetic traits of your apiary and the ones of the just bought Virgin queens. Doing so, the bee-keeper will produce a peculiar vigor of the daughter queens and , therefore, of the workers which will be born. The positive genetic features of your apiary will be preserved and enriched from the ones selected by the bee-keeper of the purchased queens.

This type of work is vital to preserve a genetic variability and a marked strength of the bees.

Finally, the advantages that Virgin Queen Bees offer, compared to the non-tested mated Queens and to the Queen Cells, is to obtain a selected genetics and high results on the percentage of fecundity.

Besides, the Virgin Queens which are lazy and malformed (flawed wings and atrophied

paws) are identified and removed. It is impossible to perform this success using Queen Cells.

To the above mentioned, we wish to point out that the virgin queen, compared to the Queen Cell, can travel longer distances.

The percentage of nucleus hives and swarms that might have been not successful, can be re-employed, for instance, to reinforce the successful nucleus or, as appropriate, to attempt a new introduction of a queen to be mated.

Finally, in existing hives where the replacement of the queen has been not successful, one can repeat the procedure with new Virgin Queens, or introduce your new mated queens, bred from Virgin Queens.

### **Regarding the Breeder Queens, selected and tested at least 12 months.**

The Breeder Queens tested at least 12 months on above described traits, comes with their families on 5 frames, so that preventing a refuse of the queens and allow at the same time, to rear those in few time, using Queen Cells and daughter queens.

In which case is it suitable?

To stock this kind of product, as an alternative to virgin queens, is suitable for those who aims to get a high number of descendant queens, for the above described productions.

**To be considered that, on a average, the value of a Breeder Queen (together with her family) and tested 12 months, is equal to the value of 33-100 virgin queens, according to the case.**

**Therefore, it is convenient to buy selected breeder queens when your goal is to rear 50 or more queens, or you wish to improve the genetics of one or more apiary.**

**It is also convenient to exploit the mother queen between more bee-keepers.**

The Breeder Queens come with their personal CV (**curriculum vitae**) in which qualities and limits are listed, so that the buyer will know what he is buying. In the same CV, advices on how to breed can also be included.

Livorno, 01/12/2015  
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