

Advanced beekeeping techniques for higher honey productions

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1. Good morning ladies and gentlemen. During the next 15 minutes I will try to show you a few simple ways to boost up your colonies in order to achieve higher honey productions. These techniques are based on several successful examples of professional Greek beekeepers, who use these techniques since many years and manage to get the best from their bees.

2. The objectives of this presentation are:

- a. To analyze step by step advanced beekeeping techniques
- b. To prove that they can be achieved in almost any apiary
- c. To confirm that
 - colony uniting
 - moving boards
 - queen rearing

are essential for increased honey production

3. Some facts about beekeeping in Greece:

- 23.000 beekeepers, owning 1.3 million hives (2nd in Europe)
- 500 of them own more than 600 hives and rely exclusively on bee products
- Density: 10 hives per Km² - 1st in Europe (EU's average is 3 hives per Km²)

However...

4. Production is as low as 10-12kg/hive for amateur beekeepers, whereas it can go up to 15-20 kg.hive for professional ones. This is one of the lowest productions in Europe and is mainly due to:

- a. Climate (prolonged dry seasons)
- b. Elimination of natural nectar sources
- c. Extended use of traditional – amateur beekeeping techniques

5. How most beekeepers work: Most of them do not use queen rearing for selecting new queens. Instead, they use queens from swarms, or supersedure cells, and, in most cases, they use random selection.

6. They still use stationary boards, where the broodnest is attached to the board. Additionally, they rarely unite two strong hives to make a better one, since they like to see a lot of them in an apiary.

7. Another factor is that they move their hives very often, from one region to another, in order to find the best place for their hives. This involves lots of risk, honey bees stress, and costs a lot of money.

8. Therefore, the technique mainly used is simply growing up a colony. Combs and supers are added to the broodnest, and then honey is harvested from the supers.

9. Now I am going to present you 4 simple techniques, based on what successful greek beekeepers do, in order to achieve higher productions. First is the use of queen excluders. Then, uniting before harvest, uniting after harvest and finally 10+1 hive system.

10. The use of queen excluders can be used only if certain things occur: lots of capped brood present in our hive, moving up the capped brood from the broodnest to the super, making an extra entrance between the super and the excluder.

11. Uniting before the main harvest

This technique involves early start of growing up the hive, during early spring and also early division of the colonies. Colonies are fed every 2 days with syrup, they reach a peak by mid March, and then they are divided in two parts. If

capped queen cells are ready, this speeds up the whole procedure.

12. Then, two colonies are grown up together, until they reach a peak at the nectar flow. They are transferred to the desired area close to each other, and they are united a couple of days later. This will bring us at least an extra super of honey during the first harvest and extra super of honey if there is another nectar flow during autumn.

13. Uniting after the main harvest

The idea is almost the same, but the difference is that uniting occurs after the first harvest. When we want to take advantage of an early nectar flow (such as the orange blossoms), we can make a first harvest there, and unite the two hives right after, in order to achieve another harvest several weeks later.

14. A second harvest can be done, if favourable conditions occur in autumn. Again, the same amount of hives overwinter.

15. As you can see, in both previous techniques, a certain number of colonies is raised, then split into two, harvested and the number comes back to the starting point, to overwinter again the same amount of hives. This eliminates the high costs of winter feeding and winter work to the minimum.

16. 10+1 Super Hive

This technique requires groups of 11 hives, 10 regular ones and 1 super hive. It also requires a very healthy apiary, since there is lot of frame exchange and possible spread of diseases. So, every 10 days we move 1 frame of capped brood from each hive to the super hive. In such way, the super hive gets approximately 1 super per week. Just before adding the new super, we check the previous one for queen cells. With this technique, the beekeeper can achieve a total 15-20% more honey from the whole apiary.

17. To conclude:

- Uniting colonies is essential for raising foragers' population in a hive = raising honey production
- Beekeepers should not be afraid to experiment new techniques
- It is better to have less but stronger hives, than numerous weaker ones

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19. I would like to end up this presentation with a famous greek philosopher, Zeno of Citium, who said “πολύ είναι η πλῆθος, ἀλλά κατὰ φύσιν ἡ ἀρίστη»», which means, “plenty is not quality, but quality is plenty”

Thank you all very much