

Sugar Roll method for counting Varroa Mites, as suggested by Jeremy Barns at our May meeting.....

Anyone willing to do some testing and recording your numbers would be appreciated

Varroa mites continue to be the major issue for beekeepers, we know that

1. We should test regularly for mites, that it is easy to do, and yet we seldom do it;
2. The mites feed on pupae, resulting in adult bees with lower body weight, a compromised immune system and a reduced life span.
3. Varroa spread viruses and ...
4. ... Bees exposed to Varroa are more vulnerable to factors such as poor nutrition, pesticides and Nosema.

We are thus asking each beekeeper in York Co to test for Varroa during the first week of every month, starting now, May. The exception is those who have recently installed a package, in that a package should not have Varroa nor do you want to disturb them this early in their build up process. But we do strongly recommend that you start testing such colonies in June.

For comparative purposes it is important we all use the same method of testing, and the easiest and least damaging to the bees is the sugar roll method, which David Papke described so vividly on Thursday evening. For those who were not there, or need a reminder, here is an outline.

You will need

- A measuring cup marked at the 100 ml level
- A plastic bucket or wash-dish container
- A wide mouthed jar with a size 8 hardware mesh top
- 1 – 2 teaspoons of powdered sugar (Accounts vary but I experimented this afternoon and found that 2 teaspoons was more than enough.)
- a cool whip container

Method

1. Select a comb of open brood with larvae which is close to being capped (this is the scenario most favored by the mites as they try to move into a cell just before it is capped.)
2. Make certain the queen is not on the frame!
3. Shake the bees into the plastic tub and then tap one corner of the tub on the ground so that the bees collect in one corner of the tub.
4. Scoop bees into the measuring cup, adding or subtracting bees until the cup is full to the 100 ml line. This is approximately 300 bees.
5. Dump the bees into the jar and screw on the hardware lid.
6. Add 1 - 2 teaspoons of powdered sugar thru the hardware lid, tip the jar at 45° and rotate it until all the bees are coated with sugar. (For convenience sake, you can add the sugar to the jar before going out to the apiary.)
7. Set the jar on a flat surface in the shade and leave it for 90 seconds. **THIS IS IMPORTANT.** The bees begin to ‘tumble’ in the jar, which generates heat and causes the mites to back out from under the bee’s abdominal segments.

8. After those 90 seconds, invert the jar and for 60 seconds shake the sugar into the cool whip container.
9. The mites will be clearly visible at the bottom of the container, even more so if you add a few drops of water to dissolve the sugar.
10. Return the bees to the hive.
11. Send the results to me using the form that is attached and I will tabulate them each month, giving you a county-wide summary which will tell you how your hive(s) relate to wider picture. If you can't open the attachment, please send me the count via e-mail.
Individual returns will be kept confidential.

FYI, below is the table which converts # of mites per sugar roll test to %age colony infestation. I have read elsewhere (I don't think it is in the Marla Spivak article in the Dec 2010 issue of ABJ) that in the spring an acceptable threshold is 3 mites per 300 bees , and in the fall 10 mites.

# Mites per 300 bees	Colony Infestation as a %
1	1
2	1
3	2
4	3
5	3
6	4
7	5
8	5
9	6
10	7
11	7
12	8
13	9
14	9
15	10
16	11
17	11
18	12

It was also suggested that we should take this opportunity to record small hive beetle infestations. At this stage we will be subjective and on the form there is space for you to record small hive beetles seen, whether it is none, light, medium or heavy. Next month we will describe a way in which you can trap and count SHB.

If the above sounds intimidating and it really is not, you can request help from one of our peer review beekeepers:

Also, as the year goes on, we will suggest possible treatment methods if you notice numbers of mites in your hive increasing.

Have fun with this! It is valuable information and a vital management tool for the success of your bees.

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