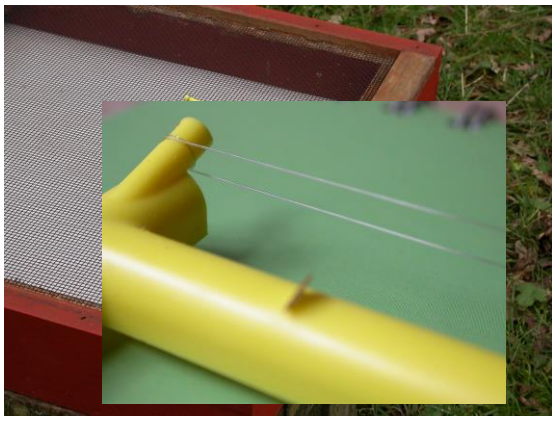
‘Trialling the BeeGYM’

Like many beekeepers I like to reduce mite populations without, or reducing, the use of chemical intervention, which is one of the prime motivating forces for the using Integrated Pest Management. For some time there has been a device called the ‘BeeGYM’ illustrated below which is claimed to enable bees to remove phoretic varroa mites by scraping them off using the wires or flippers on the device. When used in conjunction with an open mesh floor it enables live mites to fall away from the colony during their initial phoretic stage before they have an opportunity to reproduce. They are claimed to be quite effective.

It appears a bit cranky so the questioned I asked myself was ‘Is the use the ‘BeeGYM’ beneficial to varroa control?’ If so would it be a useful project for DARG members and any other beekeepers that may wish to try it out and collect data.

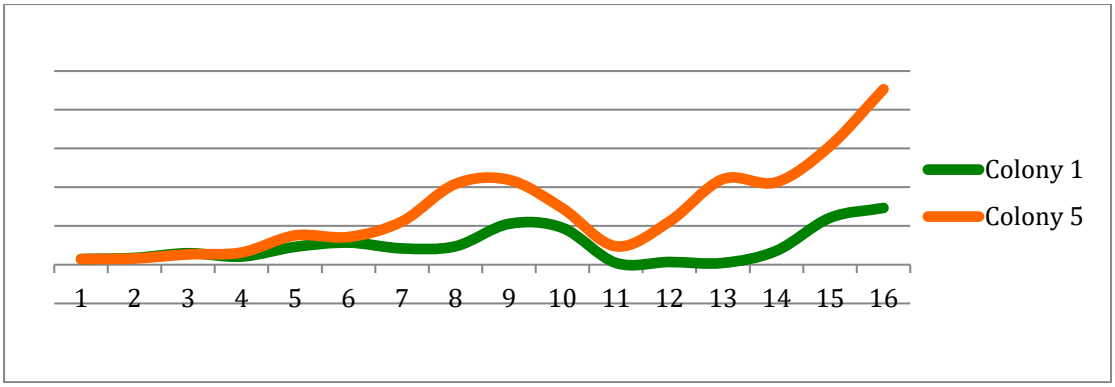


Horns at the rear of the BeeGYM

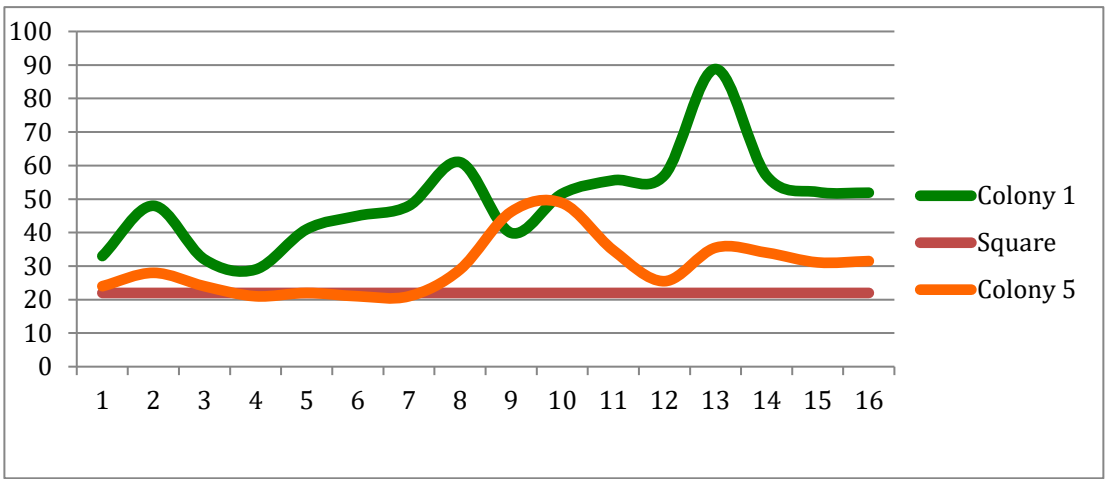
I was kindly given a BeeGYM and some instructions so had to think up a system of monitoring. I decided that I would count the mite fall from the colonies making a comparison between the area under the BeeGYM and the rest of the floor. A control colony would be required without a BeeGym and the same areas compared. To ‘catch’ live mites sticky back plastic was placed beneath the Bee GYM. I marked my floor inserts with a 7-inch (18 cm.) square directly under the BeeGYM.

I selected two bee colonies of similar strength and varroa infestation. During April the average weekly varroa mite drop was Colony 1 – 41 and Colony 5 – 44. A bit high but would show if the BeeGYM worked. At the beginning of May I installed the BeeGYM in Colony 1, random selection by tossing a coin! Mite drops were counted on a daily or other day basis as too much debris accumulates otherwise, making accurate counting difficult. The drops were totalled up weekly and the percentage difference between the square and the rest of the board recorded.

During the recording period It was clear that a greater percentage of mites was falling on the square in the BeeGYM colony. The graph below shows the results obtained over the period of use. During the trial the colonies made swarm preparations, which was controlled by removing the queens and leaving one queen cell. (Not good beekeeping but it kept the colonies and their varroa populations intact!) The high percentage readings at week 8 and 10, on Graph 2, coincide with brood-less periods indicating that there may have been more bees clustering around the hive entrance and higher levels of phoretic mites.



Graph 1: Shows varroa mite population calculated from daily drop over the trial period.



Graph 2: Shows the percentage of varroa mites counted under the 'BeeGYM' within the 7 inch square. This equates to 22% of the floor area, which is shown by the 'pink square' line on the graph.

My initial conclusion is that for this trial the BeeGYM has been beneficial but many more similar trials are needed for a considered conclusion. I shall certainly carry on with this trial using more colonies and BeeGYMs in 2017. If these sort of projects interest you why not come along to DARG meetings or if you would like to trial the BeeGYM please contact me.

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