

Treatment free beekeeping  
(Reducing varroa without miticides)

Sugar Shake or Roll (for monitoring varroa levels)

- “Rolling” bees in icing sugar detaches mites, providing beekeepers with a guide to the levels of varroa in the colony at different stages of the season
- Completed in 10 minutes
- Sugar Shakes (or Rolls) are thought to be more accurate than monitoring the natural drop of varroa onto insert boards, where the mite drop is influenced by the levels of brood hatching, other insects eating mites and the wind blowing them off.



Method:-

- From the brood nest, where most varroa reside, shake 300 bees from a brood frame into the shaker (up to the black line which = 100ml), being careful not to include the Queen!
- Put 2 tablespoons of icing sugar onto the bees and add the lid
- Gently roll the bees to give them a covering of sugar
- Set aside for 5 minutes in the shade whilst the bees groom
- Gently roll them for a further 30 seconds, then.....
- Invert the shaker over a bowl of water (or white paper) and gently shake ‘n tap the container for about 1 minute so that the icing sugar falls through the mesh lid

- Mites also fall through the mesh and are easy to count as they float on the water
- Afterwards, the bees are returned alive to the colony

Infestation rate:

- Count the mites. If there is no brood present, divide the number of mites by 3 to give a % infestation rate. Eg; if 9 mites drop, divide by 3 (as there were 300 bees) = 3%
- If there is brood present, then divide by 3 AND double the mite count to include an estimate of mites in the sealed brood.
- Example with brood: 18 mites drop. Divide by 3=6. Then double=12% mite infestation rate
- 8-12%+ infestation rate is high
- This "point in time" guide to the level of mites can be added to the hive record sheet for the colony

A video of the process can be found at:-

<https://m.youtube.com/watch?v=OE457iSYXM4>