

# Information Sheet: (A quick guide to) **Integrated Varroa Management**

## **FIGHT THE MITE!**

The Varroa mite clings to the bee and sucks blood, weakening it and making it susceptible to disease.

It is the size of a pinhead, glossy and chestnut in colour and looks like an upturned saucer with all its important “bits” underneath. It has recently become resistant to chemical treatments (pyrethroid resistance) in many areas of Britain and the aim now is to control the mite with a range of methods throughout the year. However, it is important to treat only when necessary.

**Q.** When is it necessary?

**A.** When there are too many mites in the colony.

**Q.** How many are too many?

**A.** There are two accurate methods to assess mite numbers but these take time so the ones you will probably want to know about are:

### **1. THE DRONE UNCAPPING METHOD**

Select a section of sealed drone brood at the “purple/pink eye” stage. Insert an uncapping fork under the cappings and lift out the pupae. You will easily see the mature brown mites against the white pupae if you have an infestation. You should examine 100 pupae if possible.

**Q.** How do I assess the level of infestation?

**A.** If you see mites on:

- 1 pupa in 50 you have a light infestation
- 1 pupa in 20 you have a medium infestation
- 1 pupa in 10 you have a heavy infestation

Alarming your colony is at risk of collapse if 1 in 7 is infested.

**Q.** Why test the drone brood?

**A.** Drone pupae develop longer in the cell (24) this enables a breeding mite time to complete many breeding cycles capable of producing 1,280 mites in 3 months, compared to a worker cell mite which can only manage 64, so culling drone brood is more effective in reducing mite levels.

**Q.** What do I do next?

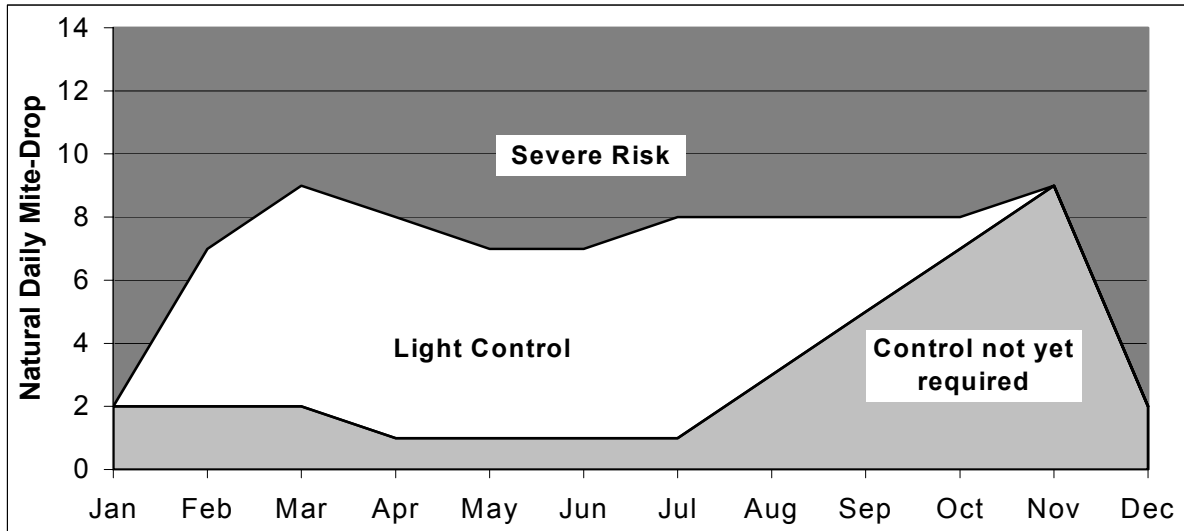
**A.** It depends on the time of year.

### **Drone Brood Tables.**

	Number of Infested Drone Pupae		
<b>Up to June</b>	Less than 1 in 60 <i>No Action</i>	Between 1 in 60 & 1 in 25 <i>Plan Control</i>	Over 1 in 20 <i>Consider Control</i>
<b>June &amp; July</b>	Less than 1 in 30 <i>No Action</i>	Between 1 in 30 & 1 in 15 <i>Light Control</i>	Over 1 in 15 <i>Severe Risk</i>
<b>August</b>	Less than 1 in 20 <i>No Action</i>	Between 1 in 20 & 1 in 10 <i>Light Control</i>	Over 1 in 10 <i>Severe Risk</i>

## 2. THE VARROA TEST TRAY METHOD

You can also count the mites which have fallen through a mesh floor by inserting a test tray in your hives. Count all the mites and divide by the number of days it has been in place. This is your daily mite fall figure. For solid floors, insert a vaselined white card on the floor. Now consult the following table.



You now know what level of mite infestation your bees are experiencing.

**Q.** How can I deal with the problems?

**A.** These are the recommended methods: (NB – information sheets on these are on our web site)

- Mesh Flooring
- Drone brood trapping
- Shook swarming
- Varroacides - } Apiguard or Apilife-VAR (thymol based)
- } Organic acid treatments
- } Pyrethroid strips (Apistan or Bayvarol treatments no longer effective)
- Queen/comb trapping – has become very time consuming & is not favoured

You may already be using some of these, particularly the shook swarm method. Some methods, such as Queen trapping may be for the more advanced beekeepers but we **MUST** all keep our mite levels down by using several treatments during each year, when, and only when these are required, otherwise the mites will out-manoeuvre us.

This chart may help you to decide which method to use at what time of the year.

Fit the action plan to suit the need:

<b>Control</b>	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec
<b>Open mesh floor</b>	----	----	----	----	-----	----	----	----	----	-----	-----	-----
<b>Drone brood removal</b>				----	-----	----	----					
<b>Comb trapping</b>				----	-----	----	----					
<b>Formic acid</b>							----	----	----	----		
<b>Apiguard/ApiLIFEvar</b>								----	----	----		
<b>Exomite</b>								----	----	----		
<b>Pyrethroid strips</b>								----	----	----		
<b>Lactic/oxalic acid</b>	--											---

The Association plans to organise practica sessions on IPM as part of continuing training. We also have the very informative FERA booklet “Managing Varroa” (2009) to peruse.