

Feeding bees

Bees may need help to build stores after a honey harvest

Bees need both pollen and nectar to survive. Nectar or honey provide the carbohydrate part of their diet and pollen provides proteins, vitamins and minerals. Honey and pollen are stored within the colony to ensure its survival through the winter and in other times of dearth, so when beekeepers remove a crop of honey it may be necessary for the beekeeper to provide a supplement. To make use of these stores water is required to process it, which is either collected as condensation or from an outside source.

To provide the bees with an alternative to honey, sugar syrup is usually fed. This is made by mixing together a ratio of 2 lbs of sugar to 1 pint of water (or 1 kilogramme to 630 millilitres). This thick syrup is used for winter feed, and is less likely to ferment. When I make this I use two, three-gallon buckets, one is marked (using a contrasting marker pen) to give the level of 16 lbs of sugar and the other is marked to give the level of 1 gallon of water. I fill the sugar bucket up to its marked level and similarly fill the water bucket up with hot water from the tap to its mark. The hot water is poured



Making sugar syrup. Photo by Simon Jones.

into the sugar bucket and mixed using an electric drill and a plaster mixer paddle (available from good DIY stores). Once mixed I pour the sugar syrup into plastic containers until it is needed. It should be noted that sugar syrup will sometimes ferment and it is preferable not to mix it earlier than four to six weeks before you are going to feed it to the bees. Thinner syrup, with a 50:50 mix, is sometimes used to simulate a nectar flow and used to stimulate and build nuclei, for queen rearing, comb production and in commercial situations for pollination.

Feeders

There are numerous types of feeder, which can be broadly divided into two groups; rapid feeders and contact feeders. Examples of rapid feeders are the Miller, Ashforth, or Brother Adam feeder. This type of feeder holds between two and three gallons. They are efficient in warm conditions and are used to get a large amount of syrup onto the hives in one go, usually in late summer or early autumn to provide the colony with winter stores.

Examples of contact feeders are the plastic bucket with a disc of fine mesh gauze moulded into the lid or simply a jar which has had some small holes punched into the lid. Because the feeding station is closer to the bee nest this is

more effective in cooler conditions and is used to simulate nectar flow which stimulates the colony to expand, collect pollen and produce comb. They are often used to build up a nucleus hive, perform a Bailey Comb Change, or stimulate a colony for queen rearing. They can be used for late summer or autumn feeding, but will require refilling and are thus more difficult to use.



A rapid feeder. Photo by Simon Jones.

When feeding, it is important that entrances are reduced so that they can be defended easily. Check that your feeders are serviceable and do not leak. If possible feed at dusk as this reduces the amount of flying that bees will do when they become excited by the new

source of food. Do not spill syrup in the apiary as this will cause robbing. If possible, feed all of the colonies in the apiary some syrup, even those that have sufficient stores, this stimulates them to defend should other colonies try to rob them. It is preferable to finish feeding syrup by the end

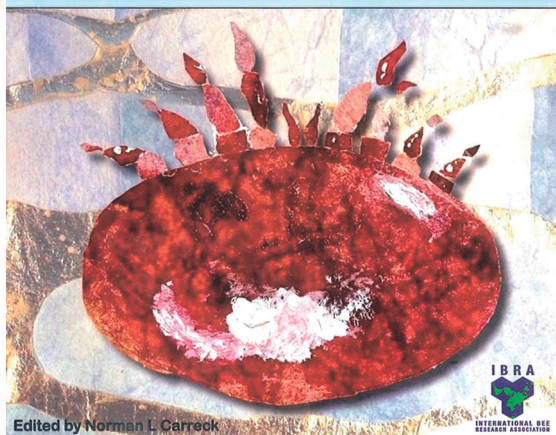


A contact feeder. Photo by Simon Jones.

It's all about bees at the IBRA bookshop!

Varroa

Still a problem in the 21st Century?



Edited by Norman L. Carrcock

Varroa - still a problem in the 21st Century?

£13.50

An international team of bee scientists cover the varroa problem in depth by outlining current knowledge, discussing the problems and suggesting solutions to enable beekeepers to live with the mite in the 21st century.

www.ibrastore.org.uk
bookshop@ibra.org.uk
(+44) 029 2037 2409
IBRA, 16 North Road,
Cardiff, CF10 3DY, UK



INTERNATIONAL BEE RESEARCH ASSOCIATION

Pollen supplement

To make a pollen substitute mix three parts (by weight) of soybean flour with one part of dried brewer's yeast and one part of dried skimmed milk. You will need 400 grams of this. Next make a solution of two parts (by volume) of sugar with one part of hot water. Let the solution cool and mix one litre of this with 400 grams of pollen substitute. Form the mixture into a cake and wrap this in greaseproof paper. Place the package on the top bars over the cluster, preferably over open brood; the bees will tear the paper away and feed on the cake. It is important that the cake remains moist, however, or bees will ignore it, so ensure the top is kept covered with greaseproof paper.



Feeding with pollen supplement. Photo by Simon Jones.

of September to give the bees time to process it before the weather gets too cold.

If colonies become short of food during winter or early spring it is better to feed them candy rather than sugar syrup, which they have difficulty processing when the temperature is still cold. Candy

Candy Recipe

Put 6 lb of sugar into a pint of boiling water and add a teaspoon of cream of tartar. Boil up, stirring constantly, until the sugar is melted. Simmer for ten minutes and then allow it to cool to about 120°F. Stir the mixture until it thickens and then pour into suitable containers.

From *The Complete Handbook of Bee-Keeping* by Herbert Mace

can be made or bought commercially; one source is baker's fondant. Generally in the UK there are ample sources of pollen from late winter until the autumn. However, if bees are confined for long periods due to poor weather they can get very short of pollen, particularly in early spring when it is needed to feed the expanding brood nest. Pollen patties can be made, or bought commercially. It is important that the pollen and honey (if used) come from a disease free source.

Simon Jones,
Seasonal Bee Inspector



www.beehappyplants.co.uk

We would like to invite BBKA groups to visit Bee Happy Plants nursery in Somerset...

The day begins with a tour and chat about our bee plants – concentrating on plants for our native *Apis mellifera*, though we also have some for bumblebees. We will identify the top pollen and nectar producers and discuss how we can grow and maintain them...

20% discount (off our website prices) given for all plants on the day – **ready to plant in your gardens now!** Refreshments also available...

To book, please email: sarah@beehappyplants.co.uk / t: 01460 221929



We propagate and grow all our herbs
organically, from seed...
"Happy Plants make Happy Bees"

