

Leiston Beekeepers' Newsletter

July - September Issue - 2013

Laurie Wiseman - Editor - ldbkaweb@aol.com

It's summertime - but where is the honey?

I started the season with seven colonies in two apiaries. They were all slow to get going because of the weather. By the time the population was expanding the oil seed rape around one of my hives was coming into bloom but unfortunately the bees largely missed this crop. As a result the early honey harvest - four weeks later than usual in early July - was very, very poor. I have another apiary where there is no oil seed rape nearby and the position was very similar. These colonies were late starting and missed the early blossom so there was little honey to take as a crop in July. To date I have not taken off a crop from these hives as I felt they probably needed the food themselves and it was uncapped. So I have little honey from my hives as an early crop. I usually take about 280lbs at the beginning of June but as yet have only taken 30lbs from two hives thus far! But all the colonies are well and very populous and hopefully will do better from the late summer flowers.

Swarm control and preparing for next year

I have made up three nuclei all of which have mated well and these will replace colonies I united with others last year because they were not sufficiently strong to overwinter. These colonies will join the others next year as productive units (?). I clip one of the queen's wings in all my colonies so I have not lost any bees from those I allowed to swarm in early July. I am now waiting for the new queens to get mated. Swarm control is very much easier if you can clip and mark the queens.

Looking forward to the winter

This is the most important time of the year as the work done now will determine whether your bees will start the new season in a healthy and well fed manner. After the last honey crop is taken in early autumn you will need to treat your hives colonies for varroa - (see varroa treatments). After this treatment the colony stores should be assessed. You will probably need to feed each colony with about two gallons of thick sugar syrup (14Kg). After feeding your colony you should protect the hive from the attention of woodpeckers. Your hive will then be ready for winter and will be properly

Thick winter feed mix - 600ml water to 1kg

Leiston & District Beekeepers' Summer Social
at

Brick Kiln Barn, Sibton

on

Saturday 10 August

12.30-4.30pm

Come & meet up with other L&DBKA members
for a

**SAUSAGE BBQ
& BEE SAFARI**

featuring

**AN APIARY OF WBC HIVES &
BRICK KILN BARN'S
SAUSAGES & SALADS**

£5 per head

Vegetarian & gluten free diets catered for
Wine, beer, cider, soft drinks, coffee & tea
available

Bookings by email to Penny Robertson
probertson@toucansurf.com
or 01728 604388/07590 983362

WE LOOK FORWARD TO SEEING YOU

VARROA TREATMENTS

L&DBKA is going to buy in both Apiguard and MAQS for the autumn varroa treatments. Please contact Penny as soon as possible with details of which treatment you want and how many hives you have.

probertson@toucansurf.com 01728 604388

Winter Feed - BELGOSUC - available!

The Christopher Bindloss syndicate has some 800 litres spare @ 97p litre. Available in 10 litre amounts, it will be available from about 26 Aug. You will to collect it in your own buckets (30lb honey buckets are ideal) from David Adams at Deben View, Back Lane, Falkenham IP10 0TL.

10 litres weigh about 14 kg; there are also spare some 9kg buckets available @ £12.15 (or £1.35p per ltr) and some boxes of fondant @ £16 for the 5 x 2.5 kg box and £17 for the 15 kg box.

Those who want to buy should get in touch with
Christopher straight away 01728-720106 or
christopher.bindloss@which.net

How does a fertilized egg become a queen and not a worker bee?

(Article précised from 'The Honey Bee Inside Out' by Celia F Davis – published by Bee Craft Limited)

A sperm released from the spermatheca of a queen carries with it 16 Chromosomes. This fuses with an egg as it passing along the queen's vagina, making a total of 32 chromosomes and is laid in a cell. This fertilised egg will develop into a female. The type of female into which it will develop has yet to be decided. Will it become a worker, destined to live a short expendable life of hard work, unable to mate because of its under developed ovaries or will it become a queen, a larger individual who may live for years, is of vital importance to the colony and whose function is as an egg-laying machine.

(Editor - A drone develops from an egg which has not been fertilized and is haploid and therefore has only 16 chromosomes.)

Type of Cell

A fertilised egg may be placed in a worker cell or a queen cell. A queen cell is bigger than a worker cell. We know that a fertilised egg laid in a worker cell can become a queen if the cell is drawn out into an emergency cell or if the resulting larva concerned is moved into a queen cell. The type of cell itself does not determine the reason why it develops into a queen although a queen cell may be of the initial stimulus for doing so.

Larval Food

There are three different components of the food which nurse bees feed to larva:

- White, produced by the mandibular glands (for the production of brood food)
- Clear, produced by the hypopharyngeal glands (for the production of royal jelly)
- Yellow, derived from pollen

(The mandibular and hypopharyngeal glands are in the bee's forehead)

The proportions in which this food is fed to bees will vary depending on larval age and intended caste - queen or worker:-

- First three days for a queen larva - mostly white food
- The last two days for a queen larva – ratio of white to clear 1:1
- Average composition of worker larval food is white/clear/yellow in a ratio 2/9/3

The queen larva not only receives a greater proportion of mandibular gland secretion but also receives food about ten times as often the worker larvae. *(Editor - Who said, 'we are what we eat?')*

The Importance of Sugar

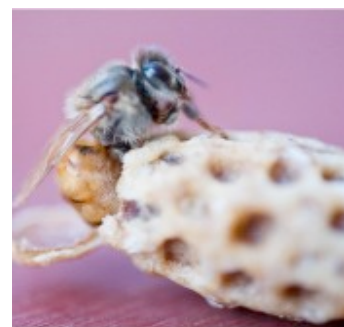
The amount of sugar in brood food differs considerably. During the first three days of development, royal jelly contains 34% sugar, whereas brood food contains only 12% sugar. After three days the sugar in the brood food rises to 47% but this is probably due to the inclusion of honey in the food. Research has demonstrated that the sense organs on the mouthparts of the larvae are sensitive to the sugar content of the diet and this stimulates an increase in food intake. It therefore appears that up to the age of three days, a queen larva consumes a greater quantity because of higher sugar content.

The Endocrine System

The glands of the endocrine system produce hormones which are secreted into the body. These glands are found in the bee's oesophagus and produce the 'juvenile hormone' (JH). There is a dramatic increase of JH in the larval development at three days old (ten times that of worker larvae) and this appears to trigger a queen to develop. *(Editor - The production of this hormone of varying strengths through the honeybee's life appears to control the bee's behavior throughout its life.)*

Conclusion

High levels of juvenile hormone are the prime cause of the queen to develop rather than a worker bee. The sugar content, the quantity and quality of food intake and the consequent increase of the JH production are all important to the development of the queen. The queen cup may act as an initial stimulus for the nurse bees to place a fertilised egg in the cup for the process to begin.



**Queen Hatching - Photograph
by Tony Pick**

Stop Press

Some members have been reporting problems with 2013 queens. Queens are showing signs of superseding and others are drone layers. There have also been reports of colonies that were previously calm becoming aggressive. The supersedure reports suggest that the bees see something wrong with their queen and they wish to change her. Drone laying queens are the result of poor mating or the queen not being able to get out to get mated because of the weather; she has a limited period to mate so if she fails to get out in time the result is a drone laying queen. Aggressiveness can be because of several reasons. The queen's behaviour is determined by the drones she mates with. She mates with up to twenty drones so one or two may have an aggressive gene. The colonies may also turn aggressive because they are under stress because of a lack of or a sudden stop to the nectar flow (oil seed rape has stopped flowering). The weather can also be the culprit if it is humid and thundery. With experience you know when not to inspect your bees – the bees will soon tell you!