

## Meet one Danish beekeeper

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Erling Bech is not a typical Danish beekeeper, in the sense that the variability between the beekeepers is so great. You cannot speak of a typical beekeeper.

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Nordic Beekeeping. Vancouver, Apimondia 1999.

But he is a well-known and highly respected beekeeper. He lives in the eastern part of Denmark, in an agricultural area, with some forests.

He is 59 years old, and has been a beekeeper for nearly 40 years.

He used to keep more than 200 colonies in the traditional Danish Troughhive. Now he has reduced the number of hives and switched over to modern hives made out of polyurethane, but still he has 130 hives.

The reason for the change was mainly the higher workload of looking after the bees in the old hives.

### Seasonal management

Early in the spring (March) the bee hives are weighed to ensure adequate stores. Those with insufficient stores are fed with sugar. At the same time they are checked for Nosema, mainly to avoid breeding of bees susceptible to Nosema.

The bottom boards are checked for dead Varroa mites. If there are too many mites the colony is sprayed with lactic acid.

In late April, early May, the time has come for the first super. But the bees must have filled the brood box totally before

this extension is added. Frames from the brood box are lifted up into the super, and new frames with foundation are placed in the brood box. The super is filled with frames with combs or foundation. During the season the whole brood nest is changed so that the bees are wintered on clean, new combs. The old combs are melted.

In spring the bees are forced to build drone brood. Erling removes drone brood regularly during the spring period to fight Varroa.

The colonies build up foraging on spring flowers: willows are important.

The first flow is in May: winter rape-seed, dandelion, and fruit trees.

The honey from the rape-seed has to be harvested soon after the flow or it might crystallise.

After the first flow there is a pause until the summer flow in June - July when we have the spring rape-seed, white clover and lime trees. By the middle of July the flow has ended in the eastern parts of Denmark.

#### Queen production

The breeding and production of queen bees is an integral part of Erling's beekeeping. Previously he had Italian Bees, but some years ago he switched over to Buckfast Bees. According to his own tests they produce 10% more honey. They are gentle, but some lines have problems with chalk brood.

He mainly produces queens for his own demand. But this is high: in his producer colonies he changes 80% of the queens each year.

#### Bee diseases, Varroa control

Traditionally we do not use drugs to treat diseases.

There has been much focus on Varroa in recent years. Erling found his first Varroa in 1994.

To keep his product clean he decided to use „Green methods" for the control of Varroa: drone brood removal, formic acid vapour, and lactic acid spraying, and recently dripping with oxalic acid.

Erling has participated in trial work together with the Danish Beekeepers' Association and the Research Group for Beekeeping, and thus he has himself helped to develop the methods.

The reason is that Erling has always tried to produce honey of very high quality. That means totally free from any pesticide residues. Until last year, when we found 1 sample with measurable Fluvalinate residue, no pesticide residues have been found in any Danish honey.

American foulbrood is not a major problem. It occurs. The treatment is something special.

You can kill the colony and clean the hive and the equipment carefully, and then use the hive again. But you can also treat the colony by transferring them to a box where they are fed to stimulate comb building. After 4 days you put the colony back into the hive (that has been very thoroughly cleaned and washed), on to new foundation. The old brood combs are burnt and the empty combs are melted. It works: the frequency of American foulbrood is no greater than in other countries.

Chalk brood has caused some concern in recent years, mainly in some lines of the Buckfast bee.

### Honey production and marketing

Erling is not a typical beekeeper. He is one of the best, with a very high production from his bees. His average production during the last 10 years is 65 kg per colony. One year he made 25 tons of honey from his 200 colonies. The average for Denmark is about 35 kg per colony.

Erling packs part of the honey and sells it directly to consumers and shops in the nearby town. The main part he sells to honey packers.

The Danish market is highly influenced by imported honey, especially prices.

Prices for bulk honey vary but the average price is about 20 DKr (3 US dollars) per kg. So we succeed in getting higher prices for Danish honey than imported honey. We think it is because of higher quality.

## Education and development

Erling is a typical Danish beekeeper in the sense that he has always tried to develop his beekeeping. He has participated in several courses run by the Danish Beekeepers' Association, and he has close co-operation with the advisory service. It is unclear who benefits most, Erling or the advisors. He has visited The APIMONDIA Congresses several times. But only when it is abroad. He is working so much with his bees during the season that participation in an APIMONDIA Congress must fulfil his demand for a holiday, as well as giving him new knowledge.

## The Danish varroa strategy is biological

No drugs are used for varroa-control. We mainly follow a strategy using different treatments over the whole season.

### Springtime:

Varroa-mites prefer drone brood for breeding, therefore in the beginning of the beekeeping-season, drone brood removal is used. Drone brood removal is very efficient, and easy. 4-8 sections of drone brood is removed.

### After honey harvest (August)

Formic acid is used right after the honey harvest. Different applications are used, krämerboards, free formic acid, nassenheider. Formic acid is a natural part of honey. Formic acid not only kills mites on the bees, but also in the sealed brood.

### Fall (October-September)

Lactic acid is used as a late treatment, to control a reinvasion of varroa mites. Lactic acid is very efficient.

Therefore Danish honey and wax do not contain residues of pesticides.

Erling is one of our full-time beekeepers - with very good success.

Normally we can have 3 honeyflows, orchards in the spring, rape in the summer and the very delicious heather honey in the fall.

The main-part of Danish bees are buckfast and Italians. Queens are breed for at god temper and resistance to diseases.