

# Organic Beekeeping and Biodiversity

IFOAM Workshop

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The IFOAM Organisation has developed 4 ethical principles: which build the substance of organic agriculture: A system to produce food without residues and good care and contact with the animals used.

## 4 principles:

Principle of fairness: org. agriculture should build on relationships to ensure fairness with regard to the common environments and life opportunities

Principle of health: Org. agriculture should sustain and enhance the health of soil, plant, animal human and planet as one and indivisible

Principle of ecology: Org. agriculture should be based on living ecol. systems and cycles, work with them, emulate them and help sustain them

Principle of care: Org. agriculture should be managed in a precautionary and responsible manner to protect health and well-being of current and future generations and the environment.

## In an consequence: Biodiversity is a main point in all these principles

Organic beekeeping is an important part of org. agriculture- so these 4 principles have to be considered in organic beekeeping

But this does not happen until today: Org. beekeeping looks mostly to the production of chemical free honey and persisted on the non chemical approach of the organic agricultural movement.

I see the necessity to catch up here towards these 4 ethical principles

## Biodiversity and organic beekeeping

Today: we will talk about biodiversity in org. beekeeping. There is not much effort for this subject.

Most of the beekeepers use hybrid queens to produce a maximum honey crop

And use also the Heterosis Effect

And : change their queens every year, so the queens do not reach their natural age. The reason for this practice is, that young queens guarantee strong colonies, high honey crops, and a low swarming attitude

A consequence of these practice is the loss of indigenous bee species and race all over the world

But: These indigenous bees are well adapted to climate and vegetation

### **This means a loss of biodiversity**

Regarding the four principles org. beekeeper should try to work with this indigenous bees or at least should try to preserve these bees as a genetic resource and source of biodiversity

### **The Schwartau Bee project in Egypt: Saving the indigenous bees Apis M. lamarkij**

A very interesting project in this context is our Egyptian bee project, to save the indigenous Egyptian Bees Apis M. Lamarkij together with the Schwartau marmalade company

Prof Jürgen Tautz, one of the most famous bee researchers of the world, mGünter Friedmann ( demeter beekeeper) and the German business Schwartau Marmelades, try to save the indigenous bee species apis Mell. Lamarkij from extinction.



These Apis M. lamarkij live only in the river Nile valley since many millions of years.

Egyptian beekeepers cultivated these bees for many thousands of years. We could see pictures from these bees and bee management in the Pyramides and Luxor temples.

### **Biology of Apis M. Lamarkij**

These bees build only little colonies and live in special hives made from mud from river Nile.

The bees itsselves are very little- they have the size like a fly

The queens are as big as a european bee.

They are red coloured at the abdomen.

A biological characteristic also is , that these bees produce many queen cells and queens during the swarming period.

The Lamarkij bees are very healthy, they do not know any brood diseases and they are very vital. They build natural combs and have a good swarming behavior.

But they produce only a little amount of honey per colony :2-3kg/ saison

And the hive management in the mud hives is difficult especially against Varroa.

As a consequence of the little honey crop and under the influence of american agriculture and beekeeping consultation, egyptian beekeepers were convinced to work with European honeybees, to get a bigger honey crop.

That worked well in the beginning, but now Egyptian beekeeping is damaged because these bees are not adapted to climate and vegetation, the colonies are ill and weak, and they show a varroa problem.

### **The present situation**

50 years ago : 1 Mio Lamarkij hives in Egypt

10 years ago: 8000 Lamarkij Hives

Today: 900-1000 Lamarkij Hives and 6 Lamarkij beekeepers all over Egypt

### **The Lamarkij bees are in serious danger of extinction!**

In the year 2007 we started our first experiences with Apis M. lamarkij, in SEKEM/ Egypt.

Now we continue our work based on our former experiences with the support of Schwartau, Dr. Oetker

We bought 650 of these 900 existing lamarkij hives.

In the next three years we want to increase the population to secure the genetic pool

We want to start a selection process with this bees

We change the Hives from the mud Hives to Top Bar Hives and try to developpe a easier hive management

During our work with Apis Lamarkij during the last years we observed, that these bees show a tolerance towards Varroa mite. So we stopped varroa treatment in our Lamarkij Hives 2010. The reasons for this Varroatolerance are completely unknown

our vision is:

- To preserve Biodiversity
- To show , that beekeeping with Lamarkij bees is very easy in Egypt.
- We want to make these bees again more attractive for the beekeepers there. These bees are very healthy, they are managing all things by themselves, so beekeepers will get only little honey crop, but they could many more hives in their apiary, because these bees do not need a lot of care.