



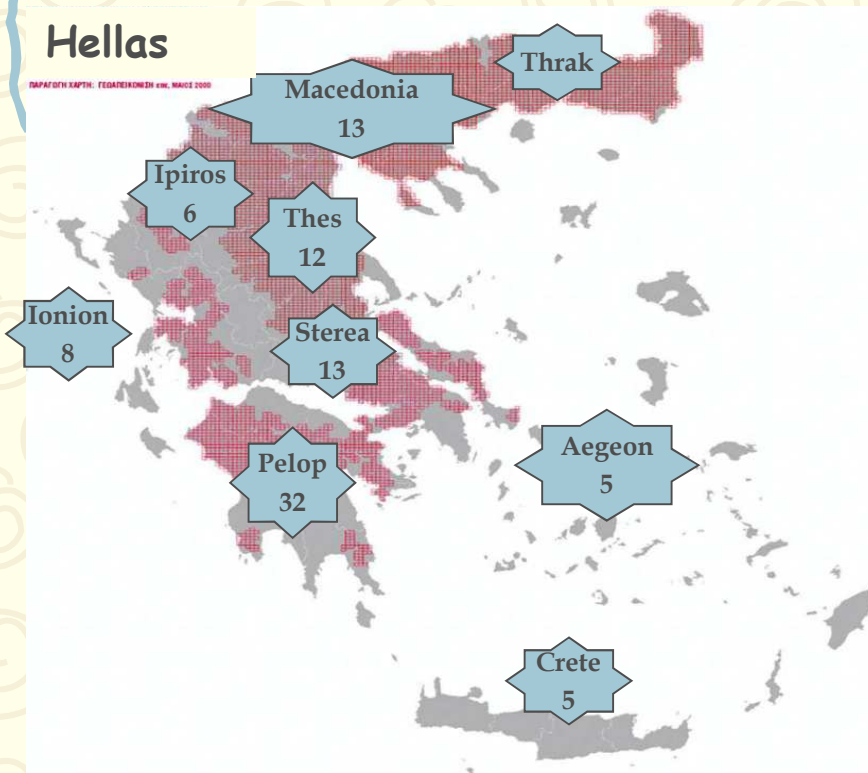
# Organic Beekeeping in Greece

Sofia Gounari

Institute of Veterinary Research of Athens,  
NAGREF



# Organic Beekeeping in Greece



94 apiaries

12.000 bee colonies (0,8% of 1.500.000)

Most of them in Peloponnesus (Mainalo, Taugetos, Parnonas)

There is an increase interest from many beekeepers, especially from Aegean and Ionian islands

# Organic Beekeeping in Greece

AGROCERT, is the Agricultural Products Certification and Supervision Organization, under the supervision of the Ministry of Rural Development and Food.

Agrocet is responsible for the evaluation, approval and supervising of private bodies (companies) that are responsible for the certification of farmers and products

In Greece there are 11 inspection and certification companies for products and systems in the agriculture and environment sector

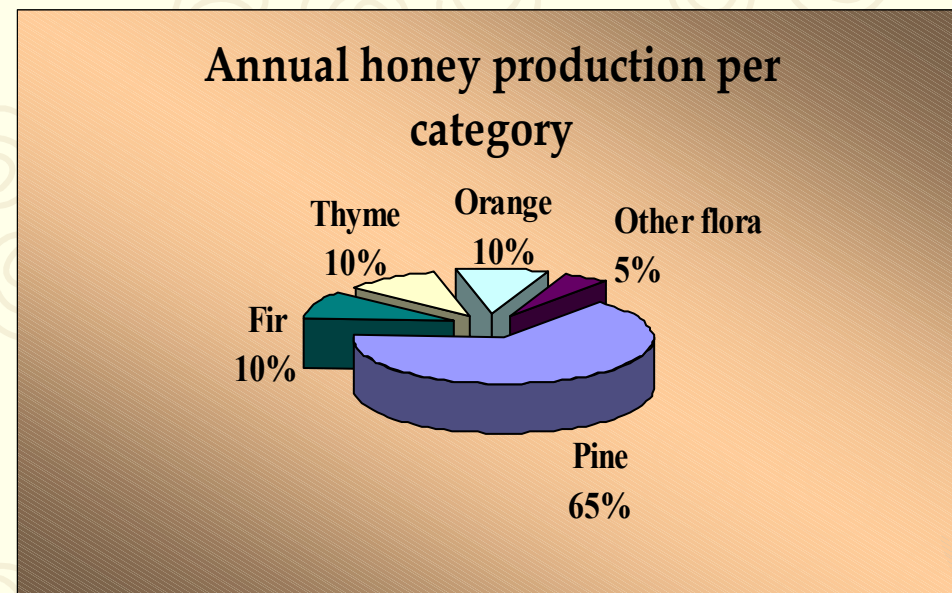
The certification budget for a beekeeper is estimated from 200€ to 500€ for 100 bee colonies for a year



Honey production in Greece (Hellas) is estimated in 12.000-15.000tn per year.

Approximately 70% of the annual honey production comply with the rules of (EC) 834/2007, according to the location of the bees.

It produces in the forests, (honeydew from pine and fir trees) or open yards (nectar from *Thymus* sp)







*So, can we say that the beekeeping in Greece is “organic”?*

NO

*But we can say that it is easy, or it has an advantage, to become...*

## *Why it is so important?*

A. Because beekeeping produce...

honey, pollen  
wax, royal jelly,  
propolis, venom,



Products which....

- ✓ are food
- ✓ with high nutritional value
- ✓ with use in medicine (**Apitherapy**)  
and in cosmetics

## B. Pollination

- Beekeeping is an important activity that contributes to the protection of the environment and agricultural and forestry production through the **pollination** action of bees.
- From **264** cultivating species The **149** need honeybees for their γονιμοποίηση
- The **86%** of forestry species pollinated from bees.)



## *How easy is to be an organic beekeeper;*

*Rather easy, because:*

- the products, produced mainly from bees, with minimal human intervention.
- they do not need alteration and they don't lose their physical characteristics for a big time interval.
- Bees have an effective immune system against pathogens (propolis, honey, hygienic behavior).
- the chemical products used against Varroa, can be easily replaced from substances friendly to the environment and/or alternative beekeeping managements (control of male brood etc)



*How easy to be an organic beekeeper;*  
And in any way the rules of Good Practicing in beekeeping matched  
to the Principles of Organic Agriculture

### Rules of Good Practicing in Beekeeping

### Principles of Org. Agriculture

➤ Respect for the bee society: study of the biological cycle of a colony in one year period

*Ecology*

➤ Beekeeping management which sustain and enhance the immune system of bee colony against diseases and enemies

*Health*

➤ Quality of queen bee

*Ecology*

➤ Replacement of the comps

➤ provide all the time fresh clean water

*Health*

*Care*

➤ Supplement feeding with honey and pollen, which produced by honeybees.

*Fairness*

➤ Attention must paid to the extraction and bottling of honey .

➤ Respect to the consumer

*Care*

## *The principles of Organic Agriculture*

### *Health*

*O. A. should sustain and enhance the health of soil, plant, animal, human and planet as one and indivisible.*

### *Ecology*

*O. A. should be based on living ecological systems and cycles, work with them, emulate them and help sustain them*

### *Fairness*

*O. A. should build on relationships that ensure fairness with regard to the common environment and life opportunities*

### *Care*

*O. A. should be managed in a precautionary and responsible manner to protect the health and well-being of current and future generations and the environment.*

## *Organic Beekeeping in Greece*

Which are the critical points in Organic Beekeeping ;

- ↪ Location of the bee colonies
- ↪ Breeding, increasing stocks
- ↪ Health of bees
- ↪ Feeding
- ↪ Wax and honeycombs





## Organic Beekeeping in Greece

### Location of bee colonies

In **summer** the main source of honey is the honeydew secretions of the species parasitized on pine, (*Pinus* spp), fir (*Abies* spp) and oak (*Quercus* spp) trees

Also in uncultivated areas, bees can harvest the nectar from *Thymus* spp,

In **autumn** the beekeeper can move the bees in mountain areas with *Erica* or *Arbutus* and in **spring** he can harvest the polyflora honey from *Origanum*, *Salvia*, *Cistus*, etc.

Only in winter the beehives may neighbored to cultivated areas, usually with olive trees. And this is something that the certificate authority must consider, when they analyzed the products





## Organic Beekeeping in Greece

### Breeding - increasing stocks

- The aim of breeding is to produce queens, bees, which are adapted to the **local conditions**, productive and resistant to diseases.
- Natural breeding and reproduction methods used
- The beekeepers usually anticipate swarming by creating artificial swarms and dividing the remaining colony to increase stocks further, as well as to re-unite anticipated swarms



## *Organic Beekeeping in Greece*

### Health of bees

The optimum in beekeeping is a bee colony reared in such a way that it is capable of correcting and imbalances by itself.

The managements must retain and promote the natural curative power and the vitality of the bee colonies



# Organic Beekeeping in Greece

## Health of bees

**virus**

sacbrood

**Acute paralysis**

**bacteria**

american foulbrood

european foulbrood

**protozoan**

nosema

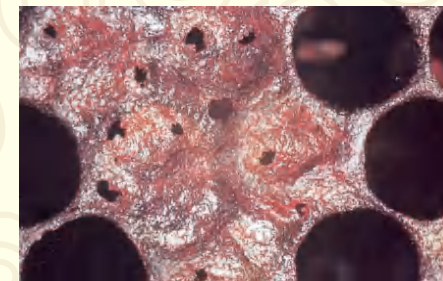
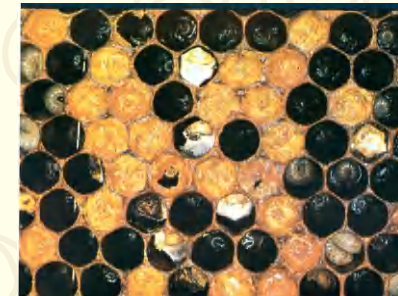
**fungus**

chalkbrood

**acari**

acarapis woodi

varroa





# Organic Beekeeping in Greece

## Health of bees

virus

sacbrood

**Acute paralysis**

bacteria

american foulbrood

european foulbrood

protozoan

nosema

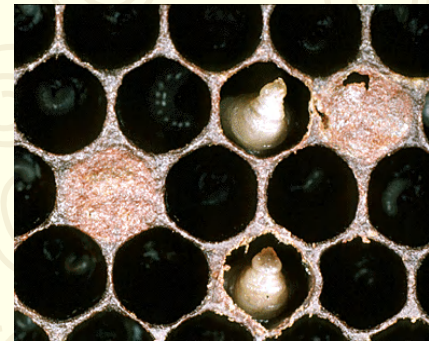
fungus

chalkbrood

tracheal mite

acari

varroa



Beekeeping managements





# Health of bees

## Treatment for Varroa

According to (EC) 834/07

Formic acid



The trickling method  
for oxalic acid



Essential oils  
Menthol, Thymol,



# Health of bees

## Treatment for Varroa

Removal of drone brood



Screen bottom



Icing sugar (dusting with sugar)



Control natural mite fall



thermotherapia





## Supplementary Feeding

The best food for the bee is their food !!

- Greek beekeepers use their **honey**, some times diluted in water, or mixed with organic **sugar**, as **candy**.
- Also they help bees with **pollen**, gathered from the same bee colonies, as it is or also mixed with sugar, when there is a shortage of pollen, usually in the end of summer or autumn



## Wax and honeycombs



According to (EC) 834/2007 a beekeeper must replace all the honeycombs of his bee colonies by the end of the conversion period of one year.

In Greece the certificate companies ask the beekeeper to change all or a percentage of the honeycombs.

As there is not, until now, organic wax in the market, this is difficult, especially in draw years.

But it is very important to do so, that's why we believe that the beekeeper is better to help the bees with sugar at the conversion period and begin with new "clean" honeycomps



The bees are screaming : We are not happy. !  
Can we listen?



## Colony Collapse Disorder (CCD)

- pesticides
- Beekeeping managements
- Migratory stresses
- Lack of genetic diversity
- Nutritional fitness
- Pathogens
- Genetically modified crops
- Environmental contaminates
- Radiation
- Climatic changes

### BEEKEEPER

- ✓ Too many transportations
- ✓ Inadequate diet
- ✓ Quality of the queen
- ✓ Chemical use in bee colonies

Is, in this situation, Organic beekeeping is an alternative

Which can make bees' and beekeeper's life better

{ The (EC) 834/2007 (as all the EC regulations) has the principle of flexibility.

Each country can (must) adapt it in local conditions and give the beekeeper a chance to realize that, organic beekeeping is **feasible** and **viable**, and perhaps “one way road”

Now days in Greece honey from org. beek. is expensive in the market (20-25 €/kg). Many people can't buy it.

But if more and more beekeepers turned to organic beekeeping, more and more honey of great nutritional value, will reach to all families.

And then we will have also the consumer happy

*O. A. should sustain and enhance the health of soil, plant, animal, human and planet as one and indivisible.*

*O. A. should be based on living ecological systems and cycles, work with them, emulate them and help sustain them*

*O. A. should build on relationships that ensure fairness with regard to the common environment and life opportunities*

*O. A. should be managed in a precautionary and responsible manner to protect the health and well-being of current and future generations and the environment.*

And of course we must always keep  
in mind that

organic beekeeping and organic  
agriculture don't produce only food  
without chemicals,

The most important is that it is  
training men to realize that he  
must live as a part of the earth  
and not as GOD



*Thank you*