

HONEY BEE
DISEASES AND
PESTS

HISTORY

- The first appearance of honey bees in the earth is dated in the third geological period in which the vegetation cover develops, that is millions of years ago.
- In Myanmar, the oldest honey bee fossil has been found inside an amber, 100 million years old.

- The origin of the honey bees is thought from to be Tropical Africa.
- In the early ages, honey bees that firstly live in the tree trunk and rock holes as wild, have been controlled and domesticated by humans over time.

- As a result of the archaeological investigations, it has become clear that apiculture extends to the early stages of the human history.
- We can see it in the stone wall paintings of Spain's PAUKA caves drawn 12,000 years ago.

- It has been unearthed by the excavations in ancient Egypt that honey had an important place in that dates and approximately 4000 years old honey was found inside the pharaoh's tombs.
- Besides, the sign of the honey bee had become a symbol of the kings.
- The honey was used as a sweetener by the upper-class people in ancient Egypt, and as a treat, as for faith and medical purposes by pharaohs and other elite classes.

- The story of honey bee and human are dated to very ancient times in Anatolia where beekeeping has been done for thousands of years.
- Anatolia has various suitable vegetations and habitats for beekeeping in terms of its geographical location and climate.

- Historical documents obtained from Boğazköy excavations revealed that beekeeping was an important agricultural activity in Hittite civilization which is one of the earliest civilizations that lived in Anatolia.
- It has been seen that there are various laws and sanctions concerning beekeeping on a manuscript tablet (belongs to 1300 years BC) obtained from the excavations in there.
- For example; a beehive = 1 sheep
- 1kg honey = 1kg butter

- In the Hellenistic period, it has been known that the Greeks deal with beekeeping.
- Aristotle (384-322 BC) mentioned on honey bees and their diseases in detail in his book namely "The History of Animals".
- It is known that ancient Greeks used ruskie (basket hive) weaved from stems and wooden hives.
- During the Roman period, it is also seen that there were important studies about beekeeping.
- Pythagoras claimed that he owed his long life to honey. Democritus, who was 100 years old, also said the same thing.
- Hippocrates had used honey in bowel diseases and he has been written his name in medical history as the first person to use honey bee poison.

- Provisions related to the beekeeping are available in the codexes introduced in the periods of Ottoman Sultans; Fatih Sultan Mehmet, Yavuz Sultan Selim, and Kanuni Sultan Süleyman.
- Honey bee and honey are also mentioned in the sacred books such as the Bible and the Qur'an
- Nahl sura (especially verses 68 and 69), which is the 16th sura of the Qur'an, speaks about honey bee and honey.
- Muhammad gave an advice as "Eat honey, you will find healing".
- In the Bible, the word of honey passes 55 times.

- In the excavations in the city of Tel Rehov located in the north of Israel, an unprecedented apiary (bee yard) has been discovered.
- Archaeological excavations since 1997 showed that honey bee hives were found on the 5th layer in the northwest corner of the city.
- According to the C14 results, it was determined that archeological remains were based on 940-860 BC.

- In the region, the presence of beehives built monumentally has been discovered.
- It has also been observed that various religious rituals have been carried out in the apiary
- Interestingly, it has been determined that Apis mellifera anatolica was used as honey bee subspecies as a result of studies conducted in this place which is considered as the world's oldest apiary.

- Surveys have revealed that beekeeping is common in almost every place where plant cover is found.
- It has took many years for the honey bee to be removed from the primitive hives and tree coves and placed in today's modern bee hives.
- Thanks to high productive honey bee breeds and modern hives, honey production is steadily increasing in various countries today.
- On the contrary, the primitive beekeeping is still going on in many countries.

The Place and Importance of Beekeeping in Agriculture

- Beekeeping forms a production line between agricultural enterprises.
- Generally, secondary income is generated by beekeeping as a second job.
- When we divide the agriculture enterprises into 3 main divisions, namely field agriculture, vineyard and animal husbandry, it seems that the beekeeping is adapted to these 3 agricultural branches.

The Place and Importance of Bees in the Pollination of Flowers

- The bees play an important role in the pollination of flowering plants and fruit trees, and this causes an increase in plant population.
- In this way, they play an important role in pollinating of 80% of the plants on the world.
- The products they provide through pollination are 20 times larger than honey and other honey bee products.
- Honey bees are also used to increase efficiently in greenhouse production.

The Place and Importance of Beekeeping in the Country's Economy

- With beekeeping;
 1. Honey (nutrition)
 2. Beeswax (Industry)
 3. Bee and queen bee
 4. Royal jelly (medication)
 5. Pollen (nutrition)
 6. Bee venom (medication)
 7. Propolis (medication)
- Honey bee creates a business line and a source of livelihood for the citizens at every level unit it is marketed.

- Turkey ranks the second in terms of the number of colonies and honey production in the world after China.
- Turkey also ranks as the first in the world in terms of the number of colonies per km².
- However, it is also known that the average honey production per hive in Turkey is well below.

- It is known that the motherland of 20% of known honeybee breeds in the world is Anatolia.
- While one distinct honey bee bred and honey variety come into prominence in many countries, a large number of honey bee breeds and ecotype exist in Turkey.
- Turkey is one of the few countries in the world where beekeeping is done during 9 months.
- There are many different kinds of honey (pine, flower, chestnut, chaste-berry, acacia, citrus, thyme etc.) in Turkey.

The Evolution of Bees

- Anatolia has played an important role in the evolution of many life forms due to its wide variety of climatic conditions, geologic structure which shows great differences to the region from the region and a natural bridge between Africa, Europe and Asia.
- Honey bees have adapted to the local climatic conditions and flora during the evolution they have been through.
- People have turned their harmonies into economic benefits.