

## National and Global Impact of COVID-19 on Beekeeping

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The COVID-19 pandemic influenced our daily life and many people working in different fields[1]. Among these people were scientists. Especially for people who continue their research with field studies, not being able to go out has created an important challenge. Beekeeping and bee science are also based on field study. Even laboratory work in bee research is done by working on samples collected from field. Therefore, it is not possible for bee research to be affected by the COVID-19 pandemic. However, the degree of influence is not yet clear. Because all mechanism of action will be chained. Currently, the first link of the chain is experienced. Failure to go out, laboratory works to be done will result in not writing article. Economic interactions will reduce new project supports. Such effects are predictable. In addition, there are unforeseen effects. Therefore, it is

considered that the real effects of COVID-19 will appear objectively in 2021.

Impact of COVID-19 outbreak on the beekeeping in Turkey, people over age 65 since the beginning of the pandemic has emerged with the curfew. The average age is 55 and over of people who are beekeeper in Turkey, has led to the majority of beekeepers affected by the curfew.

The first case to be seen in Turkey in March has a disadvantage due to the beginning of the beekeeping season. Activities such as maintaining apiary, cleaning hives, fighting Varroa, feeding were not done regularly. Neighbors or young friends took care of the bees of our beekeepers aged 65 and over. In addition, bee health and bee product analyzes could not be conducted due to the universities stopping their activities.

Migratory beekeeping as common beekeeping activities in Turkey, especially during the initial phase of a pandemic,

outside the province could not be held due to travel restrictions. Later, farmers were able to travel with special permissions and hive transfers were made. Considering that beekeeping is the most important agricultural branch, negative feedback of the restriction of beekeeping activities will surely be in the COVID-19 pandemic.

In universities, COVID-19 pandemics negatively the most affected laboratory studies and face-to-face network environments such as congress, conference, symposium. Since lessons and graduate education are carried out online, they have been the least affected by the pandemic.

Looking across the world, the best work which summarizes the current situation was done by the COLOSS Association. In fact, although countries have different

approaches, COVID-19 has shown similar results in almost all countries [2].

In the survey by COLOSS, 230 participants from 56 countries answered questions about COVID-19. This is the first study in global size and using measurable data for statistical analysis. The results will be published soon. This study will be an important resource for risk assessments in beekeeping for the next years.

All interactions show that national impact of COVID-19 is parallel with global one. Another conclusion we will consider is that it is still too early to fully talk about the effects of COVID-19. The reflections of the process we are currently experiencing will only emerge concretely next year.

Keywords: Covid-19, Corona virus, pandemi, apiculture, apicultural research, beekeeping

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