

We are IntechOpen, the world's leading publisher of Open Access books Built by scientists, for scientists

4,800

Open access books available

122,000

International authors and editors

135M

Downloads

Our authors are among the

154

Countries delivered to

TOP 1%

most cited scientists

12.2%

Contributors from top 500 universities

**WEB OF SCIENCE™**Selection of our books indexed in the Book Citation Index
in Web of Science™ Core Collection (BKCI)

Interested in publishing with us?
Contact book.department@intechopen.com

Numbers displayed above are based on latest data collected.
For more information visit www.intechopen.com



Introductory Chapter: Actuality and Trends of Beekeeping Worldwide

Ramón Rebolledo Ranz

1. Introduction

Both biodiversity and food production rely heavily on the role that play pollinating insects, especially honeybees (*Apis mellifera*), so much so that of the 100 cultivated species that give 90% of the world's food, 70% are pollinated by bees and other native insects. In Europe it is estimated that 84% of commercial crops and 80% of natural plants depend on bee pollination. It is estimated that the contribution of bees to pollination corresponds to 22,000 million euros for Europe and 265,000 million dollars for the rest of the world.

Nonetheless, bee populations are suffering a sharp decline in their populations, due among other things to loss of environment, inadequate agricultural practices such as monocultures and pesticides, new diseases and parasites, and climate change. On the other hand, the significant increase in the world's population has brought with it a greater demand for food, which is increasingly innocuous and of better quality. To respond to this great demand, it has been necessary to resort to an increasing use of inputs such as fertilizers, pesticides, and growth regulators, among others, which affect various organisms of the ecosystem including natural pollinators and honeybees.

There is a growing concern in regards the colony collapse (CCD) issue over the world. There is a wide range of literature on how to solve this problem and which are the economic and ecological implications this represents. So much so that the European Economic Community has already banned the use of Neonicotinoid pesticides, considered as one of those responsible for the loss of hives in the world. Despite the aforementioned problems faced by beekeepers, the commercial exchange of honey has had an important increase of 12% annually in its value and 8% in quantity, being China, New Zealand, Argentina, Mexico, and Germany the main honey exporting countries (**Figure 1**), while the United States, Germany, France, the United Kingdom, and Japan are the main importing countries of honey in the world (**Figure 2**)

The honey production of bees has shown an important growth in the last decades with 1,860,712 tons (**Figure 3**), growth mainly given by the Asian continent. On the other hand, the number of hives has had a significant increase (**Figure 4**), this being higher than the 80 million hives.

In most of the continents, there have been few significant changes in honey production in the last 10 years, with the exception of Asia which has shown strong growth due to the important influence of China. However, even though there is growth in terms of the number of hives and the production of honey, new problems have appeared in the world concert, such is the case of adulterated and counterfeit

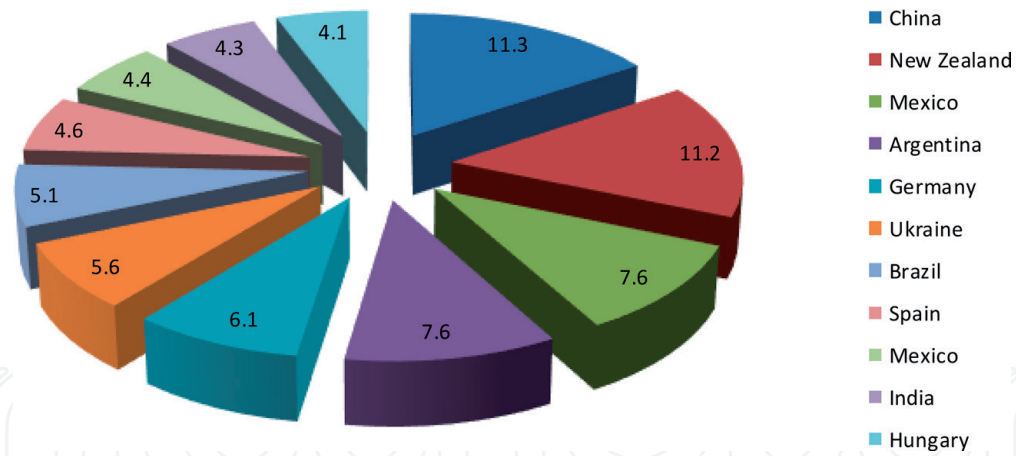


Figure 1. Leading countries in the export of honey and percentage of participation in the world market year 2017 (FAO source, FAOSTAT) [1].

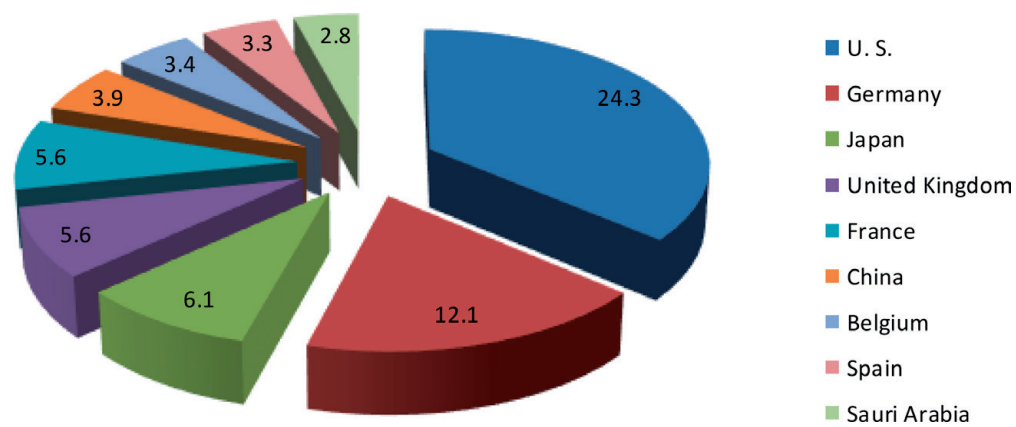


Figure 2. Main countries importing honey and percentage of participation year 2017 (FAO source, FAOSTAT) [1].

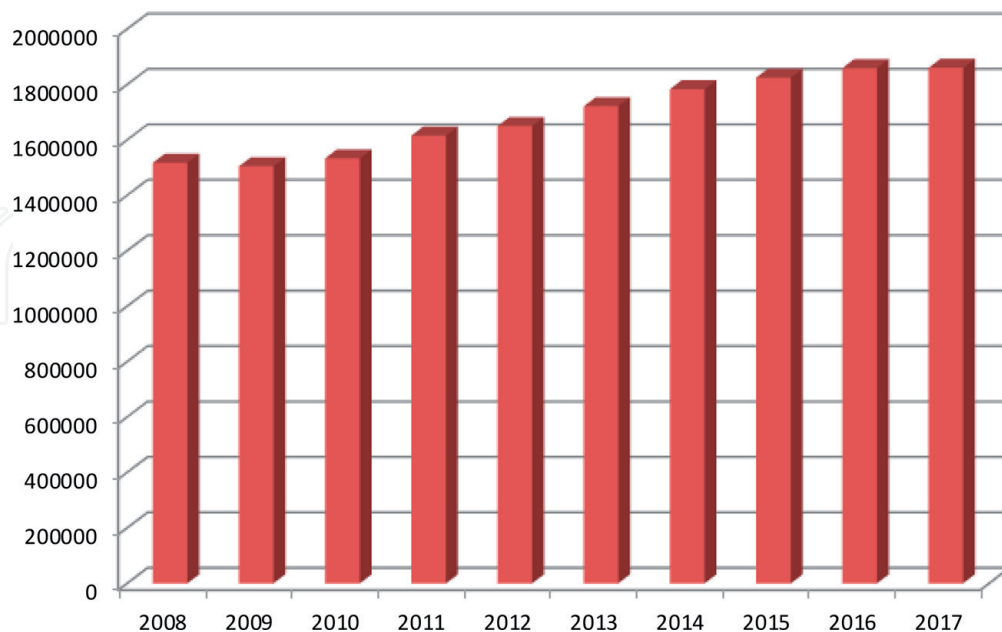


Figure 3. World honey production year 2008–2017 in tons of honey.

honeys, which, in the particular case of China, has been discovered by commercializing counterfeit and adulterated honeys that seriously affect countries that cannot compete in these conditions. In recent years, the production of honey has

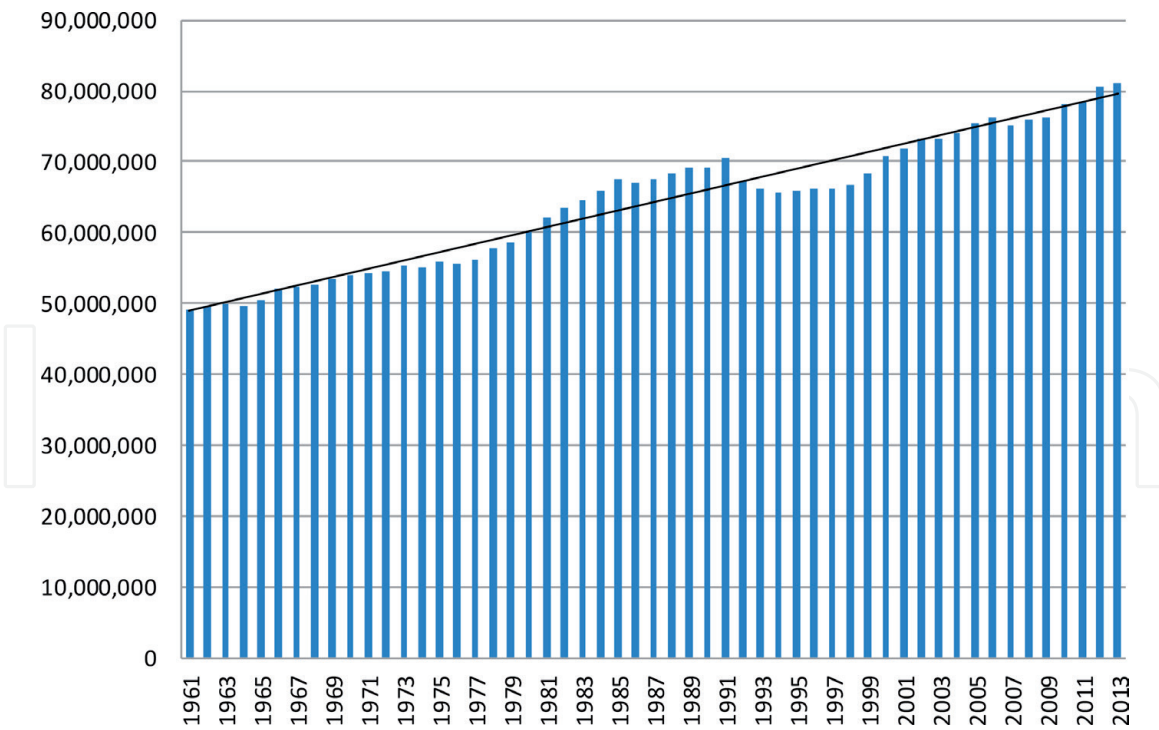


Figure 4.
Number of beehives worldwide.

suffered severe losses due to climate change conditions (with extreme droughts), and in particular, the application of glyphosate herbicide that appears in honey in crops and complicates and slows its commercialization is the main challenge facing beekeeping today.

IntechOpen

Author details

Ramón Rebolledo Ranz
Faculty of Agricultural and Forestry Sciences, University of La Frontera,
Temuco, Chile

*Address all correspondence to: ramon.rebolledo@ufrontera.cl

IntechOpen

© 2020 The Author(s). Licensee IntechOpen. This chapter is distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/3.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. 

Reference

[1] FAO STAT 2018. Available at: www.fao.org/stat visited may 2019

IntechOpen

IntechOpen