

## Agriculture and Apiculture in Afghanistan

By Reza SHAHROUZI

International Counsellor for Agriculture & Apiculture

Qazvin-Iran.P.O.Box 34185-451

rezashahrouzi@yahoo.com

Phone :+98 281 3687061

Fax: :+98 281 2227144

MOBILE :+98 912 5819733

### Presentation

The Islamic Republic of Afghanistan with a population of 30,000,000 inhabitants, and surface of 249,999 sq miles (647,497 sq km), is bordered by Iran on the west, by Pakistan on the east and south, and by Turkmenistan, Uzbekistan, and Tajikistan on the north; a narrow strip, the Vakhani (Wakhan), extends in the northeast along Pakistan to the Xinjiang Uygur Autonomous Region of China. The capital and largest city is Kabul.



The greatest part of the country is steeply sloped with mountains, the ranges fan out across the centre of the country from the towering Hindu Kush (reaching a height of more than 24,000 ft/ 7,315 m). There are, however, within the mountain ranges and on their edges, many fertile valleys and plains. In the south, and particularly in the southwest, are great

stretches of desert, including the regions of Seistan and Registan. To the north, between the central mountain chains (notably the Selseleh-ye Kuh-e Baba, or Koh-i-Baba, and the Paropamisus) and the Amu Darya (Oxus) River, which marks part of the northern boundary, are the highlands of Badakhshan (with the finest lapis lazuli in the world), Afghan Turkistan, the Amu Darya plain, and the rich valley of Herat on the Hari Rud (Arius) River in the northwest corner of the country (the heart of ancient Ariana). The regions thus vary widely, although most of the land is dry.

The rivers are mostly not navigable; the longest is the Helmand, which flows in a southwest direction from the Hindu Kush to the Iranian border. Its water has been used since remote times for irrigation, as have the waters of the Hari Rud and of the Amu Darya. The Kabul River, beside which the capital stands, is particularly famous because it leads to the Khyber Pass and thus south to Pakistan.



Although warfare in Afghanistan during the late 20<sup>th</sup> century caused substantial population displacement, with millions of refugees fleeing into Pakistan and Iran, regional ethnicity remains generally the same as it was before the unrest. Tajiks live around Herat and in the northeast; Uzbeks live in the north, and nomadic Turkmen live along the Turkmenistan border. In the central mountains are the Hazaras, of Mongolian origin. In the eastern and south central portions Afghans (or Pashtuns), who make up the country's largest ethnic group, are dominant, and Baluchis live in the extreme south. Dari (Afghan Persian), Pashto (Afghan), and various Turkic tongues (mainly Uzbek and Turkmen) are the country's

principal languages. A unifying factor is religion, almost all the inhabitants being Muslim; the large majority (about 80%) are Sunni, the minority Shiite. In addition to Kabul, important cities include Kandahar, Herat, and Jalalabad.



## **Economy**

Agriculture is the main occupation, although less than 10% of the land is cultivated; a large percentage of the arable land was damaged by warfare during the 1980s and 90s. It consists largely of subsistence crops including wheat and other grains, fruits, and nuts. The opium poppy, grown mainly for the international illegal drug trade, is the most important cash crop, and the country is the world's largest producer of opium. Grazing is also of great importance to the economy. The fat-tailed sheep are a staple of Afghan life, supplying skins and wool for clothing and meat and fat for food.

Mineral wealth is virtually undeveloped, except for natural gas. There are deposits of coal, copper, chromite, talc, barites, sulfur, lead, zinc, iron ore, salt, emeralds, and lapis lazuli; oil fields are found in the north. Some small-scale manufactures produce cotton and other fabrics, furniture, shoes, fertilizer, and processed agricultural goods. Extremely high levels of unemployment, about 40% in 2005, have resulted from the general collapse of Afghanistan's industry.

Opium, fruits and nuts, hand-woven carpets, wool, cotton, lambskins (Karakul), and gemstones are the main exports; capital goods, foodstuffs, textiles and other manufactured goods, and petroleum products are the main imports. As a result of civil war, exports have

dwindled to a minimum, except for the illegal trade in opium and hashish. The country has also become an important producer of heroin, which is derived from opium. Afghanistan is heavily dependent on international assistance. The main trading partners are Pakistan, the United States, and India.



Road communications throughout the country are poor, although existing roads have undergone reconstruction since the end of Taliban rule; pack animals are an important means of transport in the interior. A road and tunnel under the Salang pass, built (1964) by the Russians, provides a short, all-weather route between N and S Afghanistan.

## Apiculture

Honeybee species indigenous to Afghanistan include *Apis cerana* and *Apis dorsata*. *Apis florea*, was recorded previously, but perhaps needs re-identification. *Apis mellifera*, the European honeybee, was introduced into Afghanistan by the FAO in 1965.

The author saw 150 colonies of *Apis mellifera* in Afghanistan, they were small, weak, docile and easy to handle. 10 to 40 kg of honey per *Apis mellifera* colony per year. In Pakistan and northern India (Haryana, Punjab) beekeeping with European honey bees is practiced on a large-scale. In these areas where beekeeping was not practiced previously, *Apis mellifera* is proving successful. These are dry plains with large-scale, irrigated agriculture: monocultures of sunflower and *Brassica* provide excellent forage sources for bees.

Beekeepers practice migratory beekeeping, moving stocks to new areas as plants come into

flower. In areas bordering the Hindu Kush Himalayas the diversity of habitats means that flowering plants are available throughout the year. This is an exceptionally good region for beekeeping and harvests well above 20 to 30 kg per colony per year can be generated. Migratory beekeeping requires transport, roads, skilled staff, and equipment suitable for continuous movement of bee colonies.



With suitable management methods, *Apis mellifera* delivers higher yields of honey and beeswax than *Apis cerana*. The input costs will also be greater. This is because *Apis mellifera* is an exotic species from a temperate climate, and requires more resources (time, treatment against endemic diseases and predators). It is already well known from other countries in Asia that beekeeping with *Apis mellifera* can be more economical than with *Apis cerana* when practiced on a large-scale. If the aim of a project is to assist landless or the poorest of farmers, the promotion of *Apis mellifera* may be inappropriate. Afghan beekeepers are largely unaware of diseases, its recognition and control, and this will cause further spread of the disease. Because the beekeeping methods and technology are brought from Pakistan, this gives rise to a dependence on Pakistan for the provision of materials, in particular the beeswax foundation sheets needed for beekeeping with frame hives.

There has been little fresh initiative to promote a self-sustainable method of beekeeping that is appropriate for the rural poor. Technical support for beekeeping is essential in view of the various NGO's now proposing beekeeping interventions. The NGO Terre des Hommes imported from Tajikistan 150 colonies for Rustaq in Afghanistan from 2008 to 2009. Rustaq now have 1000 colonies with 91 beekeepers, 22 of which are women beekeepers and one

active cooperative. The beekeepers were trained by Reza Shahrouzi from 2008 to 2010, this was organized by the NGO Terre des Hommes.



Traditional hives and wall hives might give a yield of around 6 to 10 kg of honey per year. These yields are low relative to those potentially obtainable from frame hives. However many poor beekeepers often only harvest similar amounts of honey from their frame hives as they could have harvested from log or wall hives. A beekeeper could have many traditional hives for the cost of one box hive with frames. However, when projects provide boxes free of charge, such economic considerations are often missed.

## Conclusion

Afghanistan has 150.000 to 200.000 colonies according to Mr. Sannie Satti, Sayed khan Panjshri, Director of the cooperative and Reza Shahrouzi 2010. Modern hives might give a yield of around 10 to 40 kg of honey per year. This can make a big economical difference for an Afghan family. In 2004, I published an article about the creation 10.000 jobs. It was a ten-year plan to create 10,000 jobs in beekeeping with 1.000.000 colonies. I wrote a book for beekeeping guidelines in Dari and translated several CDs produced by OPIDA into the Dari language for Afghani beekeepers. I hope that by 2015 Afghanistan will have reached the 1.000.000 hives with 10.000 beekeepers. Since 2005, Franco-Afghani collaboration has been very active with my colleague Marc Jean. Jean has been involved since 2005 as have several NGOs working for rural development following my report in 2004. They are working on a 10

year plan to create 30,000 jobs in different agricultural activities such as arboriculture, cattle and sheep breeding, green house production etc.. This is much needed for the future in Afghanistan.

## Bibliography

*Reza Shahrouzi ,La Situation actuelle de l'apiculture Afghane 20.07.2009.*

[http://www.beekeeping.com/articles/fr/api\\_afghan.pdf](http://www.beekeeping.com/articles/fr/api_afghan.pdf)

*Reza Shahrouzi ,Causes de mortalite' des colonies d'abeilles en Afghanistan,Iraq Iran 22.03.2009.*

[http://www.beekeeping.com/articles/fr/abeilles\\_afghanistan\\_iran\\_iraq.pdf](http://www.beekeeping.com/articles/fr/abeilles_afghanistan_iran_iraq.pdf)

*Reza Shahrouzi ,La creation 10.000 emplois en apiculture pour les Afghans 13.02.2009.*

[http://www.beekeeping.com/articles/fr/emplois\\_apiculture\\_afghanistan.pdf](http://www.beekeeping.com/articles/fr/emplois_apiculture_afghanistan.pdf)

*Reza Shahrouzi ,Natural and chemical control of Varroa destructor and Tropilaelaps mercedesae in Afghanistan 25.07.2008.*

[http://www.beekeeping.com/articles/us/natural\\_chemical\\_control\\_of\\_varroa.pdf](http://www.beekeeping.com/articles/us/natural_chemical_control_of_varroa.pdf)

*Reza Shahrouzi ,L'apiculture dans le developpement agricole l'exemple de la region de Rustaq en Afghanistan 25.07.2008*

[http://www.beekeeping.com/articles/fr/apiculture\\_developpement\\_agricole\\_afghanistan.pdf](http://www.beekeeping.com/articles/fr/apiculture_developpement_agricole_afghanistan.pdf)