

# **Rehabilitation of beekeepers and Rebuilding of bee keeping industry in flood affected areas of Khyber PuktunKhwa Province Pakistan/**

## **PAK-GERMAN REHABILITATION INITIATIVE OF FLOOD AFFECTED BEEKEEPERS OF 2010 IN KHYBER PAKHTUNKHWA PROVINCE PAKISTAN**

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### **Abstract**

Bee keeping is important business in Pakistan

### **Introduction**

Bee keeping is important business in Pakistan and about 7000 beekeepers are involved in this. There are 400,000 colonies which produce 12,000 metric tons of honey annually. The country's total honey export is about US \$ 5 million. Efforts are underway to touch the mark of US \$ 15 million in next five to six years. Honey bee flora is present in abundance in many parts of the country. Due to lack of proper rules and regulations the state and the beekeepers are not getting the full advantages of this product. According to a report, 20 per cent of honey is lost every year due to untrained beekeepers. However, carrying capacity of floral source has potential of 10 times.

In Pakistan several attempts were made to introduce *A. mellifera* by various scientists from 1927 to 1976 but without any success. However, after 16 unsuccessful attempts, Pakistan Agricultural Research Council (PARC) took this challenging job and during 1977 imported some *A. mellifera* colonies as package bees from Australia. Out of these some were multiplied at research stations and few were given to progressive beekeepers associated with indigenous honeybee at that time. This was PARC successes introducing this species and traditional beekeeping switched to beekeeping with *A. mellifera* in Langstroth modern beehives. Most of the beekeepers are now getting optimum results. Bee keeping was promoted in through colony management, queen breeding, honey extraction techniques, reduction in post-harvest losses, nutrition, pests and diseases improving skills of beekeepers, wax recycling for wax foundation sheets through training to agricultural extension staff, beekeepers, universities, research institutes and technical training institutes.

The floods Of 2010 caused havoc in the country including the hilly areas of Pakistan Beekeeping industry were badly affected by July 29, 2010 devastated floods and torrential rains. The flood hit districts of Charsadda, Peshawar, Nowshera, Swat, Dir, Chitral and D I Khan. The

Khyber Puktun Khah (KPK) government planned to train 8000 manpower including 1000 females besides distributing 2500 bee-boxes on concessional rates among flood hit beekeepers to bolster their income.

The women of Gilgit –Baltistan have worked hard to provide food and shelter for their families, but now they have lost everything including the lives of loved ones. The entire beekeeping community, in Gilgit, Hunza-Nagar, Ghizer, Chitral and Kalash Valley has been severely affected by Monsoon rains and floods that of August September 2010. These floods resulted in massive infrastructural damage and property losses, including the loss of 762 bee hives estimated in \$80,772. The cost of each beehive is \$106. In this background this rehabilitation venture was undertaken.

### **Material and Methods**

AS this flood subsidized it was found that heavy damage has been caused to crops, livestock and settlements. The situation was quite grim in the flood affected areas. The beekeeping industry suffered colossal loss Therefore a survey was conducted in the flood affected areas of KPK province, and losses were estimated. Personal visits were made and details of individual sufferers were collected. Afterwards the beekeeper that were badly affected was indentified. This was all possible through the personal efforts of Mr. Hermann Kricher, Progressive German Scientist/ beekeeper. These were given bee colonies and awareness provided training

After discussion with different stakeholders it was finalized to provide bee colonies these affected peoples. In addition to this they were given 4 day training on modern bee management. They were also provided with bee related equipment.

### **Results**

The Beekeepers were divided into two groups. One is Swat group and the other is Nowshehra group. Two hundred honeybee colonies were distributed among the twenty floods affected beekeepers of Swat and Nowshera in 2013. This included two women also. Each bee keepers was given 10 colonies. Each beehive was thoroughly checked for their health and strength before being given to bee keeper. These colonies were arranged through a tender case. After a survey in the open Market only one firm was found who committed to provide us

Standard equipment that included Smoker, hive transportation belts, hive tool, Uncapping fork, bee veil, bee brush, food grade plastic honey can.

Pollen trap and hornet trap was prepared for them at the Honey bee Research Institute's wood workshop. One kg of beeswax comb foundation sheets was also provided to each beekeeper. Two set of honey extraction equipment was manufactured in the local market which includes four frame Stain less steel honey Extractor with stainless steel Uncapping tray and double strainer. One set was given to each group. The ten beekeepers from each group have access to it for honey extraction. The leader of that group was made responsible that every one is benefitted. Due to shortage of money every one could not be provided with an individual set of honey extraction equipment.

Training was provided on colony management, queen breeding, honey extraction techniques, reduction in post-harvest losses, nutrition, pests and diseases and pollination of entomophilous crops, improving skills of beekeepers, wax recycling for wax foundation sheets.

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