

Beekeeping – A sweet reward to farmers

under Farmer FIRST Programme in Punjab

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The Farmer FIRST Programme as a concept of ICAR is developed as farmers in a centric role for research problem identification, prioritization and conduct of experiments and its management in farmers' conditions. The focus is on farmer's Farm, Innovations, Resources, Science and Technology (FIRST). Farmers tend to face problems related to production and natural resource management but they might not have found the solutions to overcome them. In such situations, Farmer FIRST Programme is an opportunity for the researchers, extension professionals and farmers to work together and find appropriate ways through assessing different solutions.

Key words: Beekeeping, Direct marketing, Subsidiary enterprise, Trainings and demonstrations

IN under the ICAR-Punjab Agricultural university (PAU), Punjab, Farmer's FIRST Programme (FFP) was chosen to implement in district Sangrur. The project is operational in two villages i.e. Chatha Nanhera and Taranji Khera. Sangrur is one of those districts where the area under crop diversification has decreased. Crop patterns are dominated by wheat-paddy rotation, which occupies about 84% of the cropped area of selected villages. The project activities started in selected villages Chatha Nanhera and Taranji Khera during February 2017. Based on the baseline survey, it was concluded that the farmers in these villages were mostly dependent on the wheat-paddy rotation for their livelihood and farmers showed minimal interest in adopting subsidiary occupations. They were unaware of the prospects of the subsidiary occupations and unable to harness innovative techniques available in the region. The income

from the crops has reached at a level from where it cannot be increased further. Subsidiary enterprises offer an important alternative for increasing income of the small and marginal farmers. However, these initiatives were lacking in the project area, so farmers in the selected villages needed to be educated and trained, demonstrated entrepreneurship skills, and institutional convergence and networks need to be created to facilitate marketing and processing.

Beekeeping is an important



Fig. 1. Successful beekeepers Shri Dara Singh from village Chatha Nanhera and Shri Naib Singh from village Taranji Khera, Sangrur district, Punjab

subsidiary occupation which is suitable for small and marginal farmers, unemployed youth and farm-women. Beekeeping enterprise does not require land, shed, capital resource, sophisticated and costly equipment, and at the same time, can enhance farmer's income with little pressure on the land and water resources. For this purpose, farmers at the community and individual level were apprised with the benefits of beekeeping and process to start enterprise. Several group meetings were conducted in the operational villages in which they were made aware and motivated to start a new venture and add up to their farm income. The farmers were so motivated that instead of 10 farmers, as per project requirement, 15 farmers attended beekeeping training. Hands-on practical training in beekeeping was provided to the farmers from the selected two villages during 11-17 October 2017 (Table 1). The trainees were provided with hands-on practice on management of honey bee colonies during different seasons, management of bee diseases and enemies, extraction of honey and purification of bee-wax. The trained farmers were provided with a total of 70 honey bee colonies along with 70 beehives with the super chamber and queen excluder, feeders, bee veils, hive tools, comb foundations and sulphur etc. Every selected farmer got a unit of 5 bee boxes along with honey bees and other required equipment.

After the successful introduction of beekeeping in the villages, the startup farmers were continuously monitored by experts during the first year of adoption of this enterprise. They were provided with all technical knowhow during every change in season. As a result, 13 out of 14 selected beekeepers not only successfully maintained their honey bee colonies but also produced honey. These beekeepers produced 20-60 kg honey worth ₹ 5,000-15,000 from their beekeeping unit of five colonies. Most (87%) of the beekeepers were able to multiply their bee stock as well. As far as the marketing of honey is concerned, most of the farmers have done direct marketing to the

Table 1. Extension activities organized for the promotion of beekeeping

Activity	Number of activities	No of participants
Group meetings	12	205
Field visits of experts	12	-
Trainings	1	15
	(5-days) 2 short duration	28
Method demonstrations	10	140
Exposure visits	2	30

consumers and obtained price as good as ₹ 300/kg of the honey and some of them sold for ₹ 250/kg. Two farmers have sold their honey through self-help group at various platforms like *kisan melas*, exhibitions, SHGs, shops, etc. Although they got a handsome price, they fear that if they increase production, marketing would be difficult. With the help of the project team, they were linked to self-help group as well as consumers from nearby big city, Ludhiana and the present situation is that they are not able to meet the demand of honey. Net gain per person ranged from ₹ 6,200-16,800. The B:C ratio calculated for the beekeeping intervention was 2.04.

Satisfied as beekeepers, all of them were enthused to increase the scale of production and some of them did. They are now demanding for the advance training in beekeeping so that they can start queen bee rearing and honey processing etc. Despite all of them have tasted success in the startup, there are some beekeepers worth mentioning who has done exceptionally well in the beekeeping as an enterprise (Fig. 1). Meet the blooming bee keeper of village Chatha Nanhera, Shri Dara Singh (35), who has been engaged in wheat-paddy rotation for 15 years but was looking for generating an additional income from subsidiary occupations. He came to know about the prospects of beekeeping in Punjab from PAU scientists engaged



Fig. 2. Glimpses of Beekeeping training and demonstration

in FFP and he adopted beekeeping as an additional source of income. After getting proper training of the operations, he got 5 boxes under the project and purchased 10 bee hive boxes worth ₹ 30,000. Within 2 years of starting the beekeeping, the number of boxes increased from 15 to 105 and the farmer is generating an additional net income of ₹ 1.5 lakh annually (Fig. 2).

Shri Dara Singh is grateful to the FFP operational term in the village which has provided farmers with beehive boxes and honey extractors for promotion of the beekeeping. He is now an experienced beekeeper, who plans to utilize the FFP funded equipment to extend his support to other smallholder beekeepers of the area.

Considering his devotion, hard work and passion for his business, FFP helped his project for improving bee farm infrastructure with the increased number of beehives and equipment for honey extracting and processing. Dara Singh shared with pride that he was forever grateful to FFP project for the help and motivation provided to him for starting and further scaling up of the beekeeping enterprise. He is an inspirational to the village to go for subsidiary occupations and generate an additional income. He provides training to the youth of his own

village and neighbouring villages in beekeeping who would want to generate additional income along with traditional farming. He is currently searching for promotional tools and channels for his products, where developing a marketing plan is a priority.

There are other farmers in the village who are actively engaged in honey production among them is Shri Boota Singh (23), a budding beekeeper who has started honey production with 5 boxes, which has increased to 12 boxes and are planning for expansion in coming years.

Ranjit Singh (40) and Naib Singh (48) have been marketing through self-help group approach producing honey for village and local market needs. Naib Singh has also utilized the market potential by direct marketing of honey at retail outlet in adjacent town.

However, despite all awareness and access to knowledge, farmers do not have potential benefits from different subsidiary occupations. But when external force like 'Farmer FIRST Programme' efforts is applied, it accelerates the knowledge, capabilities, innovativeness, risk taking capacity and motivation to start. Farmer FIRST Programme is changing the lives of hundreds of farmers while contributing to the environment and beekeeping is one such area where farmers are getting sweet rewards.

Table 2. Economics of beekeeping enterprise adopted by farmers

No. of bee-keeping units	No. of boxes	Farmers benefitted	Average honey production (kg/box)	Economics of FLD (₹/box)			
				Gross cost	Gross return	Net return	B:C ratio
14	70	14	5.5	743.8	1521	777.2	2.04

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