

Impact of Beekeeping Training on Socio-economic Status of Farmers and Rural Youths in Kullu and Mandi Districts of Himachal Pradesh

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ABSTRACT The present study was conducted from January 2005 to December 2010 at Krishi Vigyan Kendra, Bajaura (Kullu, Himachal Pradesh) to assess the impact of beekeeping training programmes. Two hundred twenty-five trainees of different age groups having rural as well as urban background were selected from Kullu and Mandi districts. For the investigations of study, the interview schedule was developed to access the impact of training with respect to need base and theoretical as well as practical aspects. The results of study showed that majority of the trainees (94%) were satisfied with the training programmes as these were conducted according to their needs. More than eighty per cent participants rated the training as excellent whereas 10.8% rated it as very good and another 6.7% rated it good. The majority of the trainees (85.4%) were satisfied with practical part of training whereas 55.8% of the respondents showed their keenness for theoretical approach of trainings. It was also observed that most of the respondents (34.2%) benefitted in term of enhanced self-confidence, followed by more employment opportunities near the home (25.2%), increased income (21.8%) and acquiring new skills (10.2%). The number of beneficiaries at commercial level was very less (8.6 %). Twenty-eight per cent of the respondents showed their eagerness to go for beekeeping for pollination purpose, whereas only twenty per cent evinced their eagerness for honey production as the area was dominated by horticultural crops like apple. All of them strongly agreed that beekeeping had a significant role in increasing the economic and social status of rural communities.

INTRODUCTION

India is a vast country where more than 80 per cent of the population lives in rural areas. Economy of its people largely depends upon agriculture for livelihood. After independence, government of India launched a massive programme of rapid industrialization with the aim to integrate rural development. Therefore, special efforts were made to develop various agro-village-based industries like dairy, fish farming, poultry, sericulture and beekeeping. The task of development of most important beekeeping industry was entrusted to then newly constituted All India Khadi and Village Industries Board which was later reconstituted as "Khadi and Village Industries Commission" (KVIC) in 1956.

It was only after the establishment of KVIC at the central level and Khadi and Village Industries Board at the state level that beekeeping industry could receive due attention for its development through scientific interventions (Kumar et al. 2010).

Himachal Pradesh (H.P.) offers a vast potential for the development of beekeeping as 37,033 square km area is under forest cover ranging from Shivalik hills to Greater Himalayas. Beekeeping has predominant role to play in pollination, honey and wax production. Pollination benefits can be evaluated at higher level as compared to by products produced by the bees. Honey bees during foraging for pollen and nectar from flower of different plant species, enhance agricultural productivity to the tune of 30-80% annually through cross-pollination (Singh 2007). The modern beekeeping in H.P. was introduced only the year 1934 in Kullu valley and in 1936 in Kangra valley. Only *Apis cerana indica* the Indian honey bee was reared in the state until the year 1961 when *A. mellifera* was introduced in India at Bee Research Station, Nagrota Bagwan (H.P.). To improve the social, economical, psychological and health status of rural people and their families, Krishi

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Vigyan Kendras imparts skill training through theoretical as well as practical experience. In this direction Krishi Vigyan Kendra, Kullu also conducted training programmes on beekeeping for rural people to uplift their socio-economic status.

Objectives

The present study was undertaken with the objective:

to find out the impact of beekeeping trainings on their social and economic status, personal confidence and knowledge.

MATERIAL AND METHODS

The present study was conducted from January 2005 to December 2010 at Krishi Vigyan Kendra, Bajaura (Kullu, Himachal Pradesh) to assess the impact of beekeeping training programmes. Two hundred twenty-five trainees of different age groups having rural as well as urban background were selected from Kullu and Mandi districts. For the investigations of study, the interview schedule was developed to assess the impact of trainings with respect to need base, theoretical as well as practical aspects. A 3 point rating scale (for example, excellent, very good and good) was also taken to lend clarity to the results. Each training programme was of 4 to 5 days duration. After conducting the training programmes, an evaluation was carried out to test the knowledge of participants. Vocational trainings on beekeeping were mostly conducted at the campus of Krishi Vigyan Kendra, near the apiary so that the practical demonstration could be imparted immediately after the lecture on a particular topic. The selection of the trainees was done after taking into consideration their interest in beekeeping vocation as they had already applied for it through the application and the impact of training was analyzed by giving the questionnaire to them after its completion. The results of the study are presented through simple statistical methods, that is, percentage, averages.

RESULTS AND DISCUSSION

The results of beekeeping training programmes conducted at KVK Bajaura from 2005-2010, Bajaura are presented in Tables 1-5. It was seen from the Table 1 that males outnumbered

females in participation as out of 225 trainees of different age groups 120 were men and 105 were women. This may be due to inability of rural women trainees to venture out of the house as they remained occupied in the domestic chores and could not afford to spare the time for long duration trainings.

Table 1: Beekeeping trainings conducted during different years

Year	No. of training	No. of Trainees		Total
		Male	Female	
2005	3	23	47	70
2006	1	16	9	25
2007	1	10	15	25
2008	1	17	8	25
2009	1	6	19	25
2010	2	48	7	55
Total	9	120	105	225

Table 2: Response of the trainees on the basis of age, educational level and occupation (N-225)

S. No.	Particular	Male	Female	Total
1.	Age (year)			
	Below 35	82 (68.3)	77 (73.3)	159 (70.7)
	35-50	33 (27.5)	28 (26.6)	61 (27.1)
	Above 50	5 (4.17)	0 (00.0)	5 (2.2)
2.	Education			
	Primary	25 (20.8)	18 (17.1)	43 (19.1)
	Higher Sec.	54 (45.0)	66 (62.8)	120 (53.3)
	Sen. Sec.	30 (25.0)	19 (18.1)	49 (21.8)
	Graduate	7 (5.8)	2 (1.9)	9 (4.0)
	Post Graduate	4 (3.3)	-	4 (1.8)
3.	Occupation			
	Government service	4 (3.3)	-	4 (1.8)
	Private	22 (18.3)	6 (5.7)	28 (12.4)
	Business	28 (23.3)	2 (1.9)	30 (13.3)
	Unemployed	66 (55.0)	97 (92.4)	163 (72.4)

Figures in parentheses indicate percentages of total sample in each category

Data on personal characteristics of the respondents including age, education level and occupation are presented in Table 2. A cursory look at the data reveals that majority of the respondents (70.7 %) including both male (68.3 %) and female (73.3 %) belonged to the age group below 35 years. Least number of respondents, that is, only 4.2 per cent males and no female belonged to the age group above 50 years meaning thereby that the older people did not evince much response in this vocation. Educational level of respondents showed that majority of re-

spondents were higher secondary (53.3 %) followed by senior secondary (21.8%) and primary (19.1%). Only 1.3 per cent of respondents were found to be post graduate. Regarding occupation of the respondents, data highlighted that majority of the respondents (72.4%) were unemployed followed by those having their own business units. Only 4 per cent males who were in Government services showed their keenness for beekeeping. This clearly shows that the vocation has found favor mostly from those respondents who were not having regular source of income. These observations are in agreement to those of Gupta and Dogra (1997-98) who reported beekeeping as a vocation of poor people who sometimes find it difficult to purchase hive and other associated equipments even.

After conducting the training, its impact was worked out by putting forth the pertinent questions to them and the data are presented in Table 3. It is seen from the table that majority of the trainees (94%) were satisfied by the need of trainings because training programmes were organized accordingly. More than eighty per cent participants rated the training as excellent whereas 10.8% rated it as very good and another 6.7% rated it good. The majority of the trainees (85.4%) were satisfied with practical part of training whereas 55.8% of the respondents showed their keenness for theoretical approach of trainings. The interest in theoretical approach of trainings may be due to lack of confidence and fear of stinging by the bees. Efforts were made that every participant handled the bee hives without fear and ado in every training so that they felt confident in handling the bees.

Table 3: Impact of training programme

Aspects of training	Most satisfied (%)	Satisfied (%)	Not satisfied (%)
Need based training	94.0	6.0	-
Theoretical part of training	55.8	44.2	-
Practical part of training	85.4	14.6	-
Rating of training	Excellent 82.5	Very good 10.8	Good 6.7
Training content	Excellent -	Very good 98.7	Good 1.3

After the completion of the training programmes, questions were again put forth to the trainees to know their views and perceptions

regarding the usefulness and utility of the programme and the results of their response are presented in Table 4. It was observed that most of the respondents (34.2%) benefitted in term of enhanced self-confidence, followed by more employment opportunities near the home (25.2%), increased income (21.8%) and acquiring new skills (10.2%). The number of beneficiaries at commercial level was very less (8.6 %), this may be due to inclement weather particularly during winters hampering the multiplication of bee colonies, reluctance of bee beekeepers to take their colonies to plains for migration, non availability of bees and readymade bee equipments at right time and high initial cost etc.

Table 4: Response of the trainees regarding benefits from beekeeping trainings

S.No.	Benefits	No. of trainees	Percentage
1.	Increase in income	49	21.8
2.	Increase in self confidence	77	34.2
3.	Got employment at home	57	25.2
4.	Acquired new skills	23	10.2
5.	Commercial level	19	8.6

Twenty- eight per cent of the respondents showed their eagerness to go for beekeeping for pollination purpose, whereas only twenty per cent evinced their eagerness for honey production as the area was dominated by horticultural crops like apple (Table 5). Some of the respondents suggested that there should be provision of providing at least one bee hive and bee equipment after completion of training. They also suggested providing educational tours to the leading Bee Research Stations and the apiaries of private beekeepers for the exposure and enhancement of their knowledge. Majority of the respondents suggested that such type of vocational trainings should also be impacted by the scientists at village and Panchayat levels. They all expressed their inquisitiveness to attend training programmes which could be more skilled, advanced, elaborated and involved more practical than theoretical aspect. All of them strongly agreed that beekeeping had a significant role in providing nutritional, economic and ecological security to the rural populace of Kullu and Mandi districts besides rendering selfless pollination services in their orchards.

Table 5: Perception of trainees regarding the adoption of beekeeping vocation

<i>Perception</i>	<i>Percentage</i>
For pollination purpose	28.0
Honey production	20.0
Other purposes	52.0

CONCLUSION

By imparting beekeeping training, KVK has made a positive contribution to the development of beekeeping enterprise and the generation of employment opportunities to the unemployed youth and rural people. Some of the youths (ex-trainees) who were imparted training during 2005-2010, have taken up commercial beekeeping with *Apis mellifera* and are earning 2.5-5.0 lacs every year. Others have taken up *Apis cerana* beekeeping in a scientific way in movable hives and use them for pollination in their or-

chards besides renting them to other orchardists. Besides some participants after having got encouragement regarding the plantation of bee flora in rangelands and common waste lands under social forestry have taken up plantation in such lands. Technical guidance and provision of financial support by preparing project profiles to avail loans from various banks were provided for the inquisitive trainees to exhort them to shift to modern beekeeping from the traditional one.

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