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Socio economic profile characteristics of the beekeepers in Kumaon hills of Uttarakhand

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Abstract

Beekeeping forms an integral part of the small holder farming system and plays a significant role as a source of additional cash income in subsistence farming. Beekeeping has a special significance for farmers in the Kumaon hills. It offers a way for those with few resources – especially poor and landless farmers and women – to gain income, as it requires only a small start-up investment, can be carried out in a small space close to the house, and generally yields profits within the first year of operation. The present study was conducted in four villages viz; Jeoli, Gaga, Baluti and Chopra. The respondents were selected through census method from Bhimtal block in Nainital district which lies in Kumaon hills of Uttarakhand. A pre tested interview schedule was used to determine the profile characteristics of the Beekeepers. The findings of the study revealed that almost all the respondents interviewed were Male and majority (68.42%) of them were in between the age of 31 to 52 years. Most of the respondents belonged to general category (96.05%) and had attended middle school and high school (35.53%) for education. Slightly less than the half of the respondents (43.43%) belonged to nuclear family system and had medium family size (81.57%). The data reveals that majority of the respondents have medium total annual income (61.84%), medium number of boxes owned (63.16%), medium level of experience in beekeeping (78.95%), The results of the study will be helpful to extension personnel and scientists to orient their work on major thrust area which are profitable and applicable.

Keywords: Socio economic, profile characteristics, beekeepers

Introduction

India is a land with abundance of natural resources and favourable environment for the cultivation of various agricultural crops, still there are many limitations in the Indian agrarian system. Small land holdings, unorganized institutional credit, unpredictable market fluctuations and weak extension system are the major limitations faced by the Indian agrarian system. In India there is always a risk of natural uncertainty like floods, drought, hailstorms etc. Agriculture and allied sector are one of the major livelihood providers in India, especially in reference to the rural areas. To utilize the Indian natural resources to maximum there is a need to shift from the traditional farming system to the modern one. To supplement the farmers income in India there is an urgent need to introduce various agriculture practices together with traditional farming system. One such major enterprise that is gaining popularity in the current scenario is “apiculture” commonly referred to as beekeeping. Beekeeping is the maintenance of honey bee colonies, commonly in hives, by humans.

A beekeeper keeps bees in order to collect honey and beeswax, to pollinate crops, to produce bees for sale to other beekeepers. It is traditionally a longstanding and environmentally friendly agricultural activity. Honeybees are the special gift to mankind because beekeeping can be done for both their pollination services and for their cherished products such as honey, beeswax, propolis, bee venom etc. These products have their wide spread use in different small- and large-scale industries in India. understanding honey bee science is to unravel nature’s most industrious as well as the most fascinating insect.

Traditionally, poor and landless farmers in remote mountain areas of the Kumaon hills have found bee colonies in the forest, protected them, and harvested small amounts of honey from them. Local tradition allows farmers to claim ‘ownership’ of such colonies while leaving them at their original nesting site, thus acting as ‘guardians of biodiversity’. Farmers with more space and resources kept the indigenous hive bee in simple homemade log or wall hives close to the house. In more recent times, beekeeping has become a more professional activity. The advent of frame hives made it possible for the bees to be managed, hives to be moved around to appropriate places, and honey production to be increased to commercial levels.

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Beekeeping scenario in Uttarakhand

Traditional beekeeping with *Apis cerana* is widely practised by rural people in Uttarakhand who inherited the tradition from their forefathers and maintain it to this day. It is not a full-time pursuit, however, but a supplementary one. Honey is the only product of beekeeping to the villagers of Uttarakhand. The bees are mainly kept in wall hives besides the log and miscellaneous hives, which are made from locally available materials. The people have indigenous knowledge of beekeeping which is passed from one generation to another. In the hill area traditional hives are more suitable than modern hives. Modern beekeeping is in its infancy in the area, so people need to be encouraged to use modern bee hives for better management of colonies and to minimize loss in the form of the re-use of honey combs for aphid multiplication of *A. cerana* colonies. Uttarakhand is a land of variety of flora and fauna. Beekeeping forms an integral part of the small holder farming system and plays a significant role as a source of additional cash income in subsistence farming. There are around 2,50,000 beekeeping units in India out of which only 8,700 are in Uttarakhand accounting for about 2500 MT of honey production in 2016-17. Uttarakhand is extremely rich in Bee forage plants but the use of this rich resource is not being made properly (Tiwari, *et al.* 2010) [6]. Around 20.00 percent of the Beekeepers in Uttarakhand do not use any medicine for the management of pest and diseases showing that the farmers are not much aware of the advance methods of beekeeping (Khan *et al.*, 2007) [4]. Uttarakhand has huge potential for beekeeping due to plenty of flora and suitability of climate.

Importance of beekeeping in Kumaon hills

Beekeeping has a special significance for farmers in the Kumaon hills. It offers a way for those with few resources – especially poor and landless farmers and women – to gain income, as it requires only a small start-up investment, can be carried out in a small space close to the house, and generally yields profits within the first year of operation. Bees provide honey, beeswax, propolis, royal jelly, and bee venom for home use and sale. In addition to the direct income from bee products, beekeeping also generates off-farm employment opportunities in many fields including hive carpentry, production and sale of honeybee colonies, honey trading, renting and hiring of bees for pollination, and bee-based micro enterprises. Beekeeping has become increasingly important with the decrease in populations of indigenous bees and other pollinators as a result of loss of forage and nesting places and expansion of monoculture agriculture. Beekeeping is needed to support pollination of the newly introduced cash crops, as well as the more traditional subsistence crops and natural vegetation on which farmers depend.

Material and Methods

The study was conducted in the Nainital district in Kumaon Hills of Uttarakhand. Bhimtal block was selected Purposively for the study as it accounts for maximum number of beekeepers as reported by the State Beekeeping Research Centre, Jeolikote. Four villages were purposively selected for the study as the villages accounted for the maximum Honey production in the district. The respondents were selected on the basis of census method from the list of beekeepers obtained from State Beekeeping Research Centre, Jeolikote. (2016). A list of registered beekeepers of the selected districts

was obtained and accordingly the number of beekeepers were selected by census method from each village. A total sample of 76 Beekeepers was obtained from all the four villages which included 40 respondents from Jeoli village, 17 respondents from Chopra, 14 from Bhaluti and 5 from Gaga village. The respondents were interviewed to determine the profile characteristics in terms of Age, Gender, Caste, Education, Family size. Family type, Occupation, Total annual income, Number of boxes owned and Number of years of experience in Beekeeping.

Results and Discussion

Age

It is evident from the Table (1) that out of 76 Beekeepers, 68.42 percent of the respondents belonged to the middle-age group followed by 21.05 percent of respondents to old age group and only 10.53 percent of the respondents were found in young age group. Thus, it may be inferred from the data that the majority of the Beekeepers belonged to the middle age group. Reason for such pattern in distribution in age may be that in Nainital district, there is a tendency of migration among the youths in search of job opportunities and therefore they were not found in practicing Apiculture as a potential source of livelihood.

Gender

It is evident from the Table (1) that all the respondents interviewed were male (100.00%). There was no variation in the study as far as the gender component is concerned. This may be due to patriarchy in beekeeping in the region and also due to the power of men to take decisions in the study area.

Caste

It is evident from Table (1), that 96.05 percent of the respondents belonged to the General category. Only 3.95 percent of the respondents belonged to Schedule Caste, whereas none of the respondents belonged to the other backward classes and schedule tribe category. It is visible from the data that most of the Uttarakhand villages are homogenous and predominated by a particular caste. This is the reason why most of the respondents belonged to general category.

Education

The data in Table (1), indicates that equal number of respondents i.e 35.53 percent were having middle and high school education followed by those who were educated up to intermediate (19.74%) and only 7.88 percent respondents were graduates. Only single respondent attained primary level of education. None of the respondent interviewed was illiterate. From the findings it can be interpreted that the people having lower education and higher education were not found to be engaged in beekeeping where as people having middle level of education were engaged in beekeeping. This may be due to the fact that low education respondents might not be aware of beekeeping as an income generating opportunity and the respondents with higher level of education seek for better employment opportunities.

Family Size

The results in Table (1) shows that more than three fourth of the respondents i.e, (81.57%) belonged to the medium family size followed by 13.16 percent belonging to the large family

size. Only 5.27 percent of the respondents belonged to small family size. The above findings also indicate that the people in study area were aware of benefits of small and medium size family.

Family type

Data regarding composition of respondents on the basis of family type has been presented in Table (1). The data indicates that the 43.43 percent of the respondents belonged to nuclear family, followed 40.79 percent of those who belonged to joint family and 15.78 percent of the respondents belonged to extended family. The results reflected the increasing popularity of the concept of nuclear family among the villages in Kumaon hills.

Occupation

Data regarding occupation of respondents has been presented in Table (1). All the respondents interviewed were beekeepers. The table shows that together with beekeeping the majority (44.74) of the respondents also practiced farming. About 19.73 percent of the respondents reared animals like goat and chicken. About 17.11 percent of the respondents were involved in farming as well as animal husbandry both. About 5.6 as percent of the respondents earned their livelihood from local shop keeping and 13.16 percent of the respondents were agriculture labours. From the above data it can be concluded that no beekeeper is solely dependent on beekeeping as a source of income concerned.

Total annual income

It is evident from the Table (1) that majority of the respondents (63.15%) had medium level of income followed by 19.73 percent of those who has low income and 11.84 percent of those who had high annual income. The probable reason for such distribution may be that a lot of respondents have some secondary source of income alongside beekeeping.

Bee boxes owned

The data in the Table (1) shows that the majority of the beekeepers (63.16%) had medium number of bee boxes owned i.e 27-124 followed by a smaller number of boxes (34.21%). Only 11.84 percent of the beekeepers had a greater number of boxes. The probable cause for medium number of bee boxes owned by the respondent may be due to the reason that beekeeping a risk-oriented occupation and therefore the respondents preferred trying low to medium number of boxes

Experience in beekeeping

The results in Table (1), clearly shows that the majority of the beekeepers had medium beekeeping experience i.e 78.95 percent followed by short experience in beekeeping (13.15%). Only 7.90 percent of the beekeepers had long level of experience in beekeeping. The results revealed that majority of the respondents had medium beekeeping experiences as most of the respondents were of middle age at the time of investigation.

Table 1: Socio Economic Profile Characteristics of Beekeepers in Kumaon Hills of Uttarakhand

S. No	Characteristics	Category	Frequency	Percentage
1	Age	Young age (up to 31 years)	8	10.53%
		Middle age (between 31 to 52 years)	52	68.42%
		Old age (more than 52)	16	21.05%
2	Gender	Male	76	100
		Female	0	0
3	Caste	General	73	96.05
		OBC	0	0
		SC	3	3.95
		ST	0	0
4	Education	Illiterate	0	0.00
		Primary	1	1.32
		Middle school	27	35.53
		High school	27	35.53
		Intermediate	15	19.74
		Graduation and above	6	7.88
5	Family Size	Small (up to 3 members)	4	5.27
		Medium (between 3 to 8 members)	62	81.57
		Large (more than 8)	10	13.16
6	Family Type	Nuclear	33	43.43
		Joint	31	40.79
		Extended	12	15.78
7	Occupation	Farming	34	44.74
		Animal husbandry	15	19.73
		Farming + Animal husbandry	13	17.11
		Business	4	5.26
		Agriculture labours	10	13.16
8	Annual Income	Low (less than 1,26,310 Rupee)	13	17.10
		Medium (between 1,26,310 to 3,88,689 Rupee)	48	63.15
		High (more than 3,88,689 Rupee)	15	19.73
9	Bee Boxes Owned	Low (less than 27)	19	25
		Medium (between 27 to 124)	48	63.16
		High (more than 124)	9	11.84
10	Experience in Beekeeping	Short (less than 8.23)	10	13.15
		Medium (between 8.23 to 25.26)	60	78.95
		Long (more than 25.26)	6	7.90

Conclusion

It is evident from the results that majority of the respondents were middle aged men, with an average high school level of education. Majority of the respondents belonged to general caste category and believed in nuclear family composition. None of the respondent dependent solely on beekeeping as an occupation. Most of the respondent had medium level of the boxes owned and medium level of experience in beekeeping. The above-mentioned details may be further helpful for the extension authorities to take measures and build policies accordingly.

References

1. Arya S, Kumar A, Kumar K, Kumar D. Major constraints faced by the beekeepers in production and marketing of honey in the Nainital district of Uttarakhand. *J Pharm. Innov.* 2021;10(8):276-279.
2. Bhusal SJ, Thapa RB. Comparative study on adoption of improve beekeeping technology for poverty alleviation. *J Agric. Anim. Sci.* 2005. p. 117-125.
3. Afreen Mallik. Effectiveness of Participatory Newsletter on Honey Production: A Study in Nainital District of Uttarakhand. Thesis, Doctor of Philosophy, G. B. Pant University of Agriculture and Technology, Pantnagar, Uttarakhand, India; c2019. p. 12-13.
4. Khan MS, Karnatak AK, Srivastava P. Beekeeping status in Uttarakhand. *Indian Bee Journal.* 2007;69(1/4):88-93.
5. Kumar P, Singh D. Prospects of beekeeping in Ludhiana District of Punjab. *Indian Bee Journal.* 2004b;66:108-111.
6. Tiwari P, Singh D. Status of Beekeeping in District Chamoli and Rudraprayag of Garhwal Himalaya, Uttarakhand. HMNEH souvenir organized by the state beekeeping center Jeolikote; c2010.
7. Yogesh Kumar. A multi-dimensional study on production and management system of apiculture farming in Jammu region. Thesis, Doctor of philosophy, Shere-e-Kashmir University of Agriculture Sciences and Technology of Jammu, India; c2013.