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## Perception towards adoption and constraints in beekeeping

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### Abstract

An evaluation study of training programmes regarding adoption and constraints in beekeeping revealed that this enterprise is becoming the area of interest for males belonging to younger age group. Majority of the respondents were agriculturists including largely (67.6%) the marginal to small farmers. Most of the respondents (95.6%) showed interest in adopting beekeeping as an occupation. About 62 per cent of the respondents were of the perception of objection from neighbors, 51.5 per cent were apprehensive of theft of the bee hives and for 46 per cent, land was necessary for beekeeping. For 2/3<sup>rd</sup> of the respondents, lack of money was a main constraint followed by sale of honey at appropriate rate (58.8%). As per 3/4<sup>th</sup> of the respondents, bee management during dearth period was the main technical constraint. It was concluded that beekeeping is becoming popular among the people; however, the constraints exposed by this study are necessary to be resolved.

**Keywords:** Perception, adoption, constraints, beekeeping

### Introduction

Beekeeping is an activity which can be carried out by any person irrespective of age, sex, education and ownership of agriculture land. Traditionally, honey bees are kept in many countries where they are used for various purposes. This activity contributes to the country's economic and social development by providing sustainable additional income and self-employment opportunities for a number of unemployed youth. The distinctive feature of beekeeping is the requirement of small capital investment to start the activity as compared to other industries. Furthermore, it does not need raw material in usual sense as nature provides the same in the form of nectar and pollen (Sharma and Dhaliwal, 2014) [6]. In addition, honey bees during foraging for pollen and nectar from flowers of different plant species enhance agricultural productivity to the tune of 30–80 per cent annually through cross-pollination (Singh 2000; Monga and Manocha, 2011) [9, 2].

Beekeeping, which requires very little resource, land and time, could be incorporated into the livelihood strategy of smallholder farming households in order to provide an additional source of income and to spread risk. The other hand, regarding recent government policy to increase the farmers' income, the beekeeping can play an important role in this regard. It can be easily carried out along with agriculture without devoting any special time. Even landless and less educated farmers can also perform this activity very well.

Due to requirement of low capital investment and dual benefits, directly by providing honey and other products, and indirectly by increasing the yield of the crops, the beekeeping is attracting a number of farmers and also the unemployed youth for generation of self employment. It is however, noteworthy that some factors could be impediments or constraints for complete adoption of beekeeping as an enterprise. Keeping this in view, the present study was conducted in order to assess the perception of the people toward adoption of beekeeping and possible constraint in this regard.

### Materials and methods

During the year 2017-18, Saina Nehwal Institute of Agricultural Technology, Training & Education, Directorate of Extension Education, Chaudhary Charan Singh Haryana Agricultural University, Hisar conducted eight training programmes (3-5 days duration) on bee keeping for farmers, women and unemployed youth in which a total of 272 trainees participated from different districts of Haryana and adjoining states. To see the perception of trainees towards adoption of beekeeping as an enterprise and constraints in this activity, an evaluation of these programmes was conducted. For this, questionnaire was developed comprising of general information and background of the participants and information regarding adoption and possible constraints in beekeeping.

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The data were tabulated and analyzed in terms of frequency and percentage using computer software MS Excel.

## Results and discussion

### Socio-economic profile of trainees

The data revealed that mostly the male candidates (94.1%) belonging to the younger age group (80.9%) showed more interest in participation in training programmes on beekeeping as compared to the females and the candidates belonging to middle and old age group (Table 1.).

**Table 1:** Socio-economic profile of trainees (n= 272)

Sr. No.	Particulars	Frequency	Percentage
1.	<b>Gender</b>		
	Male	256	94.1
	Female	16	5.9
2.	<b>Age</b>		
	Young (18-35 yrs)	220	80.9
	Middle (36-50 yrs)	44	16.2
	Old age (>50 yrs)	8	2.9
4.	<b>Education</b>		
	Up to Primary	16	5.9
	Up to Matriculation	72	26.5
	Senior Secondary	104	38.2
	Diploma holder	16	5.9
	Graduation	48	17.6
	Post Graduate	16	5.9
6.	<b>Occupation</b>		
	Agriculture	160	58.8
	Labor	12	4.4
	Self employed	12	4.4
	Govt. Job	4	1.5
	Others (Retiree, student etc.)	84	30.9
7.	<b>Land holding</b>		
	Landless	52	19.1
	Marginal (<1 ha)	68	25.0
	Small (1-2 ha)	116	42.6
	Medium (2-10 ha)	32	11.8
	Large (>10 ha)	4	1.5
8.	<b>Annual Income</b>		
	Low (< 1 lac)	88	29.4
	Medium (1-2 lacs)	148	54.4
	High (> 2 lacs)	44	16.2

These results were in accordance with the study conducted by Verma *et al.* (2018) [10] and Moniruzzaman and Rahman (2009) [3]. It indicated that the youth, especially males are more innovative and responsive to new vocation. Education level of the participants ranged from primary to post graduation; however, number of respondents having education level up to matriculation and senior secondary was more (64.7%) as compared to the others. These results are in line with the findings of Mujuni *et al.* (2012) [4]. It showed that beekeeping is best suited to the person who could not keep their education continue after secondary or senior secondary level due to any reason.

Majority of the respondents (58.8%) were having agriculture as an occupation indicating increasing interest of farmers in adoption of beekeeping to add in family income. Nearly 2/3<sup>rd</sup> of the respondents were having marginal to small land

holding and about 1/5<sup>th</sup> were from landless category. It showed that beekeeping enterprise does not require much land and even landless farmers can adopt this activity as an occupation. It was also inferred from the study that more than 3/4<sup>th</sup> of the respondents were having low to medium annual income. Singh *et al.* (2018) [8] also reported that the people having low level of annual income were adopting beekeeping as an enterprise more for income generation.

### Perception towards adoption of beekeeping as an enterprise

The data regarding perception towards adoption of beekeeping as an enterprise revealed that majority of the respondents (95.6%) showed interest in adopting beekeeping as an occupation (Table 2.). It indicated that beekeeping is becoming an attractive enterprise among the people, the unemployed youth in particular. It might be due to gradual decrease in land holding day by day, lesser chances of jobs in government sector and most importantly low capital requirement for starting this activity. Only 4.4 per cent of respondents gave negative response toward adoption of beekeeping as an occupation. It showed that there is need to give more focus on this activity and it can be easily promoted among the people, particularly the farmers possessing marginal to small land holding, landless farmers and the unemployed youth in rural area. This can be achieved by organising more training programmes with needful information, providing credit facilities for starting the activity and market support for fetching good price for honey and related products.

### Constraints in adoption of beekeeping as an enterprise

Multiple responses were received from the respondents regarding constraints in adoption of beekeeping as an enterprise (Table 2.). Though, most of the respondents showed interest in adopting beekeeping as an occupation, however, a number of them also stated some constraints in this regard. Objection from neighbor in keeping beehives near to their field was the main social constraint as reported by 62 per cent of the respondents followed by theft of the bee hives (51.5%). It indicates that there is need to educate the people about the indirect benefits of beekeeping like increase in yield through pollination.

Regarding physical constraints, about 46 per cent of the trainees were of the opinion that land is necessary for beekeeping and nearly 40 per cent were afraid of bees. For starting any kind of business, money is the prime requirement. Though beekeeping can be started with a low capital, however, about 2/3<sup>rd</sup> of the respondents showed lack of money a main economical constraint in starting beekeeping followed by sale of honey at appropriate rate in the market (58.8%). Singh *et al.* (2016) [7] also reported that the economic constraint was the primary hurdle in adoption of beekeeping as an entrepreneurship in Nagaland. It indicated that public as well as private sector banks and other financial agencies should come forward to promote such type of activity by providing credit facilities to the needy at lower possible interest rate. Regarding technical constraints, about 3/4<sup>th</sup> of the respondents showed difficulty in bee management during dearth period when there is no or less flora in the field.

**Table 2:** Perception towards adoption and constraints in beekeeping (n= 272)

Particulars	Frequency	Percentage
<b>Perception towards adoption</b>		
Adopter	260	95.6
Non-adopter	12	4.4
<b>Constraints in beekeeping</b>		
<b>Social constraints</b>		
Objection from neighbor	168	61.8
No family support	44	16.2
No interest in beekeeping	4	1.5
Theft of bee hives	140	51.5
<b>Physical constraints</b>		
Labor intensive activity	40	14.7
Fear from bees	108	39.7
Allergy from bee sting	44	16.2
No land for keeping bee hives	124	45.6
<b>Economic constraints</b>		
Lack of money to start business	184	67.6
More recurring expenditure	16	5.9
Sale of honey at appropriate rate	160	58.8
Less income than expenditure	12	4.4
<b>Technical constraints</b>		
Insufficient training	20	7.4
Lack of complete knowledge	56	20.6
Difficult occupation	32	11.8
Bee management in dearth period	196	72.1

Majority of the trainees were satisfied with the technical knowledge provided during the training programme as only 7.4 per cent of the respondents of the opinion that training was insufficient to start beekeeping. However, it indicated that in further training programmes, there is need to give more focus on bee management in the absence of flora during the dearth period. Asrani *et al.* (2017) <sup>[1]</sup> in a study on prospects of beekeeping in Haryana and related needs, constraints and enablers also pointed out technical constraints the major constraints faced by respondents. Phadke (2008) <sup>[5]</sup> listed excessive use of pesticides and absence of forage during other months coupled with excessive heat of summer as constraints in the development of beekeeping on agricultural plains in India.

### Conclusion

It has been deduced from these findings that beekeeping is a male dominated enterprise of young people particularly who dropped their education at certain level. Beekeeping could be a viable venture that generates huge amount of money for the beekeepers with little capital investment that may be generated from personal savings. Though more number of people are adopting beekeeping as an enterprise, however, the constraints exposed by this study are necessary to be resolved by the concerned government or other organizations engaged in this activity by providing needful information through organizing various training programmes, credit facilities for setting up the business and institutional support for marketing.

### References

1. Asrani S, Kaushik S, Sharma SK, Kaushik HD. Prospects of beekeeping in Haryana: Perceived needs, constraints and enablers. *Journal of Dairying Foods & Home Sciences*. 2017; 26(1):7-8.
2. Monga K, Manocha A. Adoption and constraints of beekeeping in District Panchkula (Haryana), India. *Livestock*

Research for Rural Development. 2011; 23(5):Article #103

3. Moniruzzaman M, Rahman MS. Prospects of beekeeping in Bangladesh. *Journal of Bangladesh Agricultural University*. 2009; 7(1):109-116.
4. Mujuni A, Natukunda K, Kugonza DR. Factors affecting the adoption of beekeeping and associated technologies in Bushenyi District, Western Uganda. *Livestock Research for Rural Development*. 2012; 24:Article #133.
5. Phadke RP. Beekeeping as an industry and its role in forestry, agriculture and horticulture. *Proceedings of the workshop Role of apiculture in increasing crop yields in horticulture held on 28th November 2008, Shivaji Nagar, Pune 102pp*.
6. Sharma K, Dhaliwal NS. Socio economic profile of successful beekeepers and profitability of bee keeping in Muktsar District of Punjab. *Journal of Krishi Vigyan*. 2014; 2(2):69-73.
7. Singh AK, Singh RP, Singh N. Constraints in adoption of beekeeping as an enterprise in Nagaland. *Indian Journal of Extension Education*. 2016; 52(3&4):61-64.
8. Singh B, Singh S, Batra A. Socio-economic status of the people adopting beekeeping as an entrepreneurship. *International Journal Current Microbiology and Applied Science*. 2018; 7(07):143-149.
9. Singh DA. Focus on honey bees in the tropics. *Current Science*. 2000; 79:1155-1157.
10. Verma TC, Meena KC, Aswal S, Singh DK. Socio-personal and economic analysis of apiculture enterprise in Hadauoti Region of Rajasthan. *Economic Affairs*. 2018; 63(1):261-268.