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RESEARCH ARTICLE :

Socio-economic profile and training needs of beekeepers in Samastipur district of Bihar

ANURADHA RANJAN KUMARI AND LAXMIKANT

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SUMMARY : Honey has offered great promise to some of the most under nourished areas of the word. Bee benefit, the plants not only increasing their yield, but also improve crop quality since beekeeping does not compete for inputs with other farming or crop, it is an ideal programme for integration. Keeping the importance of beekeeping a study was undertaken to find out the socio-economic and psychological profile and training needs of beekeepers. The study highlighted that majority of the respondents belonged to middle to young age group, medium to high level of family education, socio-economic status, innovativeness and risk bearing capacity. The results also showed that majority of respondents had low to medium level of extension contact and size of land holding, respectively. In respect to training needs of beekeepers in different areas, it was found highest in protection of bee pests, diseases and other hazards followed by the business of bees, beehive products and their extraction, processing and medicinal values, management of bee colonies during different seasons and essential operations.

KEY WORDS :
Socio- economic, Innovativeness, Beekeepers, Training needs

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Author for correspondence :
ANURADHA RANJAN KUMARI
Krishi Vigyan Kendra (ICAR-IIVR) MALHANA DEORIA (U.P.) INDIA
Email: anuradha_rau@rediffmail.com

See end of the article for authors' affiliations

BACKGROUND AND OBJECTIVES

Apiculture is an ideal, absorbing instructive and economically profitable hobby. It is especially suitable for rural youth because it does not involve heavy physical work, allows time flexibility, provides grain full employment near to their houses and ultimately provides financial security. It solves problem of unemployment if adopted on commercial scale or as cottage industry it can generate self employment to over 15 million rural and tribal families and can produce annual income of over Rs. 4.5 billion by producing 150,000 tons of honey (Shende, 1992).

The present age is the age of scientific development over women cannot afford to do without training. For the full development of human resoures for improvement of homes and proper upbringing of children, there is great necessity for extending scientific knowledge and skill to women in general and rural women in particular for increasing scientific knowledge, skill and adoption of rural women require appropriate training is needs to be developed so that the new technologies could be easily disseminated in an intelligent and compatible manner to rural women for their acceptance. The acceptance would take

place only if they are disseminated after their assessment and refinement. Thus, a developing economy faces a challenging task of transferring the fast emerging technology to the farm women living in remote areas.

Modern beekeeping in India can, however, be traced to the beginning of nineteenth country, after independence, village industries boards were established at state level to promote cottage industries including beekeeping for co-ordination between the state boards. In addition to that from 1980 ICAR started an "All India co-ordinate project on Honey bee Research and training" Universities and khadi and village industries commission were also contributing to the development of beekeeping. Beekeeping is appropriate technology because it is very low scale and requires little money to begin with. Bees and beekeeping also contribute to the uplift of rural masses by way of employment generation and as a subsidiary occupation to supplement their income. The rural youth in the country in facing critical problem of unemployment. More than 26 per cent of the total population of the country is living below the poverty line. Therefore, effort must be made to raise the economic and social status of the weaker sections of the rural societies, who are below the subsistence level.

Apiculture has great potential for self-help of the rural people of the country. It provides the employment, new sources of income generation, food and nutrition security and improves rural economy. The most important factors in the development of the beekeeping industry are considered to be climate conditions, training, extension and research improved methods of management, queen rearing, pest and disease control, improved honey harvesting, processing and control use of pesticides. In this modern age, training of beekeeping is considered as one of the most important non-monetary inputs in all the aspects of development programmes. This fact applies to agriculture sector too. The importance of training in beekeeping practices as an indispensable instrument for rapid transfer of scientific beekeeping technology and a way to modernize the traditional beekeeping and the economic condition of beekeepers. Keeping in view the importance of beekeeping, the present study was undertaken to identify the socio-economic and psychological profile and training needs of beekeepers.

RESOURCES AND METHODS

The present study was conducted in Pusa block of samastipur district in Bihar state comprising 38 districts. The majority of respondents were involved in beekeeping in the district of Samastipur. Therefore, the sample for the study was selected from Pusa block of Samastipur district using purposive sampling technique because this block covered maximum number of beekeeping, eight villages were selected namely Harpur, Dighra, Birauli, Morsand, Bisunpur, Mahmada, Thahra Gopalpur and Deopar. Fifteen respondents from each village were selected randomly. Thus, in turn, one hundred twenty respondents constituted the sample for the study. The data were collected with the personal interview technique. Training needs of each specific area were categorized in three points *i.e.* low, medium and high. Mean score were used to rate specific areas and suitable statistical techniques were used for analysis of collected data.

OBSERVATIONS AND ANALYSIS

The findings of the present study as well as relevant discussion have been presented under following heads.

Socio- economic and psychological profile of the beekeepers :

The distribution of respondents based on their socio-economic and psychological profile have been presented in Table 1 and discussed as follows:

Age :

Data in Table 1 revealed that maximum 61.66 per cent of the respondents belonged to middle age group (36-50 years) followed to old age group. The data shows that majority of the respondents (88.32%) were young to middle age group which made this venture successful.

Family education :

Education in the family means the level of education of all the effective members (above the age of 6 years) of the family on the basis of mean education score of the respondents, family were categorized into three groups *i.e.* low, medium and high. It was observed from Table 1 that most of the respondents *i.e.* 44.16 per cent belonged to medium level of family education followed by 31.66 per cent belonged to low level of family education. The remaining 24.16 per cent belonged to high level of family education. It reveals that constant efforts were required to be made to promote family education in the rural area.

Size of land holding :

The study revealed that 46.66 per cent of respondents possessed small land holding and 31.66 per cent were landless and 15.00 per cent of respondents had medium size land holding. The remaining 6.66 per cent of respondents possessed large land holding. It shows that majority of respondents (88.32%) were having landless and small land holding. It implies that this venture is adoptable for landless and small land holding respondents.

Socio- economic status :

Socio-economic analysis of the data indicated that 46.66 per cent of respondent belonged to medium level of socio- economic status followed by 38.33 per cent from low level of socio- economic status. The remaining 15.00 per cent of respondents belonged to high level of socio- economic status. It established that respondents with medium level of socio-economic status were comparatively higher than the other categories.

Mass media exposure :

Data revealed that maximum 55.00 per cent of the respondents had medium level of exposure to mass media and 26.66 per cent had low level. The remaining 18.33 per cent of respondents had high level of mass media exposure. It shows that respondents had good exposure to the different mass media and thus, they can adopt this profession successfully.

Risk bearing capacity :

It was observed that maximum 50.84 per cent of respondents had medium level of risk bearing capacity followed by 30.00 per cent had low level and remaining 19.16 per cent of respondents had high level of risk bearing capacity. This predicts that a majority of respondents (70.00%) had medium to high level of risk

Table 1: Socio- economic and psychological profile of beekeepers **(n=120)**

Sr. No.	Personality traits	Category	Score range	Frequency	Percentage
1.	Age	Young	21-35 years	32	26.66
		Middle	36-50 years	74	61.66
		Old	51-65 years	14	11.67
2.	Family education	Low	0-11	38	31.66
		Medium	12-24	53	44.16
		High	25-36	29	24.16
3.	Size of land holding	Landless	-	38	31.66
		Small	< 2 acre	56	46.66
		Medium	3-7 acre	18	15.00
		Large	> 7 are	8	6.66
4.	Socio-economic status	Low	10-19	46	38.33
		Medium	20-28	56	46.66
		High	29-37	18	15.00
5.	Mass media exposure	Low	0-6	32	26.66
		Medium	7-12	66	55.00
		High	13-18	22	18.33
6.	Risk bearing capacity	Low	6-13	36	30.00
		Medium	14-22	61	50.84
		High	23-30	23	19.16
7.	Extension contact	Low	0-16	51	42.50
		Medium	17-32	48	40.00
		High	33-48	21	19.50
8.	Innovativeness	Low	6-7	30	25.00
		Medium	8-10	70	59.16
		High	11-12	19	15.84

bearing capacity. Therefore, there is more scope to launch new beekeeping development programmes among beekeepers.

Extension contact :

The data presented in Table 1 revealed that 42.50 per cent had low level of extension contact and 40.00 per cent had medium level. The remaining 17.50 per cent of respondents had high level of extension contact. It reveals that majority of respondents (82.50%) had low to medium level of extension contact. This implies that there is a greater need for beekeepers to contact extension officials/beekeeping experts.

Innovativeness :

It was found that maximum 59.16 per cent of respondents had medium level of innovativeness and 25.00 per cent had low level. Only 15.84 per cent of respondents had high level of innovativeness. It predicts that a significant majority of respondents (75.00%) had medium to high level of innovativeness. This implies that beekeepers with more innovative outlook have a capacity of taking the risk in opting the latest beekeeping technology if available to them.

Training needs of beekeepers :

Training is the critical inputs for human resource development. It plays an important role in initiating and accelerating human behaviour. Training is being a tool for making interventions at the level of human resource in increasingly becoming crucial for development in almost all fields with growing satisfaction in technology.

In order to make any training needs of the trainees. The remaining needs for beekeepers were identified on the basis of training needs percentage with respect to scientific beekeeping practices. The main idea behind

Table 2: Training needs of beekeepers **(n=120)**

Sr. No.	Function/activities	Category	Score	F	%	Mean	Training need	Rank
1.	Selection of site and	Low	3-4	68	56.67			
	equipments	Medium	5-7	38	31.66	4.66	50.83	IX
		High	8-9	14	11.67			
2.	Life cycle of bees and their	Low	5-7	71	59.17			
	rearing	Medium	8-11	29	24.17	7.50	55.83	VIII
		High	12-15	20	16.66			
3.	Frequency of examination	Low	3-4	63	52.50			
	during different seasons	Medium	5-7	36	30.00	5.83	61.66	VI
		High	8-9	21	17.50			
4.	Management of bee colonies	Low	4-6	54	45.00			
	during different seasons	Medium	7-10	41	34.17	7.91	70.83	IV
		High	11-12	25	20.83			
5.	Essential operations	Low	5-7	26	21.66			
		Medium	8-11	62	51.66	9.16	64.16	V
		High	12-15	32	26.66			
6.	Bee forage and pollination	Low	3-4	60	50.00			
		Medium	5-7	32	26.67	3.33	57.50	VII
		High	8-9	28	23.33			
7.	Beehive products and their	Low	5-7	33	27.50			
	extraction and medicinal	Medium	8-11	45	37.50	8.33	73.33	III
	values	High	12-15	42	35.00			
8.	Protection of bee pests	Low	4-6	12	10.00			
	diseases and other hazouds	Medium	7-10	27	22.50	10.00	85.83	I
		High	11-12	81	67.50			
9.	The business of bees	Low	3-4	31	25.83			
		Medium	5-7	32	26.67	5.41	85.50	II
		High	8-9	57	47.50			

training is to develop adequate working knowledge level of beekeeping the area in which there is requirement of training were identified on the basis of training needs percentage. The training needs scores were worked out in terms of percentage and accordingly, all the areas were ranked in descending order and presented in Table 2. Table 2 revealed that among different aspects of beekeeping training requirements of beekeepers was found to be highest in protection of bee pest, diseases and other hazards (training needs 85.83%) got rank I followed by the business of bees (training needs 82.50% and got rank II), beehive products and their extraction processing and medicinal values (73.33% and got rank II), management of bee colonies during different seasons (70.83% and got rank IV), essential operations (64.16% and rank V), frequency of examination during different seasons (61.66% and rank VI), bee forage and pollination (57.50% and rank VII), life cycle of bee and their rearing (55.83% and rank VIII) and selection of site and equipment (50.83% and rank IX). It implies that extension workers/experts should provide more and more training on bee pests/diseases and other hazards, the business of bees, beehives products and their extraction and medicinal values, management of bee colonies during different seasons, essential operation and frequency of examination during different seasons. The result of this study are in line with the findings given by Chillar (2005); Naegal (1990); Bhagat and Nain (2005) and Singh (2004).

Conclusion :

The study concluded that majority of the respondents belonged to middle to young age group, medium to high level of family education, socio-economic status, innovativeness and risk bearing capacity, the majority of respondents had low to medium level of extension contact and size of land holding. In respect to training needs of beekeepers in different areas, it was found highest in protection of bee pests, diseases and other hazards (85.83%) followed by business of bees (82.50%), beehive products and their extraction processing and medicinal values (73.33%), management of bee colonies during different seasons (70.83%), essential operations (64.16%) and lowest was observed in selection of site and equipment area. The extension workers/experts should organize more and more trainings on bee pests/ diseases and other hazards, the business of bees, bee hive products and their processing and medicinal values and essential operations and management of bee colonies during different seasons.

Authors' affiliations :
LAXMIKANT, Krishi Vigyan Kendra (SVPUA&T) RAMPUR (U.P.) INDIA

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