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A study on knowledge level recommended of beekeeping practices of beekeeping farmers in Alwar and Bharatpur District of Rajasthan

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Abstract

The present study has been conducted to study the Knowledge status of one hundred twenty beekeeping farmers in the Alwar and Bharatpur District of Rajasthan. Pre tested and interview schedule and personal interview were used the data collection. Data collected from eight villages of Alwar and Bharatpur district. For the analysis of data frequency, percent, mean, standard deviation, and rank, used.

Keywords: Beekeeping, beekeeping practices, knowledge level, beekeeping farmers

Introduction

Agriculture is one of the most important sectors of the Indian economy and continues to play a vital role in ensuring food security, employment generation, and rural development. (BIRTHAL *et al.*, 2015) ^[2].

It is considered one of the most suitable enterprises for small and marginal farmers because it requires comparatively less land, labour and capital investment. Besides honey production, beekeeping provides various products such as beeswax, royal jelly, pollen, propolis, and bee venom, which have significant commercial value in pharmaceutical, cosmetic and food industries (Bogdanov *et al.*, 2008) ^[1].

The country is home to several species of honey bees, including *Apis mellifera*, *Apis cerana indica*, *Apis dorsata*, and *Apis florea*. Among these species, *Apis mellifera* has gained considerable importance in commercial beekeeping because of its high honey-producing capacity and adaptability to scientific management practices (National Bee Board, 2024) ^[5].

India has recorded remarkable progress in honey production and exports during the last decade. Recent reports indicate that the country produced approximately 1.4 lakh metric tonnes of natural honey and exported more than 1.07 lakh metric tonnes of honey during 2023–24, earning substantial foreign exchange. India has emerged as one of the leading honey-producing and honey-exporting countries in the world, reflecting the growing significance of the beekeeping sector in the national economy (Government of India, 2024) ^[6].

Review of Literature

Gebreyohans and Gebremariam (2017) ^[3] found that beekeepers in Eastern Tigray possessed knowledge of local bee flora, honey maturity identification, and feeding practices. Beekeepers identified maturity of honey by the

behaviour of bees (64%) and appearances of honey (60%). However, internal inspection of colonies was conducted rarely by the majority of beekeepers (49.2%), reflecting gaps in modern colony management knowledge. The study noted that knowledge of good honey harvesting and storage practices was limited, as smoking during harvesting adversely affected honey quality.

Panchani *et al.* (2022) ^[4] revealed that only 12 per cent of beekeepers in Gujarat were aware that the Good Beekeeping Practice parameters they followed were specified by the National Bee Board (NBB), while 100 per cent of beekeepers were aware of specific parameters. Beekeepers developed awareness about GBPs parameters from training conducted by different SAUs, NGOs, and fellow progressive beekeepers. This suggests that while practical knowledge exists, formal awareness of institutional guidelines remains poor.

Sharma *et al.* (2026) ^[7] through logit regression analysis in Chitwan, Nepal, found that financial capacity significantly influenced adoption of Good Beekeeping Practices. Higher annual income from beekeeping indicated greater investment in knowledge acquisition and improved practices. The study observed that approximately 77.1 per cent of farmers who had received training showed better understanding of recommended beekeeping practices.

Materials and Methodology

The study was conducted in Alwar and Bharatpur districts of Rajasthan. A total of 120 beekeeping farmers were selected for the simple random sampling. Data were collected through pre - tested interview schedule and personal interview. The collected data were analysed using frequency, percentage, mean, standard deviation, and rank.

Results and Discussion

Table 1: Distribution of farmers according to their Knowledge about Recommended beekeeping practices

S. No.	Statement	Complete knowledge	Partial knowledge	No knowledge	Mean score	Rank
1	Importance of beekeeping	105 (87.5)	15 (12.5)	0 (0)	1.88	VI
2	Select a suitable site for beekeeping	82 (68.33)	38 (31.67)	0 (0)	1.68	IX
3	Suitable boxes for beekeeping	94 (78.33)	25 (20.83)	1 (0.83)	1.77	VII
4	Suitable species for beekeeping	79 (65.83)	41 (34.67)	0 (0)	1.65	XI
5	Benefits of regular inspection of the bee colony	85 (70.83)	33 (27.5)	2 (1.67)	2	III
6	Nutrition of bees	83 (69.17)	36 (30)	1 (0.83)	1.68	X
7	Pests found in bees	74 (61.67)	42 (35)	4 (3.33)	2	I
8	Diseases found in bees	77 (64.17)	41 (34.17)	2 (1.67)	2	II
9	Control of pests in bees	68 (56.67)	51 (42.5)	1 (0.83)	2	V
10	Control of diseases in bees	73 (60.83)	44 (36.67)	3 (2.5)	2	IV
11	Management in bees during the summer season	70 (58.33)	47 (39.17)	3 (2.5)	1.5	XIV
12	Management in bees during the winter season	71 (59.17)	46 (38.33)	3 (2.5)	1.6	XIII
13	Management in bees during the Rainy season	63 (52.5)	55 (45.83)	2 (1.67)	1.5	XV
14	About honey extraction techniques from the beehive	61 (50.83)	54 (45)	5 (4.17)	1.5	XVI
15	About the migration of bees	65 (54.17)	52 (43.33)	3 (2.5)	1.5	XVII
16	Record-keeping related to beekeeping	41 (34.17)	70 (58.33)	9 (7.5)	1.3	XIX
17	About schemes related to beekeeping	4 (3.33)	13 (10.83)	103 (85.33)	0.2	XX
18	Protective measures used in beekeeping	44 (36.67)	75 (62.5)	1 (0.83)	1.4	XVIII
19	Receive information related to beekeeping	76 (63.33)	43 (35.83)	1 (0.83)	1.6	XII
20	Beekeeping products to you know about	84 (70)	35 (29.17)	1 (0.83)	1.7	VIII

The data presented in Table 1 showed that most of the farmers 87.5 per cent have complete knowledge, 12.5 per cent partial knowledge and 0 per cent no knowledge of the importance of beekeeping, with Mean Score 1.88 and Rank VI. 68.33 per cent have complete knowledge, 31.67 per cent partial knowledge and 0 per cent no knowledge of the Suitable site for beekeeping, with Mean Score 1.68 and Rank X. 78.33 per cent have complete knowledge, 20.83 per cent partial knowledge and 0.83 per cent no knowledge of the Suitable Boxes for beekeeping, with Mean Score 1.77 and Rank VII. 65.83 Per cent have complete knowledge, 34.67 per cent partial knowledge and 1.65 per cent no knowledge of the Suitable Species for beekeeping, with Mean Score 1.65 and Rank XI. 70.83 per cent have complete knowledge, 27.5 per cent partial knowledge and 1.67 per cent no knowledge of the benefits of regular inspection of the bee colony, with Mean Score 2 and Rank IV. 69.17 per cent have complete knowledge, 30 per cent partial knowledge and 0.83 per cent no knowledge of the Diet of bees, with Mean Score 1.68 and Rank IX. 61.67 Per cent have complete knowledge, 35 per

cent partial knowledge and 3.33 per cent no knowledge of the about pest found in bees, with Mean Score 2 and Rank I. 64.17 percent have complete knowledge, 34.17 per cent partial knowledge and 1.67 per cent no knowledge of the about disease found in bees, with Mean Score 2 and Rank III. 56.67 Per cent have complete knowledge, 42.5 per cent partial knowledge and 0.83 per cent no knowledge of the control of pests in bees, with Mean Score 2 and Rank V. 60.83 Per cent have complete knowledge, 36.67 per cent partial knowledge and 2.5 per cent no knowledge of the Control of diseases in bees, with Mean Score 2 and Rank II. 58.33 Per cent have complete knowledge, 39.17 per cent partial knowledge and 2.5 per cent no knowledge of The Management in bees during in summer season, with Mean Score 1.4 and Rank XIV. 59.17 Per cent have complete knowledge, 38.33 per cent partial knowledge and 2.5 per cent no knowledge of The Management in bees during in winter season, with Mean Score 1.6 and Rank XII. 52.5 Per cent have complete knowledge, 45.83 per cent partial knowledge and 1.5 per cent no knowledge of The Management in bees during in Rainy

season, with Mean Score 1.5 and Rank XV. 50.83 Per cent have complete knowledge, 45 per cent partial knowledge and 1.5 per cent no knowledge of The Honey extraction techniques from the bee hive, with Mean Score 1.5 and Rank XVI. 54.17 Per cent have complete knowledge, 43.33 per cent partial knowledge and 2.5 per cent no knowledge of the migration of bees, with Mean Score 1.5 and Rank XVII. 34.17 Per cent have complete knowledge, 58.33 per cent partial knowledge and 7.5 per cent no knowledge of The Record –keeping related to bees, with Mean Score 1.3 and Rank XIX. 3.33 Per cent have complete knowledge, 10.83 per cent partial knowledge and 85.33 per cent no knowledge of The Schemes related to bees, with Mean Score 0.2 and Rank XX. 36.67 Per cent have complete knowledge, 62.5percent partial knowledge and 0.83 per cent no knowledge of The Protective measures used in beekeeping, with Mean Score 1.4 and Rank XVIII. 69.33 Per cent have complete knowledge, 35.83 per cent partial knowledge and 0.83 per cent no knowledge of The Information related in beekeeping, with Mean Score 1.6 and Rank XIII. 70 Per cent have complete knowledge, 29.17 per cent partial knowledge and 0.83 per cent no knowledge of The Products to beekeeping, with Mean Score 1.7 and Rank VIII.

Table 2: Distribution of farmers according to their overall Knowledge about Recommended beekeeping practices

S. No.	Category	Frequency	Percentage
1	Low	15	12.5
2	Medium	86	71.67
3	High	19	15.83
Total		120	100

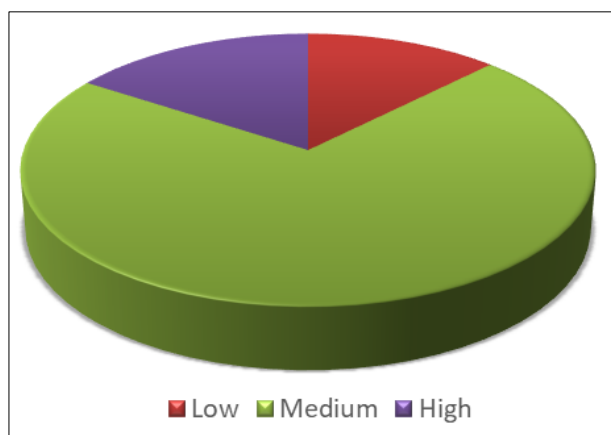


Fig 1: Distribution of farmers according to their over Knowledge about Recommended beekeeping practices.

Conclusion

The findings revealed that the most of the farmers 71.67 per cent had medium knowledge, whereas 15.83 per cent high knowledge and 12.5 per cent of the farmers had low knowledge about beekeeping farmers.

References

1. Bogdanov S, Jurendic T, Sieber R, Gallmann P. Honey for nutrition and health: a review. *Journal of the American College of Nutrition*. 2008;27(6):677-689.
2. Birthal PS, Roy D, Negi DS. Assessing the impact of

crop diversification on farm poverty in India. *World Development*. 2015;72:70-92.

3. Gebreyohans KW, Gebremariam TT. Beekeeping management practices and constraints in Eastern Tigray, Ethiopia. *Journal of Agriculture and Environment for International Development*. 2017;111(2):323-342. doi:10.12895/jaeid.20172.634.
4. Panchani PN, Lakhani CD, Chovatia JV. Awareness and adoption of good beekeeping practices by beekeepers. *Gujarat Journal of Extension Education*. 2022;33(2):19-22.
5. National Bee Board. Status of beekeeping and honey production in India. New Delhi: Ministry of Agriculture and Farmers Welfare, Government of India; 2024.
6. Government of India. National Beekeeping and Honey Mission (NBHM): progress report. New Delhi: Ministry of Agriculture and Farmers Welfare, Government of India; 2024.
7. Sharma NK, KC P, Mishra BP. Adoption of good beekeeping practices among beekeepers in Chitwan District, Nepal. *Nepalese Journal of Agricultural Sciences*. 2026;30:141-151.