

## Assessing the Effectiveness of Apiculture Training Programme on Rural Women

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### ABSTRACT

*The present study was carried out to know the effect of Apiculture training programme on rural women. The findings revealed that the trained beekeepers possess higher level of knowledge. Skill and adoption in comparison of untrained beekeepers and there was significant difference in the mean level of knowledge, skill and adoption of trained and untrained beekeepers women. The computed t-value is highly significant in all variables.*

**Key words:** Apiculture, Training, Knowledge, Skill, Adoption, Effect of training;

Beekeeping training has been successful in producing a significant impact on the trained beekeepers. Beekeeping plays a crucial role in the present context of commercialization of agriculture and liberalization of economy. It covers entire scope of honey bee resources, bee products, beekeeping practices, pollination services and their interface with business systems and environment integrity. There is a significant unknown diversity of scientific and practical knowledge available in different countries which need to be disseminated properly. Due to lack of co-ordination amongst different implementing agencies little information is available on the overall status of research, training and extension systems. Beekeeping is especially suitable for women, because it does not involve heavy physical work, allows time flexibility, provides gainful employment near to their house and ultimately provides financial security. It solves problem of unemployment if adopted on commercial scale or as cottage industry.

Any number of improvement in our science and technology will be not fulfill unless until this will be adopted by our farm women who are the real uses of our modern technology or who are the real beneficiaries. Suppose we do invent anything for the development of our society and if it is not being transferred up to the gross root level. Then that invention is meaningless,

worthless. In the modern scenario when extent agriculture is the main study for 65 per cent of our population and 52 per cent our women for is illiterate, we have to search alternate sources of employment to strengthen our rural economy and this juncture of global economy when India is standing with WTO sanctions, apiculture has increased as a new venture were our rural mass can get self employment and they can empower themselves economically. Apiculture is not a new enterprise, which does not require very big investment, nor does it require a complex infrastructure with high-energy investment to start with. In this direction only to transfer our technology a center of excellence has been establish by RAU (Apiculture Research Training Center) to disseminate the technology among rural mass of surrounding area. Keeping this in view, the present study was, therefore, undertaken to know the impact of training on different aspects of honey production technology with the following objectives:

- i) To study the level of knowledge, skill and adoption by the rural women through Apiculture technology.
- ii) To measure the extent of adoption of recommended Apiculture technology.
- iii) To study the relationship regarding acquisition of knowledge, skill and adoption of apiculture technology.

## METHODOLOGY

The present study was conducted in Pusa block of Samastipur district in Bihar. The seven villages were selected in which the beekeeping training programme on rural women was already conducted. Fifty trained and fifty untrained randomly selected rural women with the help of interview schedule. Analysis of data was resorted to frequency and average. The correlation and multiple regression analysis were also done to know the relationship of independent variables with knowledge, skill and adoption of Apiculture technology.

## RESULTS AND DISCUSSION

Data presented in Table 1 indicated that out of 50 trained women, 96.0 per cent had high level of knowledge, 4.00 per cent had medium knowledge and none of these had low level of knowledge about Apiculture technology.

While in case of untrained women. It was noted that medium level of knowledge (98.0%). The low level of knowledge had been 2.0 per cent and none of these respondents had high level of knowledge.

**Table 1. Distribution of respondents according to extent of knowledge, skill and adoption of Apiculture technology**

Variables	Categories	Trained women (n=50)		Untrained women (n=50)	
		No.	%	No.	%
Knowledge	Low	00	0.00	01	2.00
	Medium	02	4.00	49	98.0
	High	48	96.0	00	0.00
Skill	Low	00	0.00	01	2.00
	Medium	01	2.00	49	98.0
	High	49	98.0	00	0.00
Adoption	Low	00	0.00	10	20.0
	Medium	06	12.0	38	76.0
	High	44	88.0	02	4.00

In case of skill, the data indicated that out of total trained women maximum 98.0 per cent had high level of skill, 2.0 per cent had medium level of skill and none of these low level of skill regarding apiculture technology. However, in case of untrained women 98.00 per cent had medium level of skill and only 2.0 per cent had low level of skill.

In case of adoption of Apiculture technology, the data revealed that maximum 88.0 per cent had high level of adoption, 12.00 per cent had medium level of adoption

and not even a single women having low adoption level. Whereas in case of untrained women majority (76.0%) had medium level of adoption followed by 2.0 per cent having low adoption and only 4.00 per cent having high adoption.

*Relationship of independent variables with knowledge, skill and adoption of apiculture technology:* It is clear from Table 2 that the variables, caste, education, family education, annual income, cosmopolitaness and economic motivation were found to be positively and significantly correlated with level of knowledge, skill and adoption at 1 per cent level of significance of trained beekeepers.

Age was negatively but significantly correlated with level of knowledge, skill and adoption. The remaining seven variables were found to be non-significant. Whereas in case of untrained beekeepers the correlation coefficient analysis revealed that the variables viz. Caste, education, family education, annual income, cosmopolitaness and economic motivation were positively and significantly correlated with level of knowledge, skill and adoption at 5 per cent level of significance.

Age was negatively but significantly correlated with level of knowledge, skill and adoption the remaining seven variable i.e. occupation, family size, family type, size of land holding, house type, house hold material possession and social participation were non-significant.

Data presented in Table 3 revealed that the coefficient of determination ( $R^2$ ) for 14 selected variables jointly explained 86.56 per cent variation in the knowledge. It has been further revealed that the regression coefficient was significantly only in case of three variables viz. Caste, family size and economic motivation. This shows that the three variables had significant influence on the knowledge of trained women towards apiculture technology. In case of untrained women, the coefficient of determination ( $R^2$ ) from 14 variables was jointly predicted to the extent of 61.19 per cent on the knowledge. It is also revealed that none of the variables contributed significantly towards level of adoption.

Table 3 also revealed that on skill of the coefficient of determination ( $R^2$ ) of 14 selected variables jointly explained 84.53 per cent variation in the skill of trained women and 61.12 per cent variation in the knowledge of untrained women. Further revealed that the

**Table 2. Relationship between independent variables with knowledge, skill and adoption of apiculture technology by rural women**

Independent variables	Correlation coefficient 'r' value					
	Knowledge		Skill		Adoption	
	T	UT	T	UT	T	UT
Age	-0.4344**	0.3259*	-0.4002**	-0.3240*	-0.3063**	-0.3299*
Caste	0.7147**	0.3038*	0.6065**	0.3010*	0.6686**	0.2849*
Personal Education	0.3691**	0.3221*	0.4352**	0.3182*	0.4087**	0.3408*
Family Education	0.4315**	0.2838*	0.5188**	0.2816*	0.4987**	0.3209*
Occupation	0.0179	0.0646	-0.0305	0.0610	0.0287	0.0367
Family size	0.2187	-0.1219	0.2130	-0.1246	0.0484	-0.0860
Family type	0.1863	-0.0283	0.0703	-0.0281	0.2399	-0.0223
Size of land holding	-0.0579	0.0847	-0.0611	0.0897	-0.0393	0.0991
Annual income	0.4338**	0.3517	0.2813**	0.3371	0.3713	0.3493*
Type of house	0.0670	0.0706	0.0037	0.0678	0.1794	0.0714
Household material possession	-0.0745	0.0978	-0.1307	0.1028	-0.0363	0.1024
Social participation	-0.1969	-0.1233	-0.0539	-0.1370	-0.1446	-0.0796
Casmopoliteness	0.4247**	0.3327*	0.4740**	0.3361*	0.5720**	0.3340*
Economic motivation	0.4607**	0.3233*	0.4536**	0.3122*	0.3745**	0.3199*

\*\* : Significant at 0.01 level ; \* : Significant at 0.05 level. T= Trained, UT= Untrained

**Table 3. Multiple regression analysis of independent variables with knowledge, skill and adoption of apiculture technology by the rural women**

Independent variables	Knowledge				Skill				Adoption			
	Ttained		Untrained		Ttained		Untrained		Ttained		Untrained	
	(n=50)		(n=50)		(n=50)		(n=50)		(n=50)		(n=50)	
	b	t	b	t	b	t	b	t	b	t	b	t
Age	-0.1104	1.21	-0.2421	-1.61	-0.1252	-0.92	0.2043	-1.59	0.0699	-0.79	-0.0513	-1.58
Caste	3.8211	4.72**	0.6923	0.40	3.5922	2.97*	0.6149	0.42	2.0172	2.57*	0.0513	0.34
Personal Education	-0.6502	-1.10	-0.4432	-0.20	0.1295	0.15	0.4272	-0.32	-0.6057	-1.06	-0.0258	-0.08
Family Education	1.0690	1.60	1.3544	0.72	3.2535	3.25*	1.0944	0.68	1.5093	2.32*	0.4486	1.11
Occupation	0.7874	1.12	-0.5688	-0.44	1.6436	1.54	-0.4638	-0.42	0.1395	0.26	-0.2154	0.76
Family size	1.8823	2.31*	-1.7380	-0.69	2.4389	2.00	-1.6025	-0.74	-0.3582	-0.45	-0.1461	-0.27
Family type	0.60000	0.85	1.0526	0.41	0.0400	0.38	0.9570	0.43	1.5691	2.30*	0.1089	0.19
Size of land holding	-0.8914	-1.55	-1.0984	-0.56	-1.0907	-1.27	-0.8720	-0.52	-0.3212	-0.58	-0.2104	-0.50
Annual income	-0.5662	-0.70	2.7995	1.52	-1.7759	-1.47	2.2327	1.42	-0.3765	0.48	0.3046	1.52
Type of house	0.4915	0.87	0.2464	0.16	-0.1938	-0.23	0.1669	0.14	0.8661	1.50	0.0237	0.08
Material possession	-0.6741	-0.53	-0.6804	-0.32	-3.7629	-1.96	-0.4153	-0.23	-2.1003	-1.68	-0.2256	-0.49
Social participation	-0.6613	-0.59	-3.8177	-1.10	1.3410	0.81	-3.4914	-0.17	0.4476	0.41	-0.5136	0.68
Cosmopoliteness	-0.0449	-0.53	0.2802	0.61	0.0083	0.04	0.2607	0.66	0.2913	1.98	0.0638	0.66
Economic motivation	0.7501	3.26*	0.6120	1.49	1.1284	3.28*	0.4934	1.40	0.3958	1.77	0.1299	1.46
	$R^2=0.8656$		$R^2=0.6195$		$R^2=0.8453$		$R^2=0.6112$		$R^2=0.8321$		$R^2=0.6202$	

\*= Significant at 0.05 level \*\*= Significant at 0.01 level; b= regression coefficient , t = t-value

regression coefficient was significant only in case of three variables viz Caste, family education and economic motivation were positive and significant in the prediction of the recommended technology of trained women. The contribution of remaining eleven variables were non significant.

In case of adoption, the data show that coefficient of determination ( $R^2$ ) for 14 selected variables jointly explained only 83.21 per cent variation in the adoption of trained women and 62.02 per cent variation in the adoption of untrained women. It was also revealed that the regression coefficient was significant in case three

variables viz. Caste, family education and family type were positively and significantly contributed in the prediction of adoption of trained women. The contribution of remaining eleven variables were non significant.

## CONCLUSION

Apiculture training has been successful in producing a significant impact on the respondents. The study revealed that there had been a positive contribution of the training programme in terms of knowledge, skill and adoption of selected trainees.

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