



A CASE STUDY

A study on psychological behaviour of lac growers on lac production technology: A case study in Chhattisgarh state

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Abstract : The study was conducted during year 2012-2013 in Bastar district of Chhattisgarh state. The analysis of the data shows that majority the respondents (78.13%) had medium level of cosmopoliteness, followed by 15.00 per cent had low level and 6.87 per cent had high level of cosmopoliteness. It was found that majority of the respondents (55.00%) had medium level of scientific orientation on lac production technology followed by 44.38 per cent had low level and 0.62 per cent had high level. The overall knowledge level of the lac growers towards lac production technology was found that maximum number of respondents (48.75%) had medium level of knowledge followed by 28.13 per cent and 23.12 per cent had low and high level of knowledge, respectively. The results of the study would be helpful in organizing training and skill development programmes at various level of lac production technology which will be helpful to increase knowledge level of lac growers of Bastar district of Chhattisgarh state.

Key Words : Knowledge, Cosmopoliteness, Scientific orientation

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INTRODUCTION

Forest is an important sector having a significant contribution to the Indian economy. India's forest is rich in biodiversity and provides a wide range of goods needed by the people. Since immemorial times a large number of poor people living in and around the forest areas depends heavily on these forests for their livelihood. Forest helps the millions of people in several ways throughout the globe. Tribal's and forests have long been interdependent. Their lives are closely entwined with the nature. They are born, brought up and die in close vicinity

of the forest. They are utilizing the forest for meeting their day-to-day needs. They mostly worship their deity whom they identified with their landscape and nature. Forest also provides lots of livelihood option for the rural people through various sources of forestry products like tendu leaves, honey, herbal tress, wood, lac and timber. Among them lac is a very important non-timber forest product which provides direct as well as indirect income to the people who live in and around forest areas.

Lac is a natural resin secreted by an insect *Kerria lacca* (Kerr) which thrives on the tender twigs of specific host trees viz., palas (*Butea monosperma*), ber (*Ziziphus*

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mauritiana), kusum (*Schleichera oleosa*), *Flemingia semialata*, *Ficus* spp. etc. Raw lac is the source of valuable, natural and renewable products *i.e.* resin, dye and wax. Rangeeni and kusmi are the two strains of lac insect which are classified based on preference of the insect for specific host plants. Lac cultivation is an important source of income for livelihood of the forest and sub-forest dwellers in different states of the country. Besides, it has high potential for generating employment for both men and women in forest and subforest areas of Jharkhand, Chhattisgarh, Madhya Pradesh, West Bengal, Maharashtra, Odisha and parts of Uttar Pradesh, Andhra Pradesh, Gujarat and NEH region. It is a highly remunerative crop, paying high economic returns to the farmers and also foreign exchange to the country through its export. Lac is mainly produced in India, Thailand, Indonesia, parts of China, Myanmar, Philippines, Vietnam, Cambodia etc. and India is the largest producer of lac in the world.

Bastar district is dominant with the forest area. Forest plays an important role in the lives of the people, providing food security and livelihood through the collection of minor forest produce. The forest provides fuel and firewood, medicines, food and drink, implements and housing materials for fulfillment of their needs. In the Bastar region 40 per cent of livelihoods are forest based, 30 per cent are agriculture based and 15 per cent of livelihoods are dependent on animal husbandry. Another 15 per cent of the people earned income from wage labour. Production of lac in Bastar district during year 2013-14 was 145 tons (Yogi *et al.*, 2015). Lac is helping the tribal peoples of Bastar in increasing their income and improving their social status. It also acts as one of the least cost income generating production for the farmers in cash without any risks of drought or any miscellaneous spending. A number of studies has been conducted by various researcher on psychological behaviour of farmers producing different agricultural crops. Narayanaswamy *et al.* (2005) observed that majority of the farmers had moderate knowledge about organic sericulture practices (54%) followed by low (30%) and high categories (16%). Geetha and Srinivasa (2007) observed that the farmers were having full knowledge of recommended technologies like silkworm spacing and shoot rearing. Sunil Dutt and Chole (2001) observed that majority of the respondents (42.50%) had high level of cosmopolitanism. Rajni (2006) found that the maximum member of respondents (44.45%) had medium level of cosmopolitanism, whereas 34.12 per cent respondents has low level and 21.43 per cent respondents

were having high level of cosmopolitanism. Shrivastava (2005) revealed that 65.63 per cent of the respondents had medium level of scientific orientation followed by 15.37 per cent respondents had low level of scientific orientation, while 15.00 per cent respondents belonged to high level of scientific orientation category regarding control measure practice of various rice diseases. Prajapati (2010) showed that majority of the respondents (64.00%) had medium level of scientific orientation, followed by 23.33 per cent had low level of scientific orientation while, 12.67 per cent of respondents had high level of scientific orientation regarding banana production technology. Keeping the above studies in mind, the present study was undertaken to highlight the psychological behaviour of lac growers of Bastar district towards lac production technology as there is so such study on psychological behaviour of lac growers.

MATERIAL AND METHODS

The study was conducted in Bastar district of Chhattisgarh. A two stage stratified random sampling technique was employed to select the sample lac growers. At first-stage eight lac growing villages and at second stage twenty lac growers, from each selected villages were selected at random. Thus, the total sample size was 160 lac growers. The relevant data and information was collected from the sample lac growers through a pre-tested questionnaire by survey method during the year 2012-13. The methodologies adopted to study the psychological behaviour *i.e.* cosmopolitanism, scientific orientation and knowledge have been described below.

Cosmopolitanism :

Cosmopolitanism is the tendency of an individual to be in contact with outside his own community based on the belief that all the needs of an individual cannot be satisfied within his own community. To measure cosmopolitanism of farmers they were asked to indicate their extent of contact with outside of their social system by their own efforts. The answer was then recorded as follows:

Categories	Score
No contact	1
Once in month	2
Once in 15 days	3
Once in a week	4
Twice in a week	5

The maximum and minimum score that can be obtained by respondent for cosmopolitaness was 2 and 3. Based on the mean and standard deviation, the scores of the respondents were classified as low, medium and high.

Category	Score
Low < (mean - standard deviation)	Below 2 score
Medium =(mean + standard deviation)	2 to 3 score
High > (mean + standard deviation)	Above 3 score

Scientific orientation :

It refers to the degree to which an individual is inclined to use scientific method in farming and decision-making. The scientific orientation scale developed by Supe (1975) was used with due modifications for the measurement of scientific orientation of respondents. The score for positive items were 5, 4, 3, 2 and 1 and for negative items scores were 1, 2, 3, 4, 5 for the response categories strongly agree, agree, undecided, disagree and strongly disagree, respectively. The sums of scores of all the six statement were worked out.

The maximum and minimum scores of scientific orientation obtained by respondents were 26 and 34. Based on the mean and standard deviation, the scores of the respondents were classified as low, medium and high.

Category	Score
Low < (mean - standard deviation)	Below 26 score
Medium =(mean + standard deviation)	26 to 34 score
High > (mean + standard deviation)	Above 34 score

Knowledge :

English and English (1961) defined knowledge, as a body of understandable information possessed by an individual or by culture. Rogers (1983) stated that knowledge is of three types namely awareness knowledge, how to knowledge and principle knowledge. In the present study awareness knowledge was studied and the study was confined, to the technical information possessed by the respondents about recommended lac production technology. The same was measured by constructing a teacher made knowledge scale. The knowledge test consisted of items called questions covering various aspects of recommended lac production technology. The set of questions developed were discussed with the subject matter specialists. The total

31 questions were finalized. A teacher made scale was used to measure the knowledge level of farmers regarding recommended lac production technology. The responses of respondents regarding knowledge were obtained into three point continuum as under.

Categories	Score
No knowledge	1
Partial knowledge	2
Complete knowledge	3

The knowledge index was worked as follows:

$$\text{Knowledge index} = \frac{\text{sum of knowledge score actually obtained by the respondent}}{\text{Maximum possible obtainable knowledge score by the respondent}} \times 100$$

The maximum and minimum scores of knowledge obtained by respondents were 46 and 62. Based on the mean and standard deviation, the scores of the respondents were classified as low, medium and high.

Category	Score
Low < (mean - standard deviation)	Below 46 score
Medium =(mean ± standard deviation)	46 to 62 score
High > (mean ± standard deviation)	Above 62 score

RESULTS AND DISCUSSION

The data which highlight the psychological behaviour of lac growers towards lac production technology have been presented in Table 1-3.

An examination of the Table 1 revealed that the majority of the respondents (78.13%) had medium level of cosmopolitaness, followed by 15.00 per cent had low level of cosmopolitaness and 6.87 per cent had high level of cosmopolitaness. From the above findings it can be concluded that the majority (78.13%) of the respondents had medium level of cosmopolitaness.

The results in the Table 2 showed that majority of the respondents (55.00%) had medium level of scientific orientation, followed by 44.38 per cent had low level of scientific orientation and 0.62 per cent had high level of scientific-orientation regarding lac production technology. It can be concluded that majority of the respondents came under the medium level of scientific orientation category.

The data presented in Table 3 indicate that maximum number of respondents (48.75%) had medium level of

Sr. No.	Cosmopolitaness	Frequency	Per cent
1.	Low level of cosmopolitaness	24	15.00
2.	Medium level of cosmopolitaness	125	78.13
3.	High level of cosmopolitaness	11	6.87
Total		160	100.00
$\bar{X} = 3$		S.D.=0.707	

Sr.No.	Scientific-orientation	Frequency	Per cent
1.	Low level of scientific orientation	71	44.38
2.	Medium level of scientific orientation	88	55.00
3.	High level of scientific orientation	01	0.62
Total		160	100.00
$\bar{X} = 30$		S.D.=4.242	

Sr. No.	Knowledge level	Frequency	Per cent
1.	Low level of knowledge	45	28.13
2.	Medium level of knowledge	78	48.75
3.	High level of knowledge	37	23.12
Total		160	100.00
$\bar{X} = 54$		S.D=8.48	

knowledge followed by 28.13 per cent and 23.12 per cent of the respondents were having low and high level of knowledge, respectively on recommended lac production technology. It can be concluded that most of the respondents had medium level of knowledge on recommended lac production technology. Similar work related to the present investigation was also carried out by Pal (2015); Pal and Yogi (2014) and Pal (2014).

Conclusion :

From the present study it was found that maximum number (48.75%) of the respondents had medium level of knowledge about recommended lac production technology, this indicates that the lac growers are aware about recommended lac production technology but at the same time they were slow to adopt recommended lac production technology. Majority of the respondents (78.13%) have medium level of cosmopolitaness indicating that lac growers more concerned to go outside to their society to know about the lac production. Majority of the lac growers had medium level of scientific orientation (55.00%) which shows that maximum number of the lac growers were scientifically orientated towards lac production. Thus, it can be concluded that there is an urgent need to improve their knowledge level more

through providing education and skill development, field trips and proper technical guidance. The skill development on use of various practices of lac production may be helpful in convincing the lac growers and increasing the adoption of recommended lac production technology.

REFERENCES

- English, H.B. and English, A.C. (1961).** *A comprehensive dictionary of psychological and psychoanalytical terms.* Longmans Green and Co., NEW YORK, U.S.A.
- Geetha, G.S. and Srinivasa, G. (2007).** Knowledge and adoption of sericulture technologies by CSR (Bivoltine) farmers in Mandya and Mysore districts of Karnataka. *Mysore J. Agric. Sci.*, **41**(4): 508-512.
- Narayanaswamy, B., Naika, R. and Nataraj, M.S. (2005).** Perception, knowledge and adoption of organic sericulture among the farmers. *Madras Agric. J.*, **92**(10-12): 677-679.
- Pal, Govind (2014).** Impact of the *Lac* developmental programmes on *Lac* economy—A study in Chhattisgarh. *Internat. J. agric. Sci.*, **10** (1): 255-259.
- Pal, Govind and Yogi, R.K. (2014).** Socio-economic status of *Lac* growers in Korba District of Chhattisgarh. *Internat. J. agric. Sci.*, **10** (1): 167-171.
- Pal, Govind (2015).** Study on methodology for estimation of

lac production in India. *Internat. Res. J. Agric. Eco. & Stat.*, **6** (1): 205-209, DOI: 10.15740/HAS/IRJAES/6.1/205-209.

Prajapati, P. (2010). A study on adoption of recommended banana production technology among the farmers of Durg district of Chhattisgarh state. M. Sc. (Ag.) Thesis, Indira Gandhi Krishi Vishwavidyalaya, Raipur, C.G (INDIA).

Rajni, T. (2006). Impact of mushroom production and processing training on women organized. M.Sc. (Ag.) Thesis, Indira Gandhi Agriculture University, Raipur, C.G (INDIA).

Rogers, E.M. (1983). *Diffusion of innovations*. The Free Press, NEW YORK, U.S.A.

Shrivastava, R. (2005). Attitude behaviour of rice growers

regarding control measure of various diseases of rice crop in Dhamtari district of Chhattisgarh State. M. Sc. (Ag.) Thesis, Indira Gandhi Agriculture University, Raipur, C.G (INDIA).

Sunil Dutt, J. and Chole, R.R. (2001). A study on knowledge of sericulturists about recommended sericultural practices. *Maharashtra J. Extn. Edu.*, **20**: 28-31.

Supe, S.V. (1975). *Project book-extension teaching methods*, Department of Agricultural Extension, Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola (M.S.) INDIA.

Yogi, R.K. , Bhattacharya, A., Jaiswal, A.K. and Kumar, A. (2015). Lac, plant resins and gums statistics 2014: at a glance. ICAR-IINRG, Jharkhand. Bulletin no. 07/2015. 01-68 pp.

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