

Queries and Expectations of Lac Farmers Under One to One Programme: An Analysis

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ABSTRACT: ICAR- Indian Institute of Natural Resins and Gums (IINRG), Namkum, Ranchi, Jharkhand has offered One to One programme (OTOP) in a form of consultancy services to different stakeholders of lac. In this programme the farmers were in direct (one to one) interaction with the experts of Institute on different aspects of lac. The objective of this paper is to understand the Queries and expectations of different lac growers. The study was planned at TOT Division based on queries raised by the lac farmers. Queries and expectation were classified in seven different categories of lac cultivation practices like plantation raising and lac cultivation on *Flemingia semialata*, general lac cultivation, lac cultivation on ber trees, lac cultivation on palas trees, pest management, processing of lac and lac marketing. Queries and expectations were evaluated by the testing tool using proportions and percentage as the main statistical analysis. During 2013, the study revealed that queries and expectations of lac farmers were plantation raising and lac cultivation on *Flemingia semialata* (66.8%), general lac cultivation (25.4%), pest management (4.2%), lac cultivation on ber trees (1.4%), lac marketing (1.1%), processing of lac (0.7%) and lac cultivation on palas trees (0.4%) respectively and ranked as first, second, third, fourth, fifth sixth and seventh respectively. The major queries comes from the state of Jharkhand, Chhattisgarh, West Bengal, Odisha, Bihar, Assam, Andhra Pradesh, Madhya Pradesh, Uttar Pradesh and Karnataka respectively and ranked as first, second, third, fourth, fifth sixth, seventh, eighth, Ninth and tenth respectively. During 2014, the study also revealed that queries and expectations of lac farmers were plantation raising and lac cultivation on *Flemingia semialata* (37.6%), general lac cultivation (25.0%), lac marketing (9.5%), lac cultivation on palas trees (5.7%), lac cultivation on ber trees (5.1%), Training on lac (5.1%), processing of lac (3.8%), Lac cultivation on Kusum (3.8), pest management (2.8%), handicraft (0.9%) and lac cultivation on minor host plant (0.6%) respectively and ranked as first, second, third, fourth, fifth sixth seventh, eighth, ninth, tenth and eleventh respectively. The major queries comes from the state of Jharkhand, Chhattisgarh, Odisha, West Bengal, Bihar, Karnataka, Assam and Uttar Pradesh and respectively and ranked as first, second, third, fourth, fifth sixth, seventh and eighth respectively.

Keywords: Queries, Expectations, Lac farmers, One to One programme (OTOP).

INTRODUCTION

Non Timber Forest Produce (NTFP) *i.e.* lac is a natural resinous substance of profound economic importance in India. It is the only resin from animal origin lending itself to diverse applications *i.e.* as a protective and decorative coating in the form of thin films, adhesives and plastics. It makes a small but significant contribution to the foreign exchange earning of the country, but the most important role that lac plays in the economy of the country is that roughly 3-4 million tribal people, who constitute the socio-economically weakest link of Indian population earn a subsidiary income from its cultivation. India

is the major producer of lac, accounting for more than 50% of the total world production. It virtually held a monopoly in the lac trade during the period of the world war-I, producing nearly 90% of the world's total output. The country's production of lac was 21,008 tonnes in 2013-14 (Yogi *et al*, 2015). Lac is mainly produced in India, Thailand, Indonesia, parts of China, Myanmar, Philippines, Vietnam, Cambodia, *etc.* India is the largest producer, processor and exporter of lac in the world.

Lac has high potential for employment generation for both men and women in forest and sub-forest areas of major lac producing states of

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India. Jharkhand state registered the highest average annual production (6306 t), sharing 38.82% of total lac produced in the country (Anonymous, 2014). About 76% of the total population in Jharkhand resides in rural area where more than 75% population depends on subsistence farming (Economic Survey, 2014). About 72% farmers belonging to small and marginal category cover about 90% of total cultivable area in the state (LUS, 2014). Marginal farmers are more inclined towards lac cultivation for livelihood security. Farmers who imparted training under capacity building programmes were found with more percentage of host tree utilization comparatively to the non-beneficiaries (Yogi and Jaiswal, 2014).

The weaker sections of the society collect, consume and sell various Minor Forest Products (MFPs) in order to survive (Sharma and Butola, 2008). A dynamic complex of lac host plant like *Ber (Ziziphus mauritiana)*, *Kusum (Schleichera oleosa)*, *Palas (Butea monosperma)*, *Flemingia semialata*, *Ficus spp.etc*; insect (*Kerria spp.*) and their non-living environment is the mean of life support system since a longtime in tribal areas of Jharkhand, Chhattisgarh, Madhya Pradesh, West Bengal, Maharashtra, Odisha and parts of Uttar Pradesh, Andhra Pradesh, Gujarat and NEH region. Mainly people living in disadvantaged areas and engaged in lac cultivation activities are integral part of this system. Lac cultivation is known as a good source of livelihood resource for poor farmers and assured source of income during drought years.

Lac cultivators are not very scientific in their profession and the reason, ICAR-Indian Institute of Natural Resins Gums, Namkum, Ranchi regularly organizes capacity building and skill development programme on scientific lac cultivation, processing and its uses to make lac cultivation scientifically and bridge the gap by bringing cultivation from conventional to scientific. ICAR-IINRG Ranchi generates modern technologies for lac production, processing, product development, value addition and also organizes transfer of technology activities for lac cultivators and extension workers and other officers of Government Organization (GOs) and Non Government Organization (NGOs). A new initiative One to One programme (OTOP) in a form of consultancy services was also offered by ICAR-IINRG Ranchi since 2013 to different stakeholders

of lac in more systematic manner. In this programme, the farmers were in direct (one to one) interaction with the experts of Institute on different aspects of lac. These new initiatives need to be evaluated time to time in order to know the effectiveness of such consultancy programme in bringing desired changes. Keeping this in view, current study was planned to study the queries and expectations of different stakeholders expected from such research institutions.

METHODOLOGY

In this study, the new initiative OTOP in a form of consultancy services was evaluated. The programme was offered by ICAR-IINRG Ranchi since 2013 for different stakeholders of lac. The study was conducted at TOT Division, ICAR-IINRG Ranchi based on queries and expectations raised by the lac stakeholders. Queries and expectation were classified in different categories of lac cultivation practices like plantation raising and lac cultivation on *Flemingia semialata*, general lac cultivation, lac cultivation on *Ber* trees, lac cultivation on *Palas* trees, pest management, processing of lac, lac marketing, lac cultivation on *Kusum*, lac cultivation on minor host plant (*Arhar*), Training on lac and handicraft. Queries and expectations were evaluated by using proportions and percentage as the main statistical tools for the analysis. The respondents were the farmers, extension workers, processors, industrialists, entrepreneurs and others.

RESULT AND DISCUSSION

The entire findings of investigation along with discussion which have been arrived after data analysis and interpretation are as follows:

One to One programme (OTOP): January to December 2013

In 2013, TOT Division has started OTOP in a form of consultancy services to different stakeholders of lac, in which the farmers, processors, industrialists, lac businessmen, lac handicraft entrepreneurs were in direct (one to one) interaction with the experts of the Institute on all the technical aspects on lac. The enclosed table 1 indicated the broader subject of interaction and the states where the maximum queries raised in view of existence of potentialities on lac.

Table 1
Number of Persons interacted on different subjects in OTOP

S. No.	Subject	JH	CG	UP	AP	OD	BH	WB	AS	MP	KR	Total
1.	Plantation raising and lac Cultivation on <i>Flemingia Semilata</i>	152 (80.4)	8 (4.2)	1 (0.5)	2 (1.0)	5 (2.6)	8 (4.2)	9 (4.7)	1 (0.5)	2 (1.0)	1 (0.5)	189 (66.8)
2.	General lac cultivation	49 (68.0)	7 (9.7)	1 (1.4)	1 (1.4)	5 (6.9)	2 (2.7)	1 (1.4)	4 (5.5)	2 (2.7)	0 (0.0)	72 (25.4)
3.	Lac Cultivation on <i>Ber</i> Tree	2 (50.0)	0 (0.0)	0 (0.0)	2 (50.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	4 (1.4)
4.	Lac Cultivation on Palas Tree	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.4)
5.	Pest Management	11 (91.6)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (8.4)	0 (0.0)	0 (0.0)	0 (0.0)	12 (4.2)
6.	Processing Of Lac	2 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	2 (0.7)
7.	Lac Marketing	3 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	3 (1.1)
<i>Total</i>		220 (77.8)	15 (5.3)	2 (0.7)	5 (1.8)	10 (3.5)	10 (3.5)	11 (3.8)	5 (1.8)	4 (1.4)	1 (0.3)	283 (100.0)

Note: Figures in Parentheses indicated in terms of percentages (JH-Jharkhand; CG- Chhattisgarh; UP- Uttar Pradesh; AP- Andhra Pradesh; OD- Odisha; BH- Bihar; WB- West Bengal; AS- Assam, MP-Madhya Pradesh, KR- Karnataka)

The study revealed that queries and expectations of lac farmers were plantation raising and lac cultivation on *Flemingia semialata* (66.8%), general lac cultivation (25.4%), pest management (4.2%), lac cultivation on ber trees (1.4%), lac marketing (1.1%), processing of lac (0.7%) and lac cultivation on palas trees (0.4%) respectively and ranked as first, second, third, fourth, fifth sixth and seventh respectively. The major queries come from the state of Jharkhand, Chhattisgarh, West Bengal, Odisha, Bihar, Assam, Andhra Pradesh, Madhya Pradesh, Uttar Pradesh and Karnataka.

OTOP in major lac producing states: January to December 2013

The major queries comes from the state of Jharkhand, Chhattisgarh, West Bengal, Odisha, Bihar, Assam, Andhra Pradesh, Madhya Pradesh, Uttar Pradesh and Karnataka respectively and ranked as first, second, third, fourth, fifth sixth, seventh, eighth, Ninth and tenth respectively. The details are enclosed in Table 2.

OTOP in major lac producing districts of different states and: Jan. to Dec. 2013

The Queries and expectations of farmers comes from major districts of different states were categorised as Jharkhand (Ranchi, Khunti, Gumla, Ramgarh, Latehar, Lohardaga, Simdega, Sahibganj, Palamu, West Singhbhum, Giridih, Godda and Hazaribagh), Chhattisgarh (Surguja, Durg, Raipur, Raigarh,

Table 2
OTOP in major lac producing states

S. No.	Items	2013		
		Frequency	percentage	Rank
1.	Jharkhand	220	77.8	I
2.	Chhattisgarh	15	5.3	II
3.	Uttar Pradesh	02	0.7	IX
4.	Odisha	05	1.8	VI
5.	Bihar	10	3.5	V
6.	West Bengal	10	3.5	IV
7.	Assam	11	3.8	III
8.	Karnataka	05	1.8	VII
9.	Andhra Pradesh	04	1.4	VIII
10.	Madhya Pradesh	01	0.3	X
<i>Total</i>		283	100.0	

Balrampur, Korea and Bastar), West Bengal (Purulia), Odisha (Sundergarh, Kalahandi, Ganjam), Bihar (Banka), Assam (Baksa), Andhra Pradesh (Visakhapatnam), Madhya Pradesh (Rajgarh), Uttar Pradesh (Mirzapur) and Karnataka (Uttara Kannada). The details are enclosed in Table 3.

Table 3
OTOP in major lac producing districts of different states

State	Districts
Jharkhand	Ranchi, Khunti, Gumla, Latehar, Lohardaga, Sahibganj, Palamu, West Singhbhum, Giridih, Godda, Hazaribagh
Odisha	Sundarbagh, Kalahandi, Ganjam
Chhattisgarh	Surguja, Durg, Raipur, Raigarh, Balarampur, Korea, Bastar
West Bengal	Puruliya
Andhra Pradesh	Vishakhapatnam
Assam	Baksha

Table 4
Number of persons interacted on different subjects in OTOP

Sl. No	Subject	JH	CG	UP	OD	BH	WB	AS	KR	Total(%)
1.	Plantation raising and lac cultivation on <i>Flemingia semialata</i>	105(88.2)	12(10.1)	0(0.0)	1(0.8)	0(0.0)	1(0.8)	0(0.0)	0(0.0)	119(37.6)
2.	General lac cultivation	66(83.5)	3(3.8)	0(0.0)	8(10.1)	0(0.0)	2(2.5)	0(0.0)	0(0.0)	79(25.0)
3.	Lac cultivation on <i>Ber</i>	11(68.8)	0(0.0)	1(6.2)	0(0.0)	2(12.5)	1(6.2)	1(6.2)	0(0.0)	16(5.1)
4.	Lac cultivation on <i>Palas</i>	13(72.2)	0(0.0)	0(0.0)	1(5.5)	1(5.5)	3(16.6)	0(0.0)	0(0.0)	18(5.7)
5.	Pest management in lac cultivation	9(100.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)	9 (2.8)
6.	Processing of lac	9(75.0)	2(16.6)	0(0.0)	0(0.0)	0(0.0)	1(8.4)	0(0.0)	0(0.0)	12 (3.8)
7.	Lac marketing	25(83.3)	1(3.3)	0(0.0)	3(10.0)	1(3.3)	0(0.0)	0(0.0)	0(0.0)	30(9.5)
8.	Lac cultivation on <i>Kusum</i>	9(75.0)	2(16.6)	0(0.0)	0(0.0)	0(0.0)	1(8.4)	0(0.0)	0(0.0)	12(3.8)
9.	Lac cultivation on minor host plant (<i>Arhar</i>)	1(50.0)	1(50.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)	2(0.6)
10.	Training on Lac	13(81.2)	0(0.0)	0(0.0)	1(6.25)	0(0.0)	0(0.0)	0(0.0)	2(12.5)	16(5.1)
11.	Handicraft	3(100.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)	3(0.9)
Total		264(83.5)	20(6.3)	1(0.3)	15(4.7)	4(1.3)	9(2.8)	1(0.3)	2(0.6)	316(100.0)

Note: Figures in Parentheses indicated in terms of percentages

(JH-Jharkhand; CG- Chhattisgarh; UP- Uttar Pradesh; OD- Odisha; BH- Bihar; WB- West Bengal; AS- Assam; KR- Karnataka)

One to One programme (OTOP): January to December 2014

The enclosed Table 4 indicated broader subject of interaction and the states where the maximum queries raised in view of existence of potentialities on lac. The study revealed that queries and expectations of lac farmers were plantation raising and lac cultivation on *Flemingia semialata* (37.6%), general lac cultivation (25.0%), lac marketing (9.5%), lac cultivation on palas trees (5.7%), lac cultivation on ber trees (5.1%), Training on lac (5.1%), processing of lac (3.8%), Lac cultivation on *Kusum* (3.8), pest management (2.8%), handicraft (0.9%) and lac cultivation on minor host plant (0.6%) respectively and ranked as first, second, third, fourth, fifth sixth seventh, eighth, ninth, tenth and eleventh respectively. The major queries come from the state of Jharkhand, Chhattisgarh, West Bengal, Odisha, Bihar, Assam, Uttar Pradesh and Karnataka.

OTOP in major lac producing states: January to December 2014

The major queries comes from the state of Jharkhand, Chhattisgarh, Odisha, West Bengal, Bihar, Karnataka, Assam and Uttar Pradesh and respectively and ranked as first, second, third, fourth, fifth sixth, seventh and eighth respectively. The details are enclosed in Table 5.

OTOP in major lac producing districts of different states: January to December 2014

The Queries and expectations of farmers comes from major districts of different states were categorised

Table 5
OTOP in major lac producing states

Sl. No.	Items	2014		
		Frequency	Percentage	Rank
1.	Jharkhand	264	83.5	I
2.	Chhattisgarh	20	6.3	II
3.	Uttar Pradesh	01	0.3	VIII
4.	Odisha	15	4.7	III
5.	Bihar	04	1.3	V
6.	West Bengal	09	2.8	IV
7.	Assam	01	0.3	VII
8.	Karnataka	02	0.6	VI
Total		316	100.0	

as Jharkhand (Ranchi, Khunti, Gumla, Latehar, Lohardaga, Sahibganj, Palamu, West Singhbhum, Giridih, Godda and Hazaribagh), Chhattisgarh (Surguja, Durg, Raipur, Raigarh, Balampur, Korea and Bastar), West Bengal (Purulia), Odisha (Sundergarh, Kalahandi, Ganjam), Bihar (Banka), Assam (Baksha), Uttar Pradesh (Sitapur) and Karnataka (Uttara Kannada). The details are enclosed in Table 6.

Table 6
OTOP in major lac producing districts of different states

State	Districts
Jharkhand	Ranchi, Khunti, Gumla, Latehar, Lohardaga, Sahibganj, Palamu, West Singhbhum, Giridih, Godda, Hazaribagh
Odisha	Sundargarh, Kalahandi, Ganjam
Chattisgarh	Surguja, Durg, Raipur, Raigarh, Balarampur, Korea, Bastar
West Bengal	Purulia
Assam	Baksha
Karnataka	Uttara Kannada
Bihar	Banka
UP	Sitapur

CONCLUSION

OTOP was implemented in a form of consultancy services to different stakeholders of lac, in which the farmers, processors, industrialists, lac businessmen, lac handicraft entrepreneurs were in direct (one to one) interaction with the experts of the Institute on all the technical aspects on lac. The programme was highly appreciated by the different stakeholders of Lac. Technology for plantation raising and lac cultivation on *Flemingia semialata* was highest in demand and stakeholders major interest area on the issue. The major lac growing states like Jharkhand, Chhattisgarh, West Bengal, Odisha, Bihar, Assam, Andhra Pradesh, Madhya Pradesh, Uttar Pradesh and Karnataka were the main beneficiaries of the programme.

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