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Economic impact of lac production through women farmer's interest group

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Abstract

The present study was conducted on women farmer's interest group of Tikariya village district Katni (MP) for the lac cultivation and their impact on socioeconomic condition of the women lac growers. The result revealed that the lac production increase the annual income of almost all the Lac growers has increased after adopting Lac production. Before the adoption of Lac production, the Lac grower's annual household income varied from Rs. 28,000 to Rs. 65,000. The contribution of Lac grower in the annual household was varied from 18.46 to 37.14 per cent and average annual household was 31.41 per cent, before the adoption of Lac production. After the adoption of Lac production, the Contribution of Lac growers in the annual household income varied from Rs. 75,000 to Rs. 1, 23,000. The contribution of Lac growers, in the annual household is varied from 40.64 to 60.29 per cent. The increase in annual income household income varied from 47.15 per cent to 63.15 per cent and average annual household income 54.81 per cent. The increase in contribution of annual household income varied from 65.51 to 82.41 per cent. Subsequent to the acceptance of lac production, there was enormous increase in the annual household income and empowerment has lead to a change in their household and socio economic status of the Lac growers.

Keywords: lac production, farmer interest group, NTFP

Introduction

Lac is an export oriented Non-timber Forest Produce (NTFP). It produced mostly by tribal, sub-forest, forest and rainfed area of Jharkhand, West Bengal, Chhattisgrah, Madhya Pradesh, Orissa, Maharashtra and part of Uttar Pradesh, Andhra Pradesh, Gujarat and NEH region (Neetu *et al.* 2011, Jaiswal *et al.* 2012) [3, 12]. About fifty per cent of forest revenue and about 70 per cent of forest export revenue in India comes from NTFPs, mostly from unprocessed and raw forms (Giridhar, 2011). Lac production is a livelihood option of both rainfed farmers and forest dependents.

Madhya Pradesh was traditionally a lac producing centre of the country during late 19th century. In the MP, Jabalpur division is the major producer of lac. Balaghat and Seoni districts in Jabalpur division are the largest producers of lac in the state, Anuppur district is the largest producer and seller of brood lac (Ogle and Thomas, 2006) [4]. In MP over 600 training on Lac production was organized since 1997 touching over 20,000 people to promote it in a SHG mode (Thomas, 2012; Thomas *et al.*, 2011) [12, 11]. In Odisha, too over 500 SHGs are engaged lac production in different districts (Panda, 2010) [7]. Jharkhand is the largest producer in India followed by Chattisgarh and Madhya Pradesh (Pal, 2011) [5].

There is a greater role of NTFPs in social and traditional lifestyle of forest dependent populations, particularly the tribal, landless, women and other rural poor as observed by Prasad (2011) [10]. In MP, Lac growers are investing their gains from lac production in child education, health, social ceremonies and agriculture, strengthening of local institutions, empowerment, and participation in the local election process has been visible in the village (Thomas, 2012; Patidar, 2011) [12, 8]. Lac production is generally a male dominated enterprise, but the ten members of women farmers' interest group SHG are producing Lac and demonstrated impressive growth.

Material and Methods

The present investigation has been conducted during the year 2016-17 in village, Katni district of Madhya Pradesh (MP) with the 10 members of the women farmers' interest group SHG as the major respondents. Women farmers' interest group SHG is a group of women Lac

growers, formally constituted in the year 2015 its operational area in village Tikarwara. The village has a large tract on land with Palash (*Butea monosperma*) trees on which Lac is produced by Lac growers on the SHG. Personal and socio-economic variables such as age was operationalised as the number of years an individual has completed at the time of interview and was measured as per actual chronological age. Based on the age of the respondents were grouped into three following categories with respective score.

A). Age group

The age of 10 participating (Women Lac growers) varied from 28 to 52 years. The youth were predominant group (60%) followed by middle age group (20%) and old age group (20%) (Table 1).

Table 1: Score pattern of lac growers according to their age group

| S. no. | Age group | Score |
|--------|-------------------------|-------|
| 1 | Young (up to 35 years) | 1 |
| 2 | Middle (36 to 50 years) | 2 |
| 3 | Old (above 50 years) | 3 |

B). Size of land holding

The size of land holding refers to an area of land possessed by an individual or household for the purpose of cultivation and represented in hectare. Based on the landholding the respondents were categorized into five following groups with respective scores (Table 2).

Table 2: Score pattern of Lac growers according to their size of land holding

| S. no. | Age group | Score |
|--------|-------------------------------|-------|
| 1 | Landless | 0 |
| 2 | Marginal farmer (up to 1 ha.) | 1 |
| 3 | Small farmer (>1 to 2 ha.) | 2 |
| 4 | Medium farmer (>2 to 5 ha.) | 3 |
| 5 | Large farmer (> 5 ha.) | 4 |

C). Increase in income and investment in households

Depending upon the increase in income due to adoption of Lac cultivation, the Lac growers of MAMLUS has been categorized into following three groups with respective scores (Table 3).

Table 3: Score pattern of Lac growers according to their increase in income

| Sl. No. | Income level | Scores |
|---------|------------------------------|--------|
| 1 | Low (28,000 to Rs.40,000) | 1 |
| 2 | Medium (Rs.40,001 to 53,000) | 2 |
| 3 | High (above Rs.53,001) | 3 |

Result and discussion

1). The Socio-economic impact of Lac production on women farmer's interest group

A. Age Group

The age of 10 participating (Women Lac growers) varied from 28 to 52 years. The youth were predominant group (60%) followed by middle age group (20%) and old age group (20%). In Jharkhand the average age of 59 percent Lac growers were more than 50 years while remaining were below 50 years (Pal *et al.* 2007) [6]. Patidar (2011) [8] reported that in MP youths predominated (65.25%) in the Lac production (Table 4).

Table 4: Distribution of lac growers according to age.

| Sl. No. | Age groups | Lac growers | |
|--------------|------------------------|-------------|------------|
| | | No. | Percentage |
| 1 | Young (up to 35 year) | 6 | 60 |
| 2 | Middle (36 to 50 year) | 2 | 20 |
| 3 | Old (above 50 year) | 2 | 20 |
| Total | | 10 | 100 |

B. Size of land holding

All the women lac growers were land holders. In the present study it was found that the Lac growers varied from marginal to large holders. Lac growers with marginal land holding predominated (40%), followed by medium land holding (30%), small land holding (20%) and large land holding (10%). In Jharkhand 85.5 per cent lac growers were marginal and small landholders and only 14.5 per cent had large land holding (Pal *et al.* 2007) [6]. In Kanker district of Chhattisgarh lac growers have 39 per cent lac growers were medium landholders followed by small (25%), marginal (18%), semi-medium (16%) and (2%) large landholders Pal 2011. In Anuppur district of MP, Patidar 2011 found predominance of lac growers with medium landholding (36.71%) followed by small holding (34.37%), large land holding (8.60%) and landless (3.91%) (Table 5).

Table 5: Distribution of Lac growers according to their size of land holding

| Sl. No. | Land holdings | Lac growers | |
|--------------|------------------------|-------------|------------|
| | | No. | Percentage |
| 1. | Marginal (up to 1 ha.) | 4 | 40 |
| 2. | Small (>1 to 2 ha.) | 2 | 20 |
| 3. | Medium (>2 to 5 ha.) | 3 | 30 |
| 4. | Large (>5 ha.) | 1 | 10 |
| Total | | 10 | 100 |

C. Occupation

Majority of the members (80%) of Lac growers, before adoption Lac production were practicing agriculture+labour, and only (20%) produced agriculture. After adopting Lac production, there was a shift in the livelihood pattern as (60%) of them adopted Lac Production+ Agriculture + labour while remaining (40%) produced Agriculture + Lac production. Agriculture has primary occupation in the rural sector has been reported by Rajlakshmi and Geeravani (1988) while mixed farming is reported by Trifle *et al.*, (1985). In the present study it was observed that Lac production has been a primary occupation of the 10 members of women's farmer interest group SHG (Table 6).

Table 6: Distribution of Lac growers according to their occupation

| Sl. No. | Categories | Lac growers | | | |
|---------|---------------------------------------|-------------|----|---------|----|
| | | Before | | After | |
| | | Integer | % | Integer | % |
| 1 | Agriculture | 2 | 20 | 0 | 0 |
| 2 | Agriculture + Labour | 8 | 80 | 0 | 0 |
| 3 | Agriculture + Lac cultivation | 0 | 0 | 4 | 40 |
| 4 | Agriculture+ Lac cultivation + Labour | 0 | 0 | 6 | 60 |

D. Contribution in Annual household income of the Lac growers (Increase in annual household income of Lac growers)

The study revealed that the annual household income of Lac growers varied from a minimum of Rs 28,000 to a maximum Rs 65,000. Based on this income range of the Lac growers of

MAMLU SHG they were categorized into three income groups viz., Low Income Group (LIG) from (Rs28, 000 to Rs. 40,000), Middle Income Group (MIG) from (Rs. 40,001 to Rs 53,000) and High Income Group (HIG) (above Rs. 53,001) (Table 7). The annual income of almost all the Lac growers has increased after adopting Lac production. Before the adoption of Lac production, the Lac growers annual household income varied from Rs. 28,000 to Rs. 65,000. The contribution of Lac grower in the annual household was varied from 18.46 to 37.14 per cent and average annual household was 31.41 per cent, before the adoption of Lac production. After the adoption of Lac production, the Contribution of Lac growers I the annual household income

varied from Rs. 75,000 to Rs. 1, 23,000. The contribution of Lac growers, in the annual household is varied from 40.64 to 60.29 per cent. The increase in annual income household income varied from 47.15 per cent to 63.15 per cent and average annual household income 54.81 per cent. The increase in contribution of annual household income varied from 65.51 to 82.41 per cent.

The share of income from lac was 23.5 per cent in total average annual income of lac growers of Jharkhand (Pal 2011). Prasad (2011) ^[10] reported that Non- Timber Products (NTFP) play increasingly greater role in social and traditional lifestyle of forest dependent populations, particularly the tribal, landless, women and other rural poor.

Table 7: Contribution in Annual household income of the Lac growers (Increase in annual household income of Lac growers)

| Sl. No | Lac growers | Contribution in Annual household income | | | | | | | | Increase in (%) | |
|--------|--------------|---|------------------|----------------------|-------|----------|------------------|----------------------|-------|-----------------|--------------|
| | | Before | | | | After | | | | Household | Contribution |
| | | Category | Household income | Contribution of WLGs | | Category | Household income | Contribution of WLGs | | | |
| | | Rs. | % | | | Rs. | % | | | | |
| 1 | Kushma | (A) | 35000 | 10000 | 28.57 | (A+L) | 77000 | 42500 | 55.19 | 54.54 | 76.47 |
| 2 | Rampyari | (A+Lb) | 28000 | 8000 | 28.57 | (A+L+Lb) | 75500 | 45500 | 60.29 | 62.51 | 82.41 |
| 3 | Indra | (A+Lb) | 35000 | 12000 | 34.28 | (A+L+Lb) | 81500 | 47500 | 58.28 | 57.05 | 74.73 |
| 4 | Kali bai | (A+Lb) | 35000 | 13000 | 37.14 | (A+L) | 82000 | 40500 | 49.39 | 57.31 | 67.90 |
| 5 | Sunita | (A+Lb) | 42000 | 15000 | 35.51 | (A+L+Lb) | 83500 | 43500 | 52.09 | 49.70 | 65.51 |
| 6 | Kanya kumari | (A) | 65000 | 12000 | 18.46 | (A+L) | 123000 | 50000 | 40.65 | 47.15 | 76.00 |
| 7 | Laxmi | (A+Lb) | 35000 | 11000 | 31.42 | (A+L) | 83500 | 44500 | 53.29 | 58.08 | 75.28 |
| 8 | Hansa | (A+Lb) | 49000 | 13000 | 26.51 | (A+L+Lb) | 103500 | 45000 | 43.47 | 52.65 | 71.11 |
| 9 | Chandra kala | (A+Lb) | 35000 | 13000 | 37.14 | (A+L+Lb) | 95000 | 40000 | 42.10 | 63.15 | 67.50 |
| 10 | Chadrawati | (A+Lb) | 35000 | 13000 | 37.14 | (A+L+Lb) | 83500 | 42500 | 50.89 | 58.08 | 69.41 |

A= Agriculture; A+Lb= Agriculture + Labour; A+L+Lb= Agriculture + Lac cultivation + Labour

2). Shift of Lac growers to other Income groups

Prior to the adoption of Lac production were categorized into three income groups viz., LIG (Rs28, 000 to Rs. 40,000) MIG (Rs. 40,001 to Rs 53,000) and HIG (above Rs. 53,001). The annual income of all the Lac growers increased after adopting Lac production. The increase in annual household income varied from Rs.75,500 to Rs. 1,23,000. The percentage increase varied from 47.15 per cent to 63.15 per cent and contribution of lac production in the annual household income varied from 65.51 per cent to 82.41 per cent. Prior to adoption of Lac production of women Lac growers the share of mean annual household income was 31.41 per cent, but after adoption it increased to 54.81 per cent. Patidar 2011 reported that increased annual income, before adoption of Lac production Rs 3000 to Rs 1.00 lakh and later it was increased Rs 5000 to Rs 2 lakhs. The share of income from lac was 23.5

per cent in total average annual income of lac growers of Jharkhand (Pal 2011) ^[8]. Neetu H *at et.* (2011) ^[3] Phukan, *at et.* (2011) ^[9] also reported the same result.

The young Lac growers were the predominant group. All the 6 (Smt. Kushma, rampyari, Indra, Sunita, Laxmi and Hansa) young lac growers. Before the lac production, 4 (Kushma, Rampyari, Indra and Laxmi) were in LIG and 2 (Sunita and Hansa) were in MIG, but after the lac production, they shifted from LIG to HIG and MIG to HIG. In the middle age, there were in, all 2 (Chandra kala and Chandra wati) were in LIG, but after the adoption lac production, they shifted to HIG. In old age 2 (Kanya Kumari and kali bai), one (Kali bai) was in LIG and one (Kanya kumari) was in HIG, but after the adoption of lac production, one (Kali bai) shifted to HIG (Table 8).

Table 8: Increase in annual income among different age group of Lac growers

| Sl. No. | Land Holding | Total | No. of WLGs in different income range | | | | | |
|---------|--------------|-------|---------------------------------------|--------|--------|--------|--------|---------|
| | | | LIG | | MIG | | HIG | |
| | | | Before | After | Before | After | Before | After |
| 1 | Marginal | 6 | 4 (66) | 0 (00) | 2 (33) | 0 (00) | 0 (00) | 6 (100) |
| 2 | Small | 2 | 2 (100) | 0 (00) | 0 (00) | 0 (00) | 0 (00) | 2 (100) |
| 3 | Medium | 2 | 1 (50) | 0 (00) | 0 (00) | 0 (00) | 1 (50) | 2 (100) |
| Total | | 10 | 7 | 0 | 2 | 0 | 1 | 10 |

LIG-Low income group; MIG- Middle income group, HIG- High income group (Figure in parenthesis indicates in percent to the total)

Prior to the adoption of lac production, among four (Rampyari, Sunita, Laxmi and Chandra wati) the marginal land holders. Three four (Rampyari, Laxmi and Chandra wati) were in the LIG and one (Sunita) was in the MIG, but after the adoption of lac production all of them shifted to HIG. After adoption of lac production, the annual household income of the only lac growers increase from Rs 65,000 to

1,23,000 almost double the income. Among the two (Indra and Hansa) small land holders groups there were in one (Indra) was in the LIG and one (Hansa) in the MIG. Both of land holders of them shifted from HIG after the adoption. In the medium land holding lac growers were in the LIG but after the lac production shifted from HIG. The only large land holding lac grower with an annual household income of Rs.

53,000 was in the HIG, increased to Rs. 1, 23,000 after the adoption of lac production (Table 9)

Table 9: Increase in annual income with different land holding of Lac growers

| Sl. No. | Land Holding | Total | No. of WLGs in different income range | | | | | |
|---------|--------------|-------|---------------------------------------|-------|--------|-------|--------|--------|
| | | | LIG | | MIG | | HIG | |
| | | | Before | After | Before | After | Before | After |
| 1 | Marginal | 4 | 3(66,66) | 0(00) | 1(25) | 0(00) | 0(00) | 4(100) |
| 2 | Small | 2 | 1(50) | 0(00) | 1(50) | 0(00) | 0(00) | 2(100) |
| 3 | Medium | 3 | 3(100) | 0(00) | 0(00) | 0(00) | 0(00) | 3(100) |
| 4 | Large | 1 | 0(00) | 0(00) | 0(00) | 0(00) | 1(100) | 1(100) |
| Total | | 10 | 7 | 0 | 2 | 0 | 1 | 10 |

After the adoption of Lac production, there was an increase in the annual household income of the Lac growers. Increase in income, expenditure and empowerment has lead to a change in their household and socio economic status.

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