

# Sustainable Livelihoods for the Rural Poor of Bankura: Look Back to Lac

## Abstract

Lac is a natural resin produced by a small insect, *Kerriallacca* (Kerr), which is cultivated on shoots of several species of trees, mainly *palash*, *kusumandber*. The production of seed lac is an old-time industry of Bankura district which was carried on extensively during the second half of the 19th century. Lac and Tasar are found from the western jungles of the district. It was the livelihood to many of the poorer classes, chiefly Santals and Bauris. Lac was also an important commercial crop of the district. In 1890 at Sonamukhi there are 75 factories, over five thousand employer were there, but owing to the competition of cheap foreign lac this industry became dwindling. Government had taken different measure for survive it but failure to improve. Now a days lac are used in different sector like Surface Coating Industries, Adhesive Industries, Electrical Industries & Jewellery and ornaments from valuable coloured stones, for polishing and sharpening stones. According to market estimates, the world demands around 40,000 metric tonnes of lac annually. India, China and Thailand's production totals only about 32,000 metric tonnes. There is a huge gap between demand and supply, clearly indicating the huge potential of lac. Otherwise Lac cultivation provides income to the farmers during the food insufficient months. Growing lac is a traditional occupation for the tribals inhabiting. Lac rearing not only provides livelihood to thousands of lac rearers but also helps conserve vast stretches of forests, thereby playing a vital role in protecting our bio-resources.

**Keywords:** Sustainable, *Kerriallacca*, bio-resources, Surface Coating Industries.

## Introduction

From the time of creation of the Bankura district (1881) it was known a backward region. Even now the district cannot develop itself such like other district of West Bengal. Land pattern is not same all over the district. In east portion of the district has connected with wide-spread alluvial flat of the Burdwan and Hoogly District. The rest of the District is, for the most part, undulating or hilly, and the soil is mainly an infertile laterite. Large track of the district still covered with hill, rock and jungle. As a cause of infertile laterite soil and lack of irrigation system inhabitant of the region cannot entirely depend on agriculture. They can produce paddy and others grain only for six month for consume. The aboriginal inhabitants are dependent on Jungle Product very past time. The manufacture of seed lac is an old-time industry of Bankura district which was carried on extensively during the second half of the 19th century. Lac and Tasar are obtained from the western jungles, the gathering of which affords occupation to many of the poorer classes, chiefly Santals and Bauris. With the deforestation of the district Jungle they slowly lost their alternative resource of life. When the scholars all over the world thinking about environment, & how the nature to be protected. In this prospective my suggestion is that we can develop the poor in the district with their natural resources & also protect our nature effectively. Recently lac became a useful item in Surface Coating Industry, Adhesive Industries, Electrical Industries, and it also use in Jewellery and ornaments, coloured stones for polishing and sharpening stones. If the Government thinks about the improvement of poorer classes in the district, they can make as such project or by any experienced NGO.

## The Problem/Objective of the Study

In early days the greater portion of the whole district was covered with forest. Before 1948 without restriction zamindars have cleared the jungle to extant their cultivation. Without restriction the charcoal burners have plied their trade. Systematic exploitation of the forests on a scientific basis started only after the opening of the Kharagpur-Gomoh branch of



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the Bengal-Nagpur Railways in 1902 when the private owners began to treat their forests as an asset capable to yielding regular returns. They have been cut down their jungle at short recurring intervals without discrimination & without Judgment. Where in 1917-24 total area under forest was 332,967.15 acres, after 20 years it became 219710.62 acres. It is true forest land. Problems of this study are that poorer class of district who dependent on forest to earn substitute support to live that came down. Only Lac was not a forest product. There was various type of product in forest such as *timber*, *bidi* leaves, *salleaves*, *mahua* flower, *simul* cotton, *babu* grasses, *huny*, *wax*, *feather*, etc, but once upon a time 'Lac' was an prosperous industry in this district. So I like to discuss about the natural product. In this paper I will try to explain how in the changing phenomena of world business lac becomes a valuable product. It can be change the situation of poorer classes of Bankura & also protect the environment for the future generation.

#### Review of Literature

W.W.Hunter (1876) said Lac and Tasar are obtained from the western jungles, the gathering of which affords occupation to many of the poorer classes, chiefly Santals and Bauris.

E.W. Collin (1890) in his report stated that "the chief seat of the industry is Bankura while at Sonamukhi there are 75 factories employing over five thousand persons for a part of the year". The industry, however, suffered a severe setback owing to the competition of cheap foreign lac.

L.S.S.O'Malley (1908) mentions-lac as an important commercial crop of the district. The processing of raw lac as it was done in those days was more or less similar to that in now-a-days.

A.D.Imms (1921) mentions in his paper that India had a monopoly on Lac production in world and most of the Lac comes from Chotanagpur, Orissa, the north-Eastern, half of the central provinces and also some western district of Bengal.

RamanujKar (1925) observe production of lac in the district was not sufficient. Lac factory collected their extra lac stick from Manbhum and Singbhum.

S.G. Hurt (1926) we know from his book that lac was mainly grown in the neighborhood of Khatra, Saltora, Sonamukhi etc., and there are small factories at Khatra and Sonamukhi. In Bankura the major portion of lac produced find its way to these factories and then exported to Calcutta. Some of this lac is taken to Manbhum (Now Purulia) district.

A.T.Weston (1929) mentions the main lac factory of this district was in Sonamukhi. The workers of Sonamukhi carry a finishing operation very skillfully.

A.Mitra (1951) mentions how to deforestation going on & as a result inhabitant of jangle gradually fall in crises of adequate job and food supply.

A.K.Banerji (1968) mentions how after 1948 afforestation became important to government and by the 1<sup>st</sup> & 2<sup>nd</sup> five year plan they try to increase the area of forest land.

#### Concept and Hypothesis

If the Government considers about the development of poorer classes in the district, they can

make as such project for improvement or by any experienced NGO. Lac cultivation provides income to the farmers during the food insufficient months. Growing lac is a traditional occupation for the tribal inhabiting. Lac rearing not only provides livelihood to thousands of lac rearers but also helps conserve vast stretches of forests, thereby playing a vital role in protecting our bio-resources.

#### Research Design

Necessary data for the present study have been collected mostly from secondary and primary sources. The study has not run to establish any special opinion. Neutrally and sincerely the studies critically analyze the collected data. Impartially this study tries to create the truth. To establish the study unquestionable sources are mentioned here.

#### Findings & Discussion

##### Lac & its Uses

Lac is a natural resin produced by a small insect, *Kerriolacca* (Kerr), which is cultured on shoots of several species of trees, mainly *palash*, *kusum* and *ber*. This scale insect is a parasite, sipping the sap of the host trees. A fully-grown insect is about 0.6 mm long and 0.25 mm broad. The lac insect is a bivoltine insect, producing two broods a year.

Lac accumulations, which contain mature female insects about to give birth to young larvae, are called brood lac, the seed material. The trees are inoculated with the brood lac, so that young larvae can settle on the fresh twigs of the host plants and suck their sap. The newborn insects swarm up the branches, select suitable places and settle down. In 2-3 days, the insects start hiding a fluid to protect them. This fluid solidifies to form a coating around the insects. This crust, when mature, is scraped off the trees and harvested as lac. It is harvested for different purposes. The timing too of the harvest varies, depending on the variety of the crop. For example, brood lac is harvested for inoculation. Brood lac is often used by the reared himself, and the surplus stock sold to other rearers. Lac that is sold for further processing is called stick lac, or raw lac (because the lac is stuck on the stick and is sold as it is or after scraping).<sup>1</sup>

There are two main strains of the lac insect—Rangeeni and Kusumi. The primary hosts of Rangeeni are *palash* and *ber* and that of Kusumi is the *kusum* tree. Both have two cropping cycles. Rangeeni has *Baishakh* and *Katik* cycles, named after their respective maturing periods, *Baisakh* (April–May) and *Katik* (October–November) whereas Kusumi has the *Jethwi* and *Agahani* cycles maturing in *Jeth* (May–June) and *Agahan* (January–February) months.

Stick lac is scraped from the tree to break the crust and then ground. This is done to break the rough lac into smaller particles, to facilitate washing and clear out impurities. Depending on the colour, wax content and other properties, the stick lac is graded before being processed. The lac is detached to separate the larger particles such as stone, sand and wood pieces. This is then washed and dried in the shade. The grinding and washing process helps remove the embedded lac insects in the lac cells. The dye that comes out in the washing process can be

used for dyeing silk and Wool was also used also used in soft drinks. The washed and dried lac is then inspected and sieved to further remove impurities and graded. The lac thus obtained is called seed lac because of its particulate nature. Seed lac is used to make shellac or button lac. Shellac contains wax, resin and colour. Products of shellac are Dewaxed Shellac, Bleached Shellac and Aleuritic acid, Aleuritic acid is widely used in the cosmetics industry.<sup>2</sup>

#### **Lac in Bankura**

The manufacture of seed lac is an old-time industry of Bankura district which was carried on extensively during the second half of the 19th century. W.W.Hunter said –Lac and Tasar are obtained from the western jungles, the gathering of which affords occupation to many of the poorer classes, chiefly Santals and Bauris.<sup>3</sup> O'Malley mentions-lac as an important commercial crop of the district. The processing of raw lac as it was done in those days was more or less similar to that in now-a-days.<sup>4</sup>

Ramanujkar mention that once Sonamukhi was the main trade center of East-India Company. There are many *Kuthis*(factories) on that place. Method of manufacture was almost similar to llambazer but workers of Sonamukhi carry a finishing operation to a stage further that is they stretch the sheets of shellac very skillfully.<sup>5</sup>There was a large lac factory in Rajagram. The Factory was known as the factory of '*Kundu*'. Many employs were engaged on that factory. Lac production of this district was not sufficient for the factory. They collect necessary lac from Manbhum and Singbhum. In 1925 there was no factory in Rajagram.<sup>6</sup>A.T.weston wrote his Report in 1929, This Industry was formerly carried on extensively all over the District

#### **Marketing of lac**

The shellac along with seed lac and stick lac are considered as marketable products of the district. S.G.Hurt showed the then trade practices of lac commodities in his book "Marketing of Agricultural Produce in Bengal, 1926" (Government of West Bengal Publication). We know also from S.G. Hurt's book that lac is mainly grown in the neighborhood of Khatra, Saltora, Sonamukhi etc., and there are small factories at Khatra and Sonamukhi. In Bankura the major portion of lac produced find its way to these factories and then exported to Calcutta. Some of this lac is taken to Manbhum (Now Purulia) district. The lac trade is encumbered by a large number of middlemen who intervene between the actual collector and the manufacturer and shipper. By a system of advances, the collectors of stick lac and the small manufacturers are bound to the middleman to whom alone they can sell. Brokers again intervene at the port of shipment. The commission of the broker is about Rs. 5 per maund.<sup>7</sup>

Stick lac generally in the district is sold in the nearest rural markets known as haats. The important *haats* that serve the purpose of providing the primary market for the sale of lac in this district are Bikhram, Bardakhal, Ranibundh, Raipore, Rudra, Ambikanagar, and Haludkanali. All are in Khatra block. That implies Khatra took the leading position in lac cultivation in this District. Most of the lac brought into haat is

purchased by the local factory. In the history of Shellac industry Sonamukhi was renowned as a pioneer Centre of India. The Mirzapur people were trained here to establish the industry in their home land. Not only this, the lac industry of Tulin (in district Purulia) is also initiated through the migrant manufacturer of Sonamukhi. The development of the village however was largely due to commercial enterprise of the East India Company which established factories here for the manufacture of shellac products.<sup>8</sup>

#### **Decline of lac factory**

E.W. Collin in his report stated that "the chief seat of the industry is Bankura while at Sonamukhi there are 75 factories employing over five thousand persons for a part of the year". The industry, however, suffered a severe setback owing to the competition of cheap foreign lac.<sup>9</sup> According to O'Malley, "the number of factories decreased from 35 in 1901 to 24 in 1905 but rose again to 26 in 1906, when the outturn was 4,160 maunds."<sup>10</sup> It will thus be seen that within a period of about 16 years, i.e., between 1890 and 1906, the number of factories at Sonamukhi had dwindled from 75 to 26. The manufacturer of shellac, continued to subsist in as much as that these industries were thriving at the turn of century and that several lac factories were then established by the local merchants in the Ranchi district to which artisans were sent from Sonamukhi. A.T.Weston discussed around 1929, there were only 8 small shellac factories in the town (Sonamukhi). Each of the factories employs about a dozen of men. The Financial condition of the lac manufacturers was reported to be precarious owing to the constant fluctuations in the shellac market.<sup>11</sup>

We find from the report on the survey of cottage industries in Bengal that in 1921 there were only a few factories at Khatra. Sreepatila Halder Lac Factory is the only registered factory using power. Among the unregistered factories Kali Pada De Shellac Factory is a notable one, which is not using power. The financial condition of the lac manufactures was reported to be precarious owing to the constant fluctuations in the shellac market.<sup>12</sup>

#### **Government's Effort to improve**

Government had taken different stapes to improve the conditions of the shellac industries in this District. In 1923 at the request of the district magistrate of Bankura, a demonstration of the Improve process of manufacture of shellac has made in Sonamkhi. The Industrial chemist visited Sonamkhi to instruct the local workers in the manufacture of lac or improved lines. He visited six factories generally produce three quality of lac those are Kusmi, the best quality, T.N. lac (Ramanujkar refers it Tuaram Nathmals, a trader who belongs to Marowari community. It was a trade mark of his name) the second quality and third quality, which made into large hard cakes and is composed chiefly of the residue of shellac. Industrial chemist conducted experiments with a quantity of the second quality. This was a decided improvement on the local process and yielded them a far better return for the lac. An experiment was also carried out with the third quality

of shellac and it was proved that without mixing it with better quality of lac it was possible to produce satisfactory quality of "T.N."lac. The demonstration was conducted at one of the larger factories where the owners of the factories were invited and all of them agree to adopt the new process which entails no extra labour.<sup>13</sup>

To improve the quality of shellac- The proprietors of the Khatra shellac factory applied to the industrial department through the collector of Bankura for expert assistance to improve the quality of the shellac manufactured by them which had hitherto been mainly of the worst quality designated as "T.N". Messrs Mukherjee and Chowdhury, shellac factory of Sanbanda also approached this department for expert advice with a view of to improving the product of their shellac factory. Industrial chemist visited two factories and suggested how to manufacture fine quality of shellac without involving any extra labour& cost. Factory also gain of Rs.10 to Rs.15 per mound of shellac produced. Accept the suggestion of chemist, Shellac factory of Khatra which had only six ovens, it reached 18 working oven next year with the great demand of excellent quality of shellac.<sup>14</sup>

Despite such attempts the lac Industry of the district became deteriorates. From 1850 confirm large scale deforestation with corresponding increase in the area put under cultivation. Systematic exploitation of the forests on a scientific basis started only after the opening of the Kharagpur-Gomoh branch of then Bengal-Nagpur Railways in 1902 when the private owners began to treat their forests as an asset capable to yielding regular returns.<sup>15</sup>They have been cut down their jungle at short recurring intervals without discrimination & without Judgment. Where in 1917-24 total area under forest was 332,967.15 acres, after 20 years it became 219710.62 acres of true forest land.<sup>16</sup>After the Government of Bengal appointed a forest committee 1936 and passed West Bengal Private forest act 1948, private forest was sought to be controlled. In the meantime The Government set up a forest division of Bankura in 1947 for the supervision the management of private forests as well as for afforesting waste lands on a large scale. During the first plane afforestation work 916 acres of state land and 2000 acres of private land was undertaken. Under second plan the total area afforested 2217 acres.<sup>17</sup>According to Wikipedia sources now a days forest area of Bankura district became larger than 1917. 21.27% of the total land area of the district covered with Jangle that seems to be 361653.552 acres.<sup>18</sup>

In this environment natural resources must be the savior of jangle inhabitant. There was different type of jangle product in the forest. Despite of those we choose the 'lac' because of its past history and potentiality. Now a days lac are used in different sector like Surface Coating Industries, Adhesive Industries,Electrical Industries & Jewellery and ornaments from valuable coloured stones, for polishing and sharpening stones. According to market estimates, the world demands around 40,000 metric tonnes of lac annually. India, China and Thailand's production totals only about 32,000 metric tonnes.

There is a huge gap between demand and supply, clearly indicating the huge potential of lac.<sup>19</sup> Otherwise Lac cultivation provides income to the farmers during the food insufficient months. Growing lac is a traditional occupation for the tribals inhabiting. Lac rearing not only provides livelihood to thousands of lac rearers but also helps conserve vast stretches of forests, thereby playing a vital role in protecting our bio-resources. Lac has been a traditional source of livelihood for thousands of tribal families, living in the forest fringes. Of These families primarily depend on agriculture for their livelihood, which does not provide them with food security and round-the-year income. These poor families have, through the years, suffered from challenges such as infertile or barren land, low asset base, lack of irrigation facilities, small landholdings, poor linkages with the market and low risk-bearing capacity, forcing them to migrate in search of work. Lac cultivation with its readily available resources, within their habitat, provides some solutions to their dilemma.

#### **Conclusion**

1. Lac cultivation provides income to the farmers during the food inadequate months. The productive cycle of the insect (October-July) matches the lean season for the tribal farmers. Income generated through lac is utilized by the farmers for buying agricultural inputs such as seed and manures. The additional income from lac also helps the villagers meet their basic needs.
2. Lac provides high economic returns. Kusumi in a hectare of *bertrees* can provide net returns of Rs 3 to 5 lakhs per year. A study carried out in several lac-growing villages of Jharkhand by the IINRG exposed that the income generated from lac cultivation was next only to paddy.<sup>20</sup>
3. Lac rearing involves very simple processes; it does not need certain talents and it takes not as much of time than other agricultural procedures. The snipping of host trees, the nylon net-bag equipment of brood lac on trees or inoculation, the elimination of used up brood lac, or *phunki*, from the trees and the collecting of the crop is some key processes in lac rearing.
4. Lac rearing not only provides livelihood to thousands of lac rearers but also helps conserve vast stretches of forests, thereby playing a vital role in protecting our bio-resources.
5. The lac sector does not have any inbuilt gender bias in its production operations. All activities, from pruning, inoculation, harvesting to even trading can be undertaken equally by men and women. Since it is community-based, self-employed farming, there is no fostering of employee-employer relationships.

On the basis of those points conclusion of this study will be the lac rearing is an alternative income generating sector that will be very effective to poorer Jangle inhabitant. Lack of irrigation farmers of this district cannot produce sufficient rice due to inadequate rain fall. There is no large factory to working. A group of jangle inhabitant goes to Burdwan, Midnapore for searching farm work. They

cannot accumulate there necessary livelihood. In this situation lac may be assist them and forest will be save from destruction. Thus livelihood and nature can go ahead together.

#### **Suggestion**

Lac rearing is not very simple. Some obstacles are there to proper grown up of Lac. Lac production depends on weather conditions and any change in the optimal climatic conditions can significantly reduce yield. So some suggestions are here to increase the production of lac.

1. With the scientific rearing it may carry out to reduce the mortality of lac insects.
2. Working out the farmers in methodical rearing applies.
3. Make connections for material and monetary contributions (credit and insurance) with performers such as SHGs, banks and insurance companies Expanding the host plants
4. Creating lac rearing a round-the-year activity by investigating with different strains on various host plants. Organizing a team of trained youths as Local Resource Persons (LRPs) for lac cultivation.
5. Guaranteeing a resource of quality brood lac from brood surplus areas to brood deficit areas.

#### **Endnotes**

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