

ASSESSING MINIMUM SUPPORT PRICE FOR NON-WOOD FOREST PRODUCTS (NWFPs):**A PRIORITY BASED POLICY INTERVENTION IN INDIA****RK Yogi, AK Singh, Nirmal Kumar & KK Sharma**

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Abstract

This study is aimed to estimate the cost of cultivation/collection of Non-Wood Forest Products (NWFPs) and assessing Minimum Support Price (MSP) for stabilizing the farm price. NWFPs are produced or collected by the forest dwellers from remote forest or agro forestry areas. Local markets of NWFPs in Jharkhand, Chhattisgarh, Odisha, Madhya Pradesh, Andhra Pradesh and NEH region are underdeveloped and imperfect, and have a poor horizontal as well as weak vertical integration. Value chains for these commodities are long and dominated by a number of intermediaries, leading to a considerable price spread. The total outlay for the MSP scheme was Rs.967 Crore for the plan period during 2013-14 to 2016-17. A total of, 12 Minor forest product (MFP) were covered under the mandate given to the TRIFED for advising the government in respect of the price policy. The exercise is required to convey its recommendations to the Government well before the sowing season of the crop. The study was conducted in consultation with marketing federations from Jharkhand, Chhattisgarh, Madhya Pradesh and Gujarat. The analysis is based on surveys of traders and market officials and farmers. Several rounds of focussed group discussions were held with forest and market officials, farmers and traders to obtain qualitative information on NWFP marketing. Secondary data on market arrivals, prices and procurement was obtained from the federations. MSP for NWFPs was first introduced in 2013-14 across PESA states. Jharkhand, Chhattisgarh, Madhya Pradesh and Gujarat markets accounts for more than 85% of total lac arrivals in the country. At current wage rates, the estimated unit cost of lac cultivation/kg ranged from Rs.240/kg (rangeeni strain) to Rs. 340/kg (kusmi strain). The findings of this study have clearly brought out that procurement system needs considerable back up to infuse implementation with transparency in local markets, and to increase the farmers' share in consumer rupees. This is a crucial feedback for policymakers to strengthen the government's initiative that aims at creating a national procurement system for NWFPs.

Key words: Cost of cultivation, Farmer, Fixed cost, Lac, Market, Tribal**Introduction**

Non-Wood Forest Products (NWFPs) are produced or collected by the forest dwellers from remote forest or agro forestry areas. Local markets of NWFPs in Jharkhand, Chhattisgarh, Odisha, Madhya Pradesh, Andhra Pradesh and NEH region are underdeveloped and imperfect, and have a poor horizontal as well as weak vertical integration. Value chains for these commodities are long and dominated by a number of intermediaries, leading to a considerable price spread. According to Chand (2012), the transfer of farm produce to consumers involves at least four intermediaries without adding any value to the produce which reduces producers' share in consumer's rupee, especially in case of NWFPs. In this case, even though small efforts in processing make huge difference in the farm price and consumer price. Consequently, this sector is constrained by the under-pricing. Poor infrastructure for grading and inadequate standards is another major problem. Multiple formalities like transact permit, taxes and market fees have added to the complexities of the marketing (Patnaik 2011; GoI 2013). Recently, TRIFED intervened in marketing of NWFPs in a big way. The total outlay for the Scheme is Rs.967 Crore as Centre's share for the plan period during 2013-14 to 2016-17. At this juncture, target of doubling farmers' income in a short period requires identification of sources of income growth and enabling conditions for harnessing their growth potential. However, extreme volatility in prices acts as disincentive to adopt productivity-enhancing technologies and diversification (Saxena *et al*; 2017).

A total of, 12 Minor forest product (MFP) are currently covered under the mandate given to the TRIFED for advising the government in respect of the price policy. The exercise is required to convey its recommendations to the Government well before the sowing season of the crop. TRIFED performed as Central Nodal Agency for implementation of the scheme through State level implementing agencies. The basic component of the scheme includes declaration of MSP for notified NWFPs by the Central Government based on the recommendation of the Pricing Cell set up within TRIFED. The Pricing Cell has already been under the Chairmanship of Managing Director, TRIFED comprising representatives of Planning Commission, Commission for Agricultural Cost & Price, Ministry of Rural Development, Indian Institute of Forest Management, Indian Council of Forestry Research & Education, National Council for Applied Economic Research and experts like ICAR-Indian Institute of Natural Resins and Gums in the relevant field. In addition, Chief

Executive Officers of designated States Procurement agencies have also been invited as a Special Invitees for the purpose.

Data and Methodology

The study was conducted in consultation with marketing federations from Jharkhand, Chhattisgarh, Madhya Pradesh and Gujarat. The analysis is based on surveys of traders and market officials and farmers. Several rounds of focussed group discussions were held with forest and market officials, farmers and traders to obtain qualitative information on NWFP marketing. Secondary data on market arrivals, prices and procurement was obtained from the federation records. Minimum support price was first introduced in 2013-14 across PESA states including Jharkhand, Chhattisgarh, Madhya Pradesh and Gujarat. Jharkhand, Chhattisgarh, Madhya Pradesh and Gujarat markets accounts for more than 85% of total lac arrivals in the country. Hence, lac was selected as a specific commodity for this study. Following a pilot survey in the selected markets and villages, surveys of farmers and traders was conducted annually during 2014-18. Experts from the processing industry were also interviewed with great care about the quality parameters affecting the market price.

Determination of Minimum Support Price (MSP) of lac: In formulating the recommendations in respect of the level of minimum support prices and other non-price measures, the computation takes into account, apart from a comprehensive view of the entire structure of the economy of a lac sector, the following factors:

Cost of production

Changes in input prices

Input-output price parity

Trends in market prices

Demand and supply

Effect on industrial cost structure

International price situation

Parity between prices paid and prices received by the farmers.

The exercise makes use of both micro-level data and aggregates at the level of district, state and the country. The information/data used in the exercise, *inter-alia* include the following:

Cost of cultivation per 100 trees

Cost of production per kilogramme in various host plants (rangeeni);

Prices of various inputs and specifications;

Market prices of products and specifications;

Prices of commodities sold by the farmers and of those purchased by them;

Supply related information – peak season of arrival, average production state wise, imports, exports and domestic availability and carryover stocks with the industry;
Demand related information - capacity of the processing industry;
Prices in the international market and changes therein, demand and supply situation in the world market;
Prices of the derivatives of the lac products;
Cost of processing of lac products;
Cost of marketing - storage, transportation, processing, marketing services, taxes/fees and margins retained by market functionaries; and
Macro-economic variables such as general level of prices, consumer price indices and those reflecting monetary and fiscal factors.
Lac cultivation is an important source of income for livelihood of the forest and sub-forest dwellers in different states. Besides, it has high

potential for generating employment for both men and women in forest and sub-forest areas of Jharkhand, Chhattisgarh, Madhya Pradesh, West Bengal, Maharashtra, Odisha and parts of Uttar Pradesh, Andhra Pradesh, Gujarat and NEH region. 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* (*Zizyphus mauritiana*), *kusum* (*Schleichera oleosa*), *Flemingia semialata*, *Ficus spp.* etc. The raw lac is the source of three 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. Further, based on the season of crop both strains are classified into four crops (**Table 1**).

Table-1: Basic information of the crops grown for lac production on various host plants

Major Host Plants	Strain type	Crop type	Inoculation	Harvesting	Duration
Kusum (<i>Schleichera oleaca</i>)	<i>Kusmi</i>	<i>Jethwi</i>	Jan –Feb	June –July	6 months
		<i>Aghani</i>	June –July	Jan –Feb	6 months
Palas (<i>Butea Monosperma</i>)	<i>Rangeeni</i>	<i>Baisakhi</i>	Oct-Nov	June –July	8 months
		<i>Katki</i>	June –July	Oct-Nov	4 Months
Ber (<i>Zizyphus mauritiana</i>)	<i>Kusmi</i>	<i>Aghani</i>	June –July	Jan –Feb	6 months
	<i>Rangeeni</i>	<i>Katki</i>	June –July	Oct-Nov	4 Months
Flemingia semialata	<i>Kusmi</i>	<i>Jethwi</i>	Jan –Feb	June –July	6 months
		<i>Aghani</i>	June –July	Jan –Feb	6 months

Identification of the base crop for estimation of cost of lac cultivation: *Baisakhi* crop on *palas* was identified as base crop for computation of cost of lac cultivation. The following points are given in favour of that:-

Based on the production scenario of various crops, highest share of the *baisakhi* crop (32%) was recorded in the total lac production (**Fig.1**).

The host wise share of *baisakhi* crop indicated that about 70 % production of *baisakhi* coming from *Palas*. Rest of 30 % share comes from *Ber* and a little share in recent years from *Flemingia semialata* also.

The price variation between *rangeeni* and *kusmi* crop is due to difference in quality and resin content. Hence, cost of *kusmi* lac cultivation was excluded at initial level, but it will be calculated by taking the base price of *rangeeni* crop

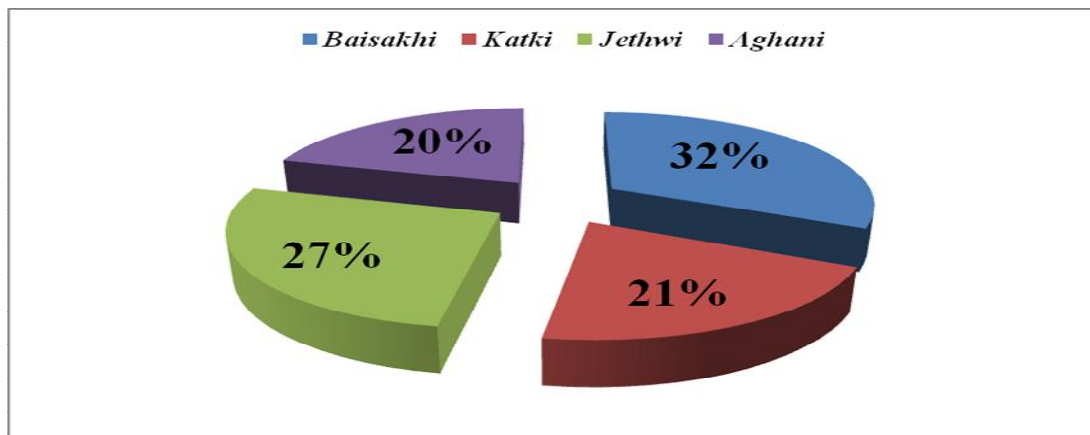


Fig.1-Share of different crops in lac production at national level (last five years)

As *kusmi* cultivation on *ber* and *Flemingia semialata* is a technological intervention. Its cost of cultivation will be always lower than the *rangeeni* cultivation on *palas*. Similarly, share of *rangeeni* cultivation on *ber* is low and *rangeeni* cultivation on *Flemingia semialata* is again a technological intervention which tends to low per kg cost of cultivation, comparatively. Thus, the *palas* as a host plant for *rangeeni* crop was taken as base crop for computation of the cost of lac cultivation. Cost of cultivation includes the fixed as well as variable costs incurred during the whole production period of the crop. A brief discussion is given below:-

Operational cost: This is the major cost component in lac cultivation activities as lac cultivation is labour intensive activity. Operational cost components directly influence the cost of lac cultivation. The following inputs were included in the computation of cost.

Human labour: Lac cultivation is labour intensive activity. Hence, labour cost constitutes a major source of total cost and it is important to study the various dimension of its valuation. Minimum wage rates across the Jharkhand, Chhattisgarh, Odisha, West Bengal, Maharashtra, Madhya Pradesh, Gujarat, Andhra Pradesh and Rajasthan for various activities including agriculture, forest, forestry, lac processing etc. were studied. A standard unit of labour was taken for the performing various activities of lac cultivation. A person doing the activities for 8 hours equivalent to forest or forestry or agriculture (whichever is higher) in unskilled category of employment was considered as a labour unit. The minimum wage rates of the following states were taken into consideration with the appropriate weightage based on the share in total lac production of

the country (Table 2). Labour requirement and its standard with specifications is elaborated in the Table 3.

Table 2. Wage rate per day for unskilled in Agriculture

States/Year	Average lac production (2007-08-2015-16)	Weights	Agriculture	Relevant price for NRG	Weighted values
Jharkhand	8082 (44.70)	45	205.73	205.73	9258.00
Chhattisgarh	4558 (25.21)	25	237.00	237.00	5925.00
Madhya Pradesh	2409 (13.32)	10	199.93	199.93	1999.33
Maharashtra	1065 (5.89)	10	310.53	310.53	3105.33
West Bengal	921 (5.09)	10	195.63	195.63	1956.33
Other states	1044 (5.77)	00	000.00		22244.00
National	18079 (100.00)	100	308.00	Weighted Price	222.44

Source: Ministry of Labour and Employment, GOI.

Table-3: Labour required for rangeeni lac cultivation on 100 lac host trees (in person days)

SN	Activity	Palas [#]	Ber [@]
		Labour	Labour
i.	Pruning	10	20
ii.	Broodlac selection & inoculation	15	20
iii.	Phunki removal	10	10
iv.	Spraying	10	10
v.	Harvesting	20	20
vi.	Other activities (scraping)	17	25
vii.	Total	82	105

Average size tree having 50 meter inoculable twigs; @ Average size tree having 100 meter inoculable twigs

Broodlac: This is the second most important cost component followed by human labour. It is very critical input for lac cultivation. Productivity of the lac is influenced by the quality of broodlac.

Farm yard manure:- This is third important expenditure incurred for lac cultivation. Majority of farmer does not purchase the FYM from outside, but they apply it regularly into the field where the host plants also survive. Hence, the imputed value of the FYM will be taken for

the computation of the cost. The specification of per tree dose is tabulated below:-

Pest management: Lac cultivation includes two major components viz. one host plant and another is lac insect. Here, host plant protection measures have nil expenditure. Only the attack of enemy insects (predators) on lac insect causes economic losses to the lac farming. Requirement of inputs for 100 number of standard size trees is given in Table 4.

Table-4: Variable cost components for rangeeni lac cultivation on 100 lac host trees

Components	Palas	Ber
Total broodlac required (in Kg)	50	150
Annual FYM required	1500	2000
Pesticide requirement		
Insecticides (in lit)	3	6
Fungicides (in Kg)	2	4

Fixed cost: Total expenditure on various equipments and tools for lac cultivation is categorized under fixed cost component. Important fixed components are discussed as below:-

Table-5: Fixed cost components for lac cultivation (rangeeni) on 100 lac host trees

SN	Component	Palas		Ber	
		Number	Rate of depreciation (%)	Number	Rate of depreciation (%)
i.	Sprayer	1	10	1	10
ii.	Secateur	5	10	10	10
iii.	Pruners	5	10	10	10
iv.	Nylon net & others	1000	20	3000	20

The expenditure is incurred once in short run and it may be variable in long term. Hence, the depreciation cost based upon the expected life of resource was computed for annual cost estimation. However, interest on fixed capital as well as working capital for time being is excluded from the total cost.

Managerial cost: Lac growers manage more than 100 labour units (casual or family labour), purchase the quality broodlac, procure other inputs and monitor the activities as per the schedule He also take the

decision for spraying the pesticides to avoid any economic losses. He also bears the risk against the variation in climate and prices of input and outputs of lac farming. Therefore, an amount at the rate of 15 % has been taken into account as managerial cost in the cost of lac production.

Net Cost: After 21 days of inoculation the *Phunki* (lac stick) is removed. The recovery of *phunki* is assumed about 10% of the total

quantity of inoculated broodlac. The market value of the lac stick is deducted from the total cost to arrive at net cost.

Yield: To arrive at the cost of per kilogramme of lac production, it is essential to find out the yield of lac from the standard size of 100 host trees. The yield was calculated from the productivity of per kg broodlac used for inoculation. Thus, about 175 kg of scraped lac was estimated for *palas* and 525 kg of scraped lac was computed for *ber*.

Cost of production (rangeeni): At this stage all components calculated and per kg cost of lac production for *rangeeni* was estimated by using the following formula:

$$\check{R}_p = \sum_{n=1}^{100} \left(p \frac{\text{Net Cost}}{\text{Yield}} \right)$$

$$\check{R}_b = \sum_{n=1}^{100} \left(b \frac{\text{Net Cost}}{\text{Yield}} \right)$$

$$\check{R} = \frac{[(\check{R}_p) * (\hat{W}_p)] + [(\check{R}_b) * (\hat{W}_b)]}{100}$$

where

\check{R}_p = Per kg cost of lac production on *palas*

\check{R}_b = Per kg cost of lac production on *ber*

\check{R} = Per kg cost of *rangeeni* lac production

\hat{W}_p = Weight for *rangeeni* lac production on *palas*

\hat{W}_b = Weight for *rangeeni* lac production on *ber*

A. Cost of production (kusmi)

After getting final per kg cost of *rangeeni* lac production, price premium for higher resin content (20%) and price premium for general price variation between two strains (*rangeeni* and *kusmi*) for its good quality. It is estimated by using the following formula:

$$K = \check{R} + (\check{R} * \text{Resin}) + (\check{R} * \text{Quality})$$

where

K = Per kg cost of *kusmi* lac production

Resin = Coefficient of price premium for resin content

Quality = Coefficient of price premium for resin content

Table-6: Computation of cost of production of *rangeeni* lac on *Palas* & *Ber* for MSP (Rs./100tree)

Sl. No.	Crop type	Particulars	<i>Palas</i> (<i>B. monosperma</i>)	<i>Ber</i> (<i>Z. mauritiana</i>)
A.	<i>Rangeeni</i>			
	I	Operational Cost		
		Human Labour@Rs. 222	16400.00	21000.00
		Broodlac	12500.00	37500.00
		Manure	7500.00	10000.00
		Pest management	5100.00	10200.00
	II	Fixed Cost	1550.00	2800.00
		Sub Total (I+II)	43050.00	81500.00
		Managerial cost including risk @ 15%	6457.50	12225.00
	III	Total Cost	49507.50	93725.00
		Value of <i>phunki</i> @ 10 % of broodlac	1750.00	5250.00
	IV	Net Cost	47757.50	88475.00
		Yield (kg)	175.00	525.00
	V	Cost of Production (Rs./kg)	272.90	168.52
		Weights given (based on share)	70	30
		Weighted cost of production (Rs./kg)		241.6
B.	<i>Kusmi</i>			
		Price premium (40%) (Rs./kg)		96.6
		Price for <i>Kusmi</i> (Rs./kg)		338.2

Current status of policy interventions

The procurement scheme is designed as a social safety net for improvement of livelihood of NWFP gatherers by providing them fair price for the NWFPs they collect. The scheme has been started to provide fair price to the NWFP gatherers for the produce collected by them and enhance their income level. Secondly, to ensure sustainable harvesting of NWFPs and management of a huge social dividend for NWFP gatherers, majority of whom are tribals. Thus it aimed to

protect the forest dwellers from exploitation by offering them the opportunity to sell their NWFPs in the protected environment with assured return. It is a holistic scheme for development of NWFP trade including its value chain and necessary infrastructure at local level. The Minimum Support Price (MSP) scheme seeks to establish a framework to ensure fair returns for the produce collected by tribals, assurance of buying at a particular price, primary processing, storage, transportation etc while ensuring sustainability of the resource base.

Table-7: Prevailing procurement prices of sticklac and broodlac for the last 5 years:

Years	Average market prices (Rs/Kg)			
	Sticklac		Broodlac#	
	<i>Rangeeni</i>	<i>Kusmi</i>	<i>Rangeeni</i>	<i>Kusmi</i>
2010-11	180	270	78-141	185-230
2011-12	266	378	102-148	249-368
2012-13	588	695	356-438	388-500
2013-14	271	399	188-300	330-580

2014-15	228	320	244-350	253-463
2015-16*	110	150	121-270	121-275

*Current average market rate; #Broodlac price is based on the prices quoted by broodlac suppliers

Table-8: Peak season of arrival of lac in the market

Strain type	Crop type	Inoculation	Harvesting	Peak season for arrival
Kusmi lac	Jethwi	Jan –Feb	June –July	July-August
	Aghani	June –July	Jan –Feb	February -March
Rangeeni	Baisakhi	Oct-Nov	June –July	July-August
	Katki	June –July	Oct-Nov	Nov-Dec

Table-9: The domestic and export market of lac in last 5 years:

Years	Production status of lac	Value (Rs. in Lakh)*	Domestic market		Export market	
	Quantity (in MT)		Quantity (in MT)	Value (Rs. in Lakh) ^s	Quantity (in MT)	Value (Rs. in Lakh)
2010-11	9035	20510.10	1621.0	13478.0	6339.05	21112.92
2011-12	17900	59369.52	1430.0	8965.5	6858.21	36461.30
2012-13	19575	127004.74	1493.0	11211.2	4361.30	48027.58
2013-14	21008	67279.59	2016.0	10240.0	8153.10	56853.63
2014-15	16978	59458.96	1456.0	7453.0	6569.17	32249.58
2015-16	18746	22495.20	2162.9	6982.2	7668.42	24755.18

^sData is based on the average market price and domestic consumption figures; *Data is based on the average market price and total sticklac production figures. Source: Lac, plant resins and gums statistics 2014: At a Glance

To protect the tribals from exploitation, the Scheme of MSP for NWFP is introduced so that tribals and other forest dwellers can sell their NWFPs in the protected environment with assured return. The scheme envisages fixation of Minimum Support Price for the selected NWFPs based on the suggestions/ input received from TRIFED and declaration of MSP for selected NWFPs by the Ministry of Tribal Affairs. Procurement and Marketing operation at pre fixed MSP is being undertaken by the designated State Agencies. The Central Government provided some portion of the working capital requirement in initial two years in the form of share capital grant in the ratio of 75:25. Simultaneously, other medium and long term issues like sustainable collection, value addition, market

infrastructure development, knowledge base expansion of NWFPs, market intelligence development, strengthening the bargaining power of local governing bodies will also be addressed. It also includes its value chain and necessary infrastructure at local level. The MSP scheme seeks to establish a framework to ensure fair returns for the produce collected by tribals, assurance of buying at a particular price, primary processing, storage, transportation etc while ensuring sustainability of the resource base. The State Procurement Agencies (SPA) need to ensure proper collection, transportation, handling and storage arrangements to avoid deterioration in the quality as per the guidelines issued by the Procurement Agency to the field level functionaries.

Table-10: Current status of the coverage of the MSP scheme for NWFPs

Particulars	Till 2017	After 2017
States	Telangana, Jharkhand, Chhattisgarh, Madhya Pradesh, Odisha and Gujarat Himachal Pradesh, Rajasthan and Maharashtra (Panchayats (Extension to Scheduled Areas) Act 1996 (PESA Rules)	Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Goa, Gujarat, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Odisha, Rajasthan, Sikkim, Tamil Nadu, Telangana, Tripura, Uttarakhand, Uttar Pradesh, West Bengal, Andaman & Nicobar Islands, Dadar & Nagar Haveli, Daman & Diu, Lakshadweep and Puducherry
Commodities	Mahua Seed, Lac, Myrobalan, Gums (Gum Karaya), Sal Leaf, Chironjee, Tamarind, Karanj Seed, Sal Seed and Wild Honey	Mahua Seed, Lac, Myrobalan, Gums (Gum Karaya), Sal Leaf, Chironjee, Tamarind, Karanj Seed, Sal Seed, Wild Honey, Kusum seeds, Neem seeds, Puwad Seed/ Chakramard, Baheda, Hill Broom Grass, Shikakai, Guggul (exdute), Bael (Dried & without crust), Nagarmotha, Shatavari (dried), Madhunashini, Kalmegh and Tamarind (De-seeded)
Agencies involved	Girijan Cooperative Corporation Ltd Chhattisgarh Minor Forest Produce Cooperative Federation Ltd Odisha Forest Development Corporation Ltd Rajasthan Tribal Areas Development Coop Federation Ltd Maharashtra State Cooperative Tribal Development Corporation Ltd Jharkhand State Cooperative Lac Marketing Federation Ltd JHASCOLAMPF Gujarat State Forest Development Corporation Ltd Madhya Pradesh Laghu Vanupaj Vyapar Avem Vikas Sahkari Sangh Ltd	

Note: Any de-nationalized MFP / items removed from the purview of monopoly procurement in future will also qualify for coverage under the Scheme. Similarly, any nationalized/ monopolized procurement, MFP will disqualify for coverage under the Scheme. However, if any State willingly wants any nationalized items to be included in MSP, then it shall have to change its nationalized status accordingly.

State agencies have to establish adequate number of such procurement centres. Therefore, it is essential to establish a godown of 50 MTs at block level to aggregate the stocks procured at each haat. Now, the scheme has been implemented in all the States & union territories having Scheduled Areas and Scheduled Tribes in the Fifth Schedule of the Constitution of India and initially would cover

all non-nationalized / non-monopolized NWFPs as given in Table 10. Recently country as whole is covered with several other NWFPs under this scheme for the welfare of forest dwellers.

About 1,00,000 tribal NWFP gatherers targeted under the scheme to provide training on sustainable harvesting and value addition activities including facilitation for marketing of the produces. The existence and dissemination of complete and accurate market information is the key to achieve both operational and pricing

efficiency. There is a need to create awareness among farmers of the benefits of MSP and build their capacity in online banking and grading of produce. Therefore, MFPNET a portal dedicated to MFPs is being established to implement information and communication technology based schemes. Subsequently, modernization of Haats, storage facility at aggregation points and establishment of Multipurpose Centers for training and capacity building, value addition, storage etc. also need to be strengthened.

Table 11: Procurement of scrapedlac under the scheme (Quantity in tons and Value Rs. in Lakh)

Name of the state	2014-15		2016-17				2017-18				Total	
	Kusumi		Kusumi		Rangeeni		Kusumi		Rangeeni			
	Qty	Value	Qty	Value	Qty	Value	Qty	Value	Qty	Value	Qty.	Value
Chhattisgarh	0.0	0.0	350.6	1208.1	101.2	250.9	2.0	3.1	13.7	13.7	467.6	1475.8
Jharkhand	0.0	0.0	0.0	0.0	3.9	5.9	0.0	0.0	0.0	0.0	3.9	5.9
Gujarat	19.5	6.2	2.7	0.5	0.0	0.0	0.2	0.3	0.0	0.0	22.4	7.0
All India	19.5	6.2	353.3	1208.6	105.1	256.8	2.3	3.4	13.7	13.7	493.9	1488.7

Source: TRIFED, New Delhi

One of the major problems of this sector in the recent past has been the instability in prices of lac. Despite good unrealized demand for lac (both domestic as well as overseas), the lac production growth had not been very healthy. Experts in this field say that the Indian lac industry is totally dependent on the export market and the uncertainty of production leading to the uncertainty of prices make foreign buyers wary to enter. Many of the lac processing units are not able to sustain themselves in this situation. This has led to lack of interest among the poor traditional lac growing tribal families to take up lac cultivation and the production has come down drastically in the recent past. One needs to appreciate and understand that without intervention to stabilize the production, prices cannot be stabilizing. Post-harvest management and small-scale processing would help farmers capture benefits of value addition. Effective coordination between centre and states is important in mainstreaming and channelizing policies and investment to achieve the target of doubling farmers' income. Prices play a crucial role in making agriculture remunerative. However, agricultural prices in the recent past have become extremely volatile. The short term instability in prices of lac and its value added products remains a matter of concern during previous years. Such a volatile behaviour of prices makes it difficult for lac growers to secure a remunerative return on investment. The implementation of MSP Scheme for NWFPs led a significant stability in market. However, the coverage in terms of procurement of actual quantity was not significant (Table 11). According to officials, it could not be happen as implementation was not mandatory in majority of the states except Chhattisgarh. However, the diversification process needs to be coupled with strong infrastructure and logistics support along with provision of efficient marketing network. The prices of lac in the recent past have witnessed extreme volatility that needs to be addressed through proper market information and intelligence efforts.

Conclusions

The findings of this study have clearly brought out that procurement system needs considerable back up to infuse implementation with transparency in local markets, and to increase the farmers' share in consumer rupees. This is a crucial feedback for policymakers to strengthen the government's initiative that aims at creating a national procurement system for NWFPs. The study has also come out with some constraints that need to be addressed. The governments provide financial support for creating essential infrastructure for implementation of this scheme with a concept of one-nation one market. This alone, however, is not sufficient. Effective implementation of the scheme also requires infrastructure in the form of storage, warehousing, prompt banking transactions, grading and assaying facilities, etc. within the market yard, the absence of which may discourage stakeholders from remote areas. There is a high

incidence of tied transactions where traders advance credit to NWFP gatherers on the latter's commitment of sale of produce. It is feared that direct transfer of sale proceeds to farmers' account might affect recovery of credit. Findings also indicate these apprehensions do not hold any ground. Nonetheless, the need is to improve forest dwellers' access to institutional credit to reduce their dependence on traders and commission agents. Farmers need to be organized into collectives to enable them to capture benefits of scale in marketing Self-Help Groups (SHGs) and Farmer Producer Companies (FPCs) are the options for this.

Simply intervening in the market through procurement and other methods of price administration are not sufficient. Thus, to bring in a stability to the entire sub-sector, stabilization of production through intervention in technology availability with the community coupled with backward (brood lac producers) and forward linkages (Community based Lac procurement agents) would be the key. This endeavor will require convergence of efforts for Resource Institution (IINRG), grassroots action organization and the lac processing units. MSP system may address such contingencies if substantial difference in MSP and market price minimized. The most important factor for MSP is broodlac cost (35%). Hence, the price of broodlac at the time of inoculation of the particular crop should affect cost of lac cultivation and may be considered for fixing the MSP for the particular season. MSP can be flexible based on the broodlac price. Minor variation in labor charges or wages and other inputs may be incorporated as and when required. About 13% amount of total cost is managerial cost, it may be converted in bonus amounts so that at the time of substantial differences in MSP and market price, it can be removed or added accordingly. Prevailing market price of broodlac affects the cost of lac cultivation and may be included in determining of MSP. Besides, effective post-harvest management and small scale lac processing at household-level would facilitate growth in farmers' income. There is a need to prioritize areas for investment based on their potential to contribute to the targeted growth, and both the public and private sectors work in tandem to achieve the goal of doubling farmers' income. Thus, an effective coordination between centre-states is essential to mainstream and channelize the policy intervention for tribal communities.

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