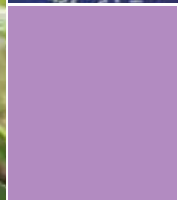
Lac, Plant Resins and Gums Statistics at a Glance 2013





ICAR-INDIAN INSTITUTE OF NATURAL RESINS AND GUMS
Namkum, Ranchi 834 010 (Jharkhand)

Lac, Plant Resins and Gums Statistics at a Glance 2013

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Cover page photographs
Left to right :
Row 1 - Lac based handicrafts, farmer with broodlac, lac dye and seedlac
Row 2 - *Babool* gum tapping, *guar* plant and *guar* splits

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Foreword

Natural resins and gums (NRGs) including lac form valuable means of subsistence, employment, cash income to growers and collectors and serve as a raw material for a number of industries. These are consumed directly as food, fodder and medicine. These also play a vital role in ecological balance and sustainable development. Production of such natural products is greatly influenced by weather vagaries and prices. Therefore, production, processing and EXIM statistics of these commodities are sought by the traders, processors, exporters, importers, government officials, policy makers, researchers and others.

The ICAR - Indian Institute of Natural Resins and Gums has been publishing annually 'Lac Statistics'. To make this publication more useful, we have also included plant resins and gums statistics from previous two years. The present publication, 'Lac, Plant Resins and Gums Statistics at a Glance 2013' contains statistics on lac; natural resins and gums production; details of area; production and yield of guar seed; production of natural gums in important states; production of pine resins; export and import of NRGs.

Its purpose is to give a clear and comprehensive overview of the most important informations in as little time as possible. Reliable and timely availability of data and information on natural resins and gums production may be helpful to traders, processors, exporters and policy makers. Documentation of updated major production and market areas will be helpful in relation to collection/tapping and disposal of the produces.

I am sure that the information and data contained in this bulletin would be useful to all the stakeholders. Authors made every effort to distill and condence a very large and diverse topic into and approachable volume. I exalt the authors for their efforts in bringing out this bulletin. Suggestions and inputs are sought from stakeholders for improvement of this publication in future. The informations used in the publication will be duly acknowledged.

(R. Ramani)

Ranchi

Director

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CONTENTS

Introduction

Indian subcontinent is the major hub of biodiversity of fauna and flora. Several forest produces have significant importance in social and economic life in tropical areas. These forest produces are classified into wood and non-wood forest produces (NWFP). NWFP includes natural resins, gums and exudates, leaves (tendu), turpentine from pines and perfumery oils from roots, stumps and fruits of various tree species. These are also natural source of spices, medicines, dyes and tannins. Most NWFPs are export currency earners and many are well suited for local small scale industries. There are a large number of lac host and gum producing trees in India which exude resins and gums.There are three categories of natural resins and gums (NRGs) originated from the plants/insects.

Natural resins are solid or semi-solid materials, usually a complex mixture of organic compounds called terpenoides, which are insoluble in water but soluble in certain organic solvents. Resin is a hydrocarbon secretion of several plants, particularly coniferous trees. Resins are valued for their chemical properties and associated uses such as the production of varnishes, adhesives and food glazing agents. These are also prized as an important source of raw material for organic synthesis and as constituents of incense and perfume. This group of natural resins includes lac secreted by an insect *Kerria lacca* (Kerr) and plant originated products like rosin, copal and dammer. Solidified resin from which the volatile terpene components have been removed by distillation is known as rosin.

Natural gums are polysaccharides of natural origin, capable of causing a large viscosity increase in solution. Most often these gums are found as exudates from woody elements of plants or in seed coatings. In the food industry these are used as thickening, gelling and emulsifying agents and stabilizers. These are also used as adhesives, binding agents, crystal inhibitors, clarifying agents, encapsulating agents, flocculating, foam stabilizers, swelling agents, *etc.* Natural gums can be classified according to their origin. Firstly, originated from non-marine botanical resources *e.g.* gum *arabic*, gum *ghatti*, gum *tragacanth*, *karaya* gum, *guar* gum, locust bean gum, *chicle* gum,

dammar gum, *mastic* gum, psyllium seed husks and spruce gum. Secondly, originated from seaweeds *e.g.* agar and *carrageenan* and thirdly, produced by bacterial fermentation *e.g. gellan* gum and *xanthum* gum. They can also be classified as uncharged or ionic polymers (polyelectrolyte). NRGs of commercial importance like lac, rosin, *guar* gum (*Cyamopsis tetragonolobus L.*), *karaya* gum (*Sterculia urens*), *dhawada* gum (*Anogeissus latifolia*), *salai* gum (*Boswellia serrata*), *char /piyar* gum (*Buchanania lanzan* Spreng.) and *babool* gum (*Acacia nilotica*) are produced in India.

Lac is a natural resin secreted by an insect *K. lacca* (Kerr) which thrives on the tender twigs of specific host trees *viz.*, *palas* (*Butea monosperma*), *ber* (*Ziziphus mauritiana*), *kusum* (*Schleichera oleosa*), *Flemingia semialata*, *Ficus spp*. *etc.* 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.

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. 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.

Estimation of lac production is required by the Government, lac-based industries, lac traders, entrepreneurs and exporters. The lac growers, processors, traders, exporters and policy makers can plan their operations in time by using timely and accurate estimations. The cultivation of lac on a large number of hosts of different kinds, its collection by numerous small growers, variations in the yield depending on the type and size of the host, cultivation practices and climatic conditions are the major factors influencing

the estimation of lac production. Accuracy in production estimate would be helpful in precision planning by all concerned. Besides knowing the present status, it would be helpful in regulating imports, planning for enhanced exports, reasonable prices and reliability in supply of lac based products.

Areas surveyed

National level information and data on NRGs were collected from primary and secondary sources. Survey was made in various NRG producing areas of the country for collection of data throughout the year during 2012-13. The requisite data was collected from respondents at various lac markets and lac processing centers. For updating the information and data, regular telephonic contacts were also made with the respondents. Surveys were conducted in 31 NRG producing districts of 10 states covering 57 lac traders, 61 lac manufacturers and 150 other key informants during 2012-13. List of the states and districts which were covered for survey and sample size surveyed during the year are presented in Table 1 and Table 2, respectively.

Table 1. States and districts surveyed

Sl. No.	State	Districts
1	Assam	Kamrup and Karbi-Anglong
2	Chhattisgarh	Bilaspur, Dhamtari, Janjgir - Champa, Kanker, Korba, Mahasamund, Raigarh and Raipur
3	Gujarat	Narmada and Vadodara
4	Jharkhand	Garhwa, Gumla, Latehar, Palamau, Ranchi, Simdega and West Singhbhum
5	Madhya Pradesh	Balaghat, Jabalpur and Seoni
6	Maharashtra	Gondia
7	Odisha	Balasore, Bhubaneswar and Sundergarh
8	West Bengal	Bankura, East Midnapur, Purulia, South 24 Pargana and West Midnapur

Table 2. Sample size of the various categories of respondents

(in numbers)

Sl. No.	Name of the state	Districts	Traders	Manufacturers	Others*	Total
1	Assam	2	1	1	1	3
2	Chhattisgarh	8	5	20	17	42
3	Gujarat	2	3	-	1	4
4	Jharkhand	7	12	5	40	57
5	Madhya Pradesh	3	10	1	20	31
6	Maharashtra	1	5	3	13	21
7	Odisha	1	1	-	1	2
8	Rajasthan	4	10	20	35	65
9	Uttar Pradesh	1	0	1	8	9
10	West Bengal	2	10	10	14	34
Total		**31**	**57**	**61**	**150**	**268**

**Government officials/ NGOs/ other key informants*

NRGs production level during 2012-13 is estimated comparatively higher than previous year. It is estimated about 837580 tons during 2012-13. Although a slight decline in production of other resins and gums is observed during the current year.

Lac production in India

On the basis of survey in the markets of different lac producing districts and states, the estimated national production of sticklac during 2012-13 was approximately 19577 tons. Jharkhand state ranks 1st followed by Chhattisgarh, Madhya Pradesh, Maharashtra and West Bengal.

Table 3. Lac production in India during 2012-13*

(in tons)

Sl. No.	Name of the state	Name of lac crop@				Total production
		Baisakhi	*Jethwi*	*Katki*	*Aghani*	
1	Andhra Pradesh	30	2	60	1	93
2	Assam	50	0	80	0	130
3	Chhattisgarh	930	785	575	970	3260
4	Gujarat	15	25	5	10	55
5	Jharkhand	1155	5370	940	3555	11020
6	Madhya Pradesh	2005	45	413	61	2524
7	Maharashtra	605	5	545	0	1155
8	Meghalaya	145	0	5	0	150
9	Odisha	70	70	55	115	310
10	Uttar Pradesh	50	0	50	0	100
11	West Bengal	370	35	310	65	780
	Total	**5425**	**6337**	**3038**	**4777**	**19577**

*@**Baisakhi :** Summer season crop of rangeeni; **Jethwi :** Summer season crop of kusmi; **Katki :** Rainy season crop of rangeeni; **Aghani :** Winter season crop of kusmi; *See Table 27 for details.*

These five states contribute around 96 per cent of the national lac production. Contribution of Jharkhand in national lac production is 56.3 per cent followed by Chhattisgarh (16.7 %), Madhya Pradesh (12.9 %), Maharashtra (5.9 %) and West Bengal (4.0 %). *Jethwi* crop ranked 1st with the contribution of 32.4 per cent followed by *baisakhi* (27.7 %), *aghani* (24.4 %) and *katki* (15.5 %) in total lac production. In the year 2012-13, production of all the crops in comparison to previous year production has been increased and the increase was 13.8, 2.6, 11.0 and 8.6 per cent for *baisakhi, jethwi, katki* and *aghani* crops, respectively. At national level, the production of lac was around 8.2 per cent more than the previous year. Lac production scenario in India and districts producing over 1000 tons of lac during 2012-13 are presented in Table 3 and Table 4, respectively. Share of different crops at national level

and lac production in India during previous five years are presented in Figure 1 and Figure 2, respectively.

Table 4. Districts produced over 1000 tons of lac during 2012-13

Sl. No.	District (state)	Production (tons)	Rank
1	Ranchi (Jharkhand)	4250	1
2	Simdega (Jharkhand)	2720	2
3	Gumla (Jharkhand)	2270	3
4	Seoni (Madhya Pradesh)	1115	4
5	Gondia (Maharashtra)	1000	5

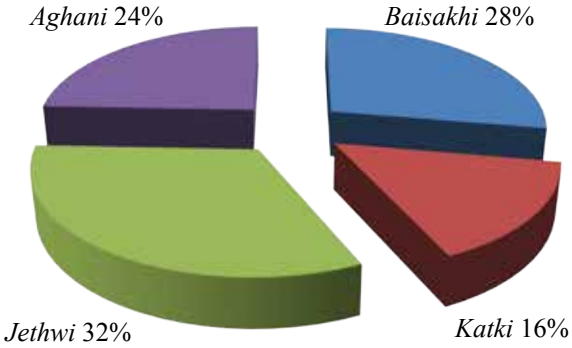

Figure 1.Crop-wise share in total lac production

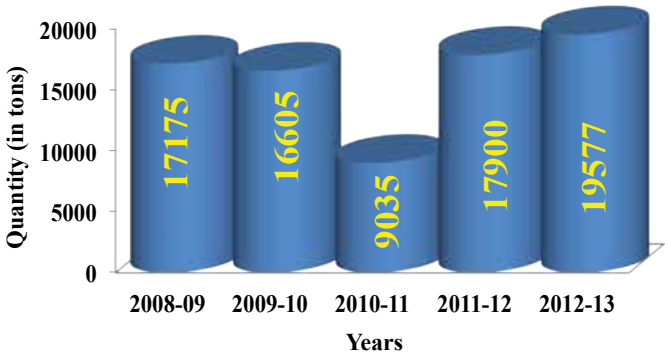

Figure 2. Lac production in India during previous five years

Lac processing in India

On the basis of surveys conducted at different lac processing centers in the country, the total quantity of sticklac processed during 2012-13 was 14594 tons which also included the imported lac in India. A total 150 lac processing units were functional in West Bengal (102), Chhattisgarh (24), Jharkhand (16), Maharashtra (6) and Madhya Pradesh (2) during the year 2012-13. In processing of lac, Chhattisgarh ranked 1st (38.6 %) followed by West Bengal (30.2 %), Jharkhand (24.5%), Maharashtra (6.2%) and Madhya Pradesh (0.6%). Information about share of different states in lac processing and amount of lac processed in India during previous five years are presented in Figure 3 and Figure 4, respectively. Lac processing centers in India and amount of sticklac processed at different lac processing centers in the country during 2012-13 are presented in Table 5 and Table 6, respectively. There were 4 primary and 6 secondary markets existing at national level in which annual arrival of sticklac was more than 500 tons. Name of the primary and secondary markets with annual arrival of over 500 tons and major lac producing districts of India are presented in Table 7 and Table 8.

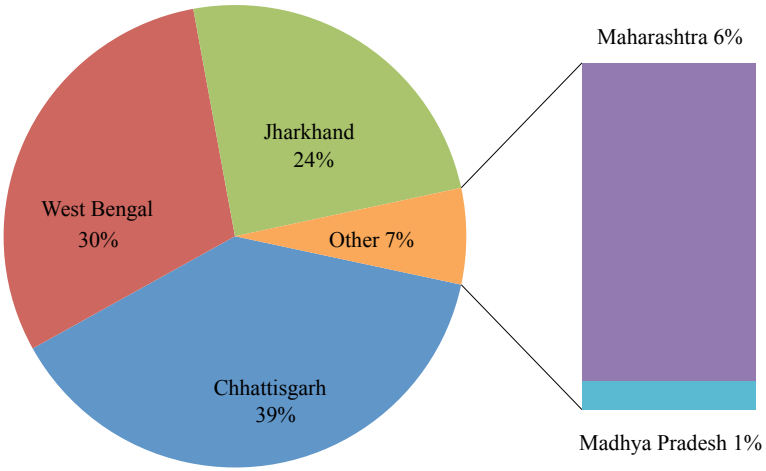

Figure 3. State - wise share in lac processing

Table 5. Major lac processing centers in India

Sl. No.	States	Districts / Centres	No. of processing units	Processed products
1	Chhattisgarh	Bilaspur	2	Seedlac, Button lac
		Dhamtari	9	Seedlac, Button lac, Bleached lac
		Janjgir - Champa (Sakti)	3	Seedlac, Shellac, Bleached lac, Dewaxed shellac, Lac dye
		Kanker	2	Seedlac
		Korba (Kathgora)	6	Seedlac, Shellac, Bleached lac
		Rajnandgaon	1	Seedlac, Shellac
		Raipur	1	Bleached lac, Aleuritic acid
2	Jharkhand	Daltonganj	2	Seedlac
		Ranchi (Khunti, Bundu, Murhu)	10	Seedlac, Button lac, Shellac, Lac dye, Bleached lac
		Simdega	2	Seedlac
		Saraikela-Kharsawan (Chandil)	1	Bleached lac
		West Singhbhum (Chakradharpur)	1	Shellac
3	Madhya Pradesh	Indore	1	Seedlac, Bleached lac
		Hoshangabad (Bankhedi)	1	Seedlac
4	Maharashtra	Gondia	6	Seedlac, Shellac, Gasket shellac compound, Bleached lac
5	West Bengal	Purulia (Balarampur)	70	Seedlac, Shellac, Button lac, Bleached lac, Aleuritic acid, Lac wax, Dewaxed decolourised lac
		Purulia (Jhalda)	3	Seedlac, Shellac, Button lac
		Purulia (Tulin)	29	Seedlac, Button lac
		Total	**150**	

Table 6. Quantity of sticklac processed in India during 2012-13

Sl. No.	States	Districts/ Centres	Quantity processed (tons)	% change over previous year
1	Chhattisgarh	Bilaspur	10	-33.3
		Dhamtari	2400	-4.0
		Janjgir-Champa (Sakti)	490	-2.0
		Kanker	280	-6.7
		Korba (Kathgora)	2400	20.0
		Rajnandgaon	50	-58.3
		Sub total	5630	3.6
2	Jharkhand	Daltonganj	200	-33.3
		Ranchi (Khunti, Bundu)	3000	20.0
		Saraikela-Kharsawan (Chandil)	30	-40.0
		Simdega	340	-32.0
		West Singhbhum (Chakradharpur)	10	-50.0
		Sub total	3580	6.2
3	Madhya Pradesh	Indore	60	-20.0
		Bankhedi	20	-60.0
		Sub total	80	-36.0
4	Maharashtra	Gondia	900	-10.0
5	West Bengal	Purulia (Balarampur)	4184	-26.2
		Purulia (Jhalda)	100	-33.3
		Purulia (Tulin)	120	-14.3
		Sub total	4404	-26.1
		Total	**14594**	**-8.2**

Table 7. Markets with annual arrival of sticklac over 500 tons during 2012-13

Sl. No.	State	Primary markets	Secondary markets
1	Chhattisgarh	Bhaisama Bazar	Dhamtari, Kathgora and Sakti
2	Jharkhand	Bandgaon, Jaldega and Kolebira	Khunti
3	Maharashtra	Barghat region	Gondia
4	West Bengal	Balarampur, Jhalda and Tulin	Balarampur

Sticklac in small quantity or lots is generally sold in the *haats* by the lac growers. Rural markets (*haat*) in remote lac growing areas operate once or twice in a week. Lac growers, after harvesting sticklac sell to *paikars* (primary purchasers). Lac growers, nearer to lac processing units, also sell their produce directly to processing units. The *paikars* after collecting, whatever quantity they could in the course of the market day, sell it to the wholesaler in the same market or nearby manufacturing centers in bigger lots. Simultaneously, the wholesalers sell the produce to manufacturers at different lac processing centers. After processing, lac is sold for internal consumption within the country or exported by lac exporters.

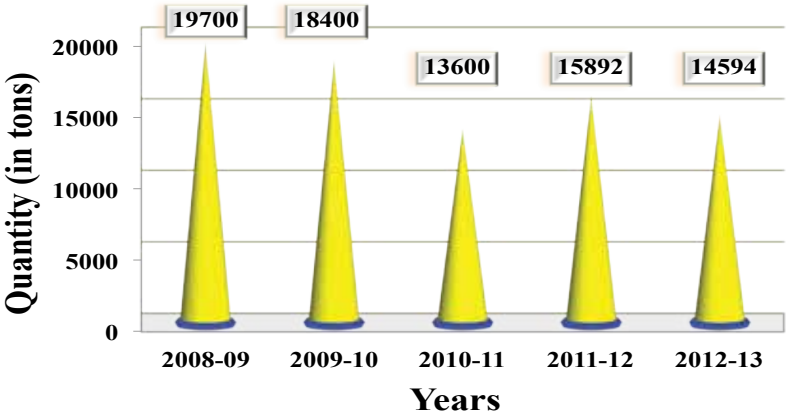

Figure 4. Lac processing in India during previous five years

Table 8. Major lac producing districts in India

Sl. No.	Classification (qty. in tons)	No. of districts	No. of processing centers	Name of the districts
1	Over 1000	3	18	Korba (CG) and Ranchi, Simdega (Jharkhand)
2	500-1000	11	14	Balaghat, Seoni (MP); Gumla, Palamau, West Singhbhum (Jharkhand); Midnapore (WB); Gondia (Maharashtra) and Bilaspur, Kanker, Raipur, Rajnandgaon (CG)
3	250-500	3	2	Daltonganj, Garhwa (Jharkhand) and Mirzapur (UP)
4	100-250	10	114	Bastar, Dhamtari, Janjgir-Champa, Mahasamund, Surguja (CG); Hosangabad, Mandla (MP); Latehar (Jharkhand); Nabarangpur (Odisha) and Purulia (WB)
5	1- 100	21	1	Ambikapur, Durg, (CG); Annuppur, Chhindwada, Dindori, Narshinghpur, Shahdol (MP); Balasore, Koraput, Mayurbhanj (Odisha); Bhandara, Chandrapur, Garhchiroli (Maharashtra); Bokaro, East Singhbhum, Hazaribag, Lohardaga (Jharkhand) and Bankura, Birbhum, Murshidabad, South 24 Pargana (WB)
6	Less than 1	24	1	Other districts in Assam, Andhra Pradesh, Bihar, Chhattisgarh, Gujarat, Jharkhand, Madhya Pradesh, Meghalaya, Odisha, Uttar Pradesh and West Bengal
Total		**72**	**150**	

Export of lac from India

Data on export of lac and its value added products from India were collected from Shellac and Forest Products Export Promotion Council (SHEFEXIL), Kolkata.

Table 9. Export of lac and its value added products from India

Sl. No.	Name of product	Export in 2011-12		Export in 2012-13	
		Quantity (tons)	Value (₹ lakh)	Quantity (tons)	Value (₹ lakh)
1	Shellac	4479.3	21565.5	2865.4	23744.4
2	Aleuritic acid	64.0	1118.1	162.4	10068.1
3	Seedlac	1657.1	7737.2	769.4	8422.5
4	Dewaxed shellac	293.6	2031.1	227.8	3066.5
5	Bleached lac	310.1	2454.5	164.2	2082.0
6	Shellac wax	47.9	290.4	43.2	557.5
7	Kiri lac	0.0	0.0	44.9	52.0
8	Hydrolysed lac	0.0	0.0	78.9	25.2
9	Gasket lac	5.2	7.4	5.2	9.2
10	Lac dye	0.002	0.06	0.01	0.2
	Total	**6857.2**	**35204.3**	**4361.4**	**48027.6**

Total export of lac and its value added products in 2012-13 was 4361.4 tons which was valued ₹480.3 crores. Details of export in quantity and value, list of top 16 countries importing Indian lac and export of lac during previous five years are presented in the Table 9, Table 10 and Table 11, respectively. Trend in export of lac (quantity and value) during previous five years and share of different items of lac export from India are shown in Figure 5 and Figure 6, respectively.

Table 10. Top 16 importing countries of Indian lac during 2012-13

Sl. No.	Country	Quantity		Value	
		(tons)	% Share	(₹ lakh)	% Share
1	Switzerland	128.6	3.0	7913.5	16.5
2	Germany	646.8	14.8	6452.6	13.5
3	Pakistan	699.9	16.1	6387.8	13.3
4	USA	387.1	8.9	4495.1	9.3
5	Jordan	416.3	9.5	4031.8	8.4
6	Egypt	369.2	8.4	3502.7	7.3
7	Bangladesh	761.3	17.4	2532.5	5.3
8	Indonesia	242.3	5.6	2336.4	4.9
9	China	49.6	1.1	2287.0	4.7
10	Italy	222.4	5.1	2107.7	4.4
11	UK	73.5	1.7	872.8	1.8
12	Spain	73.9	1.7	674.0	1.4
13	France	32.4	0.7	442.1	0.9
14	Czech Republic	37.0	0.9	396.1	0.8
15	Iraq	34.0	0.8	391.1	0.8
16	Japan	39.0	0.9	316.1	0.7
17	Others	148.1	3.4	2888.3	6.0
	Total	**4361.4**	**100.0**	**48027.6**	**100.0**

Table 11. Export of lac during XI plan and current year of 2012-13

Sl. No.	Year	Quantity (tons)	Value (₹ lakh)
1	2007-08	7906.3	12426.9
2	2008-09	6968.4	12414.5
3	2009-10	6422.6	11002.3
4	2010-11	6339.1	21112.9
5	2011-12	6858.2	36461.3
6	2012-13	4361.4	48027.6

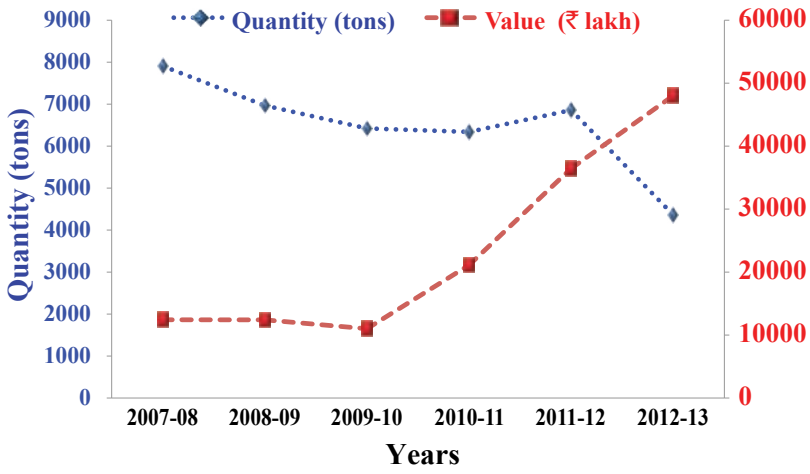

Figure 5. Trends in export of lac based products from India

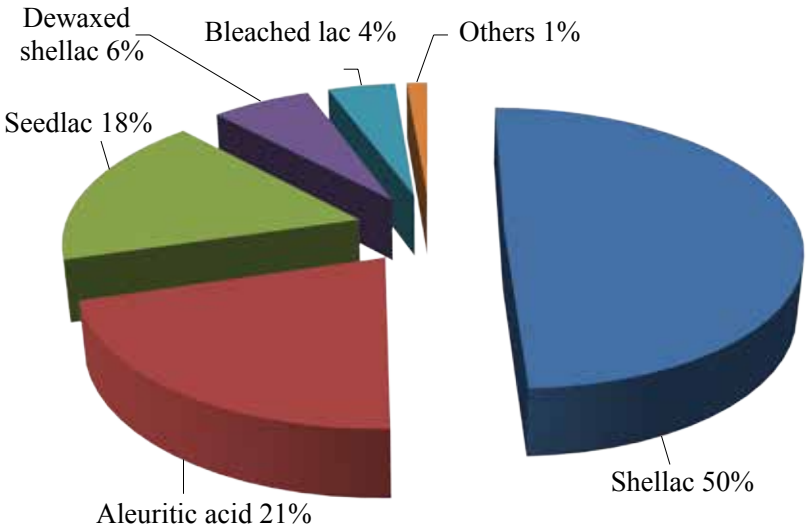

Figure 6. Product-wise export share of the various lac based products (in value)

Price of sticklac and seedlac

Data on prices of *rangeeni* and *kusmi* sticklac and seedlac were collected from the various lac markets on quarterly basis. Trend in movement of lac prices is presented in Figure 7. Prices of *rangeeni* and *kusmi* sticklac as well as seedlac has shown increasing trend from December, 2009 to December, 2012, respectively. Prices incresed sharply during the period, due to external factors like decline in production of lac in other lac producing countries. Consequently, poor import was observed during previous two years. Regular export demand of lac and low carryover stocks from previous years dragged up the price level. Subsequently, harvesting of good lac crop was observed during the previous two years 2011-12 and 2012-13 and crop was supplied to the market. It was observed that prices of sticklac and seedlac started to decline onwards of December, 2012.

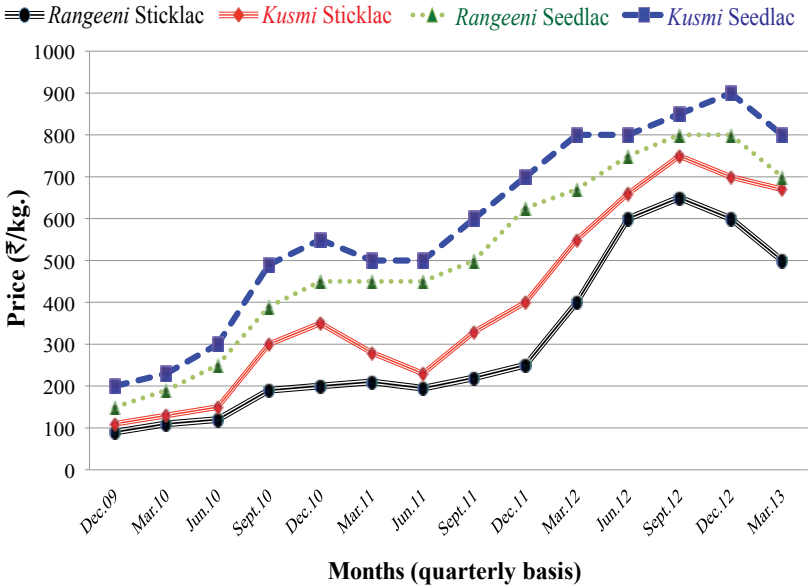

Figure 7. Movement in prices of sticklac and seedlac

Natural resins and gums

NRG production level has been estimated about 837580 tons during 2012-13. The detailed information about state-wise production of *guar* seed, *karaya* gum, *dhawda* gum, *babul* gum, *etc.* is presented below.

Guar gum

Guar gum/split is extracted from *guar* seed which accounts for 30 per cent of whole seed (± 4% variance). The ratio of *churi* and *korma* varies from 30 to 41 per cent depending upon the quality of seed. *Guar* gum is further refined to *guar* powder, while *churi* and *korma* are used as cattle feed. *Guar* seed is drought tolerant *kharif* crop, mostly cultivated in northwestern parts of the country. This crop is a rain-fed crop that requires 3-4 spells and grown well in sandy soil. The crop is grows from July and extends up to August. It is harvested from September to December. Peak arrival of the crop in the market is seen in October to December while lean arrival in the months of January to May. All India area, production and yield of *guar* seed is presented in Table 12. State wise area, production and yield of *guar* seed are illustrated in Table 13, Table 14 and Table 15, respectively. Export of *guar* gum during X and XI plan period is given in Table 16 and its trend over the period is depicted in Figure 8.

Table 12. All India area, production and yield of *guar* seed

(Area- '000 ha, Production- '000 tons, Yield- kg/ha)

Sl. No.	Year	Area	Production	Yield
1	2007-08	3471.6	1787.9	515
2	2008-09	3868.8	1938.3	501
3	2009-10	2995.8	593.2	198
4	2010-11	3388.0	1965.1	580
5	2011-12	3506.7	2258.4	644
6	2012-13	4924.9	2447.7	497

Source: Directorate of Economics and Statistics, MoA, GoI

Table 13. State wise area of *guar* seed

('000 ha)

Sl. No.	State/ Year	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	Average
1	Gujarat	196.0	150.4	132.7	124.6	170.0	170.0	157.3
2	Haryana	340.0	370.0	252.0	256.0	215.0	200.0	272.2
3	Punjab	23.9	27.8	21.8	24.0	25.0	26.0	24.8
4	Rajasthan	2909.7	3318.1	2586.8	2980.9	3094.2	4526.4	3236.0
5	Uttar Pradesh	2.0	2.5	2.5	2.5	2.5	2.5	2.4
6	All India	3471.6	3868.8	2995.8	3388.0	3506.7	4924.9	3692.7

Table 14. State wise production of *guar* seed

('000 tones)

Sl. No.	State/ Year	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	Average
1	Gujarat	130.0	52.7	44.5	73.0	100.0	100.0	83.3
2	Haryana	395.0	602.0	329.0	333.0	290.0	300.0	374.7
3	Punjab	17.4	22.1	16.6	18.0	20.0	22.0	19.3
4	Rajasthan	1243.5	1261.0	201.0	1539.1	1846.4	2023.7	1352.4
5	Uttar Pradesh	2.0	2.1	2.1	2.0	2.0	2.0	2.0
6	All India	1787.9	1939.9	593.2	1965.1	2258.4	2447.7	1831.7

Table 15. State wise yield of *guar* seed

(Kg/ Hectare)

Sl. No.	State/Year	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	Average
1	Gujarat	663	350	337	586	588	588	519
2	Haryana	1162	1627	1305	1301	1349	1500	1374
3	Punjab	745	795	771	750	800	846	785
4	Rajasthan	427	380	78	517	597	447	408
5	Uttar Pradesh	1000	840	835	800	800	800	846
6	All India	515	501	198	580	644	497	489

Source: Directorate of Economics and Statistics, MoA, GoI

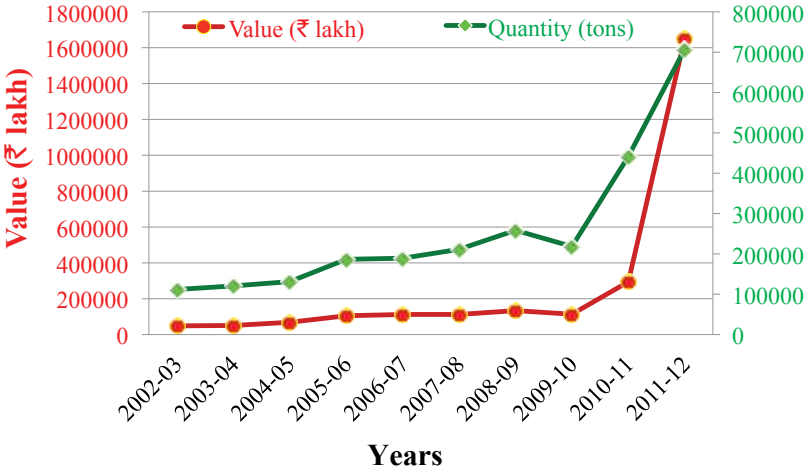

Figure 8. Trends in export of guar gum from India

Table 16. Export of *guar* gum during X and XI plan period

Sl. No.	Year	Quantity (tons)	Value (₹ lakh)
1	2002-03	111832	48612
2	2003-04	120561	50788
3	2004-05	131303	68946
4	2005-06	186720	104924
5	2006-07	189311	112576
6	2007-08	211167	112572
7	2008-09	258567	133901
8	2009-10	218480	113331
9	2010-11	441608	293870
10	2011-12	707326	1652387

Source : Directorate of Economics and Statistics, MoA, GoI

Major destinations

Guar gum is exported across the globe in 124 countries. About 84 per cent was exported (quantity) to top 10 countries and rest 16 per cent is exported to 114 countries (Figure 9). Other countries are U K, Canada, Phillipnes, Indonesia, Brazil, Vietnam Soc Rep, Egypt, A Republic, Poland, Belgium, Iran, Thailand, France, Japan, Denmark, Mexico, Greece, Korea Republic, Spain, UAE, Pakistan, *etc.* Agricultural exports increased from ₹ 86000 crore in 2011-12 to ₹ 107000 crore in 2012-13 registering a growth of nearly 24 per cent. Increase in value of agricultural exports during 2012-13 was primarily on account of higher exports of *guar* gum, basmati and non-basmati rice, meat and meat preparations. Share of agricultural exports in the total exports increased from 10.5 per cent in 2010-11 to 12.8 per cent in 2011-12 (Annual Report 2012-13, Department of Agricultural and Cooperation, Ministry of Agriculture, GOI). *Guar* gum has been the topmost export commodity in agri-export during previous two years.

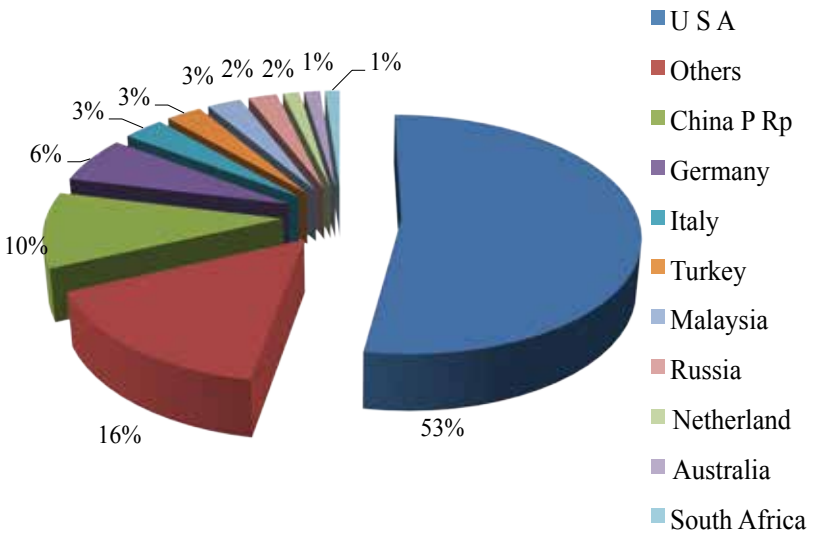

Figure 9. Destination-wise share of the guar gum exported from India

India's top 5 agricultural export commodities in terms of quantity and value for the years 2011-12 and 2012-13 are given in the Table 17.

Table 17. Top agri-export commodities during previous two years

Sl. No.	Particulars	Export Value (₹ lakh)		% share in total agri export	
		2011-12	2012-13	2011-12	2012-13
1	*Guar* Gum	1652386.7	1962457.9	19.2	18.2
2	Basmati Rice	1544959.6	1686063.2	18.0	15.7
3	Buffalo Meat	1372523.0	1566200.2	15.9	14.6
4	Non Basmati Rice	865912.6	1309309.1	10.0	12.2
5	Other Cereals	549292.4	0.0	6.4	0.0
6	Wheat	0.0	919047.2	0.0	8.5
Total (Sl. No.1-6)		**5985074.3**	**7443077.6**	**69.5**	**69.2**
Total agri-export (All items)		**8601893.7**	**10763713.1**	**100.0**	**100.0**

Source: DGCIS, Kolkata and APEDA Annual Report.

Gums production in Andhra Pradesh

Gum *karaya* (*S. urens*), Gum *kondagogu* (*C. religiosum*), Gum *olibanum/salai* (*B. serrata*), Gum *thiruman/dhawada/ghatti* (*A. latifolia*) and Gum *dikamali* (*Gardenia gummifera*) are produced in the state. Total production of all gums in the state is around 127 tons during 2012-13 (Table 18). Gum tapping is mainly done in the schedule areas where tribal populations exist. Gums producing districts and areas are presented in Table 19.

Table 18. Production of gums in Andhra Pradesh during previous five years

(in tons)

Sl. No.	Year/ Gums	*Karaya*	*Kondagogu*	*Olibanum*	*Thiruman*	Total production
1	2008-09	237.6	14.9	7.9	0.6	**261.0**
2	2009-10	196.5	9.3	4.2	0.3	**210.3**
3	2010-11	115.1	2.1	4.4	0.8	**122.4**
4	2011-12	182.1	2.5	5.0	0.5	**190.1**
5	2012-13	117.9	3.0	5.5	0.6	**127.0**

Collection rate for *karaya* gum ranged from ₹ 20000, ₹ 15000 and ₹ 10000 per quintal for grade I, II and III, respectively. Overall price of the *karaya* gum was observed ₹ 12500 per quintal (qt) during 2012-13.

Table 19. Gums producing districts and areas

Sl. No.	Districts	Areas
1	Adilabad	Jannaram, Kamma Reddy, SK Nagar and Utnoor
2	Chittur	Chittur, Kaddapa and Nellore
3	East Godavari	Addategella, Maredumilli, Rajavomma Kangi and Rampachodavaram
4	Khammam	Bhadrachalam, Chintoor, Dammapeta and Kukunaru
5	Mahboobnagar	Mannanoele, Nanjaria and Pedadornala
6	Srikakulam	Pathpattanam and Setampeda
7	Visakhapatnam	Arku, Chintapalli, GKVidhi, G.Murugala, Kashipatnam, Koyuru, Munchingput, Paderu and Petabayallu
8	Vizianagram	Gummalaxmipuram, Parvatipuram and Salur
9	Warangal	Etrunagram, Mulug and Narshimhpeda
10	West Godavari	AR Puram

Gums production in Chhattisgarh

Annual production of gums varies much from year to year. Information has been collected from Chhattisgarh Minor Forest Product Federation Ltd., Raipur, Chhattisgarh. Four major gums namely *karaya/kullu* gum (*S. urens*) Grade-I and Grade-II, *dhawada* gum (*A. latifolia*), *babool* gum (*A. indica*) and *khair* gum (*A. catechu*) are categorized under nationalized gums in the state. Other important gums of the state are *saja* (*Terminalia tomentosa*), *char, tanwar, dikamali* (*G. gummifera*), *bahera* (*Terminelia belerica*) and *jhingan* (*Lavea grantis*) and these gums are categorised under non-nationalized forest produces. Major gum producing forest divisions in the state are Bilaspur (Mugeli, Dindori, Ratanpur, Takhatpur and Lormi), Raipur, East Surguja (Balarampur), Marvahi (Kota), South Surguja, Raigarh (Khamariya,

Milupara, Dharmajaygarh and Manendragarh) Rajnandgaon, Mahasamund, Dhamtari, Korea, Sukma, Bijapur, Dantewada and West Bhanupratapur. Total production of all gums in the state was around 90.4 tons during 2012-13 (Table 20). Collection of *Kullu* gum is prohibited in the state except in Bastar, Kanker and Jagdalpur districts. The entire area of collection is divided into different units. These units are sold in advance through tenders and auctions by MFP Federation, Raipur to facilitate the collection of gums. Gum purchasers are required to deposit the 10 per cent of the sale value, calculated on the basis of notified quantity in the tender notice, as security deposit. Collection charges to the collectors at collection centres are paid by purchasers at the rate fixed by the government. Collection rate for *kullu* gum was ₹ 150 to 270 per kg for grade I and grade II, respectively; for *dhawada* ₹ 5000-7000 per qt and for *jhingan*, *khair* and *babool* ₹ 1740 to 4000 per qt in 2012-13. Overall, procurement price of *karaya* gum was observed ₹ 20250 per qt during 2012-13 which was highest among all the gum producing states in India. After making the payment of the collection charges to the collectors and the difference amount of sale rate and collection rate in the District Union, the purchasers are allowed to transport the collected gums wherever they desire.

Table 20. Collection of nationalized gums in Chhattisgarh during previous five years

(in tons)

Sl. No.	Year/ Gums	*Karaya*	Others*	Total production
1	2008-09	86.4	56.0	142.4
2	2009-10	175.0	61.9	236.9
3	2010-11	76.0	95.5	171.5
4	2011-12	14.5	51.0	65.5
5	2012-13	19.9	70.5	90.4

**Dhawda, Khair and Babool gums*

Gums production in Gujarat

Information on gums production in Gujarat was collected form Gujarat State Forest Development Corporation Limited (GSFDCL), Vadodara. *Salai* gum (*B. serrata*), *prosopis* gum (*P. julifiora*), *khair* gum (*A. catechu*), *dhawada* gum (*A. latifolia*), *babul* gum (*A. arabica*), *karaya* gum (*S. urens*) and *guggul* gum (*C. wightii/mukul*) are produced in the state. All gums are nationalized items in the state. Procurement and sale of all gums is done by the GSFDCL. Total production of all gums in the state was around 42.6 tons during 2012-2013. Production of gums in Gujarat and gums producing districts is presented in Table 21 and Table 22, respectively. Procurement price of *karaya* gum ranged from ₹156 per kg for Grade-I and ₹101 per kg for Grade-II in the state.

Table 21. Production of gums in Gujarat during previous five years

(in tons)

Sl. No.	Year	*Salai* gum	*Guggul* gum	*Babul* gum	*Dhawada* gum	*Karaya* gum	*Khair* gum	*Prosopis* gum	Total production
1	2008-09	10.2	9.9	2.1	0.2	0.1	1.2	4.3	**28.0**
2	2009-10	26.7	6.4	2.7	0.5	0.1	0.7	10.1	**47.2**
3	2010-11	13.3	2.9	5.6	0.3	0.1	0.03	5.7	**27.9**
4	2011-12	20.3	3.3	2.3	2.3	0.0	0.5	4.7	**33.4**
5	2012-13	29.3	1.6	3.7	1.3	0.0	0.7	6.0	**42.6**

Retail packing price of the *guggul* gum, *babul* gum (*A. arabica*) and *salai dhoop* (*B. serrata*) was observed as ₹1000 per kg; ₹170 per kg and ₹250 per kg, respectively. Supply network of the various value added products is spread across the cities of Vadodara, Ahemdabad, Gandhinagar, Junagadh, Jamnagar, Rajkot and Ambaji.

Table 22. Gum producing districts and areas

Sl. No.	Districts	Areas
1	Balsar	Dharampur, Malanpada and Pangarbari
2	Banskantha	Ambaji, Pata and Virampur
3	Bharuch	Jaghadiya and Jankhawav
4	Dahod	Baria and Sagtala
5	Dang	Ahwa and Waghai
6	Kuchachh	Bhachau, Bhirandiyara, Bhuj, Dwarika, Mandvi, Nakhatrana and Rapar
7	Narmada	Dediapada, Mandvi and Rajpipla
8	Navsari	Ankalachh, Bansda and Chikhali
9	Panchmahal	Dakor, Ghoghamba, Nadiad and Santrampur
10	Sabarkantha	Bhiloda, Choriwada Modasa and Posina
11	Vadodara	Chhota Udepur, Devhant, Jambaguda, Jatpurpavi, Kawant, Tejgadh and Zoz

Gums production in Jharkhand

Data and information was collected from survey in different districts of Jharkhand related to gums production. Gums produced in the state are *karaya* (*S. urens*), *dhawada* (*A. latifolia*), *babool* (*A. nilotica*), *jhingan* (*L. grantis*), *palas* (*B. monosperma*), *salai* gum (*B. serrata*) and *char* (*B. lanzan spreng*). The major gum producing districts and areas are Latehar (Garu, Mahuadar, Herhanj, Balumath, Barwadih, Lesliganj, Chhipadohar and Richughutu), Chatra (Lawalang, Pratappur and Kanti), Garhwa (Ramkanda and Bhandaria), Daltonganj (Panki and Chhatarpur) and West Singhbhum (Chakradharpur). Average annual production of all gums in the state is 300 tons. Data of previous two years collection of *karaya* gum is given in the Table 23.

Table 23. *Karaya* gum collection in Jharkhand during previous two years

Sl. No.	Year	Quantity (tons)	Sale price (₹ lakh)	Sale price (₹/kg)@
1	2011-12	49.4	22.1	45.0
2	2012-13	51.5	25.0	50.0

@ Figures are rounded off the nearest five

Gums production in Madhya Pradesh

Karaya gum (*S. urens*), *salai* (*B. serrata*), *dhawada* (*A. latifoia*), *khair* (*A. catechu*) and *babool* (*A. nilotica*) are economically important gums and extracted in Madhya Pradesh. These gums come under the category of nationalized Non Wood Forest Products (NWFPs). Extraction of these gums was carried out through Primary Forest Produce Cooperative Societies and the District Unions. However, all gums except *Karaya* gum have been taken out of the list of specified produce in 2003. In Madhya Pradesh, these trees were being destroyed due to deep tapping injury. Therefore, the State Government had banned extraction of gums in early 80's. This ban was lifted in 1995 and controlled extraction was permitted in identified districts.

The collected quantity is sold through open tenders/auctions either in advance or after storage. Extraction of *karaya* gum is done through Primary Forest Produce Cooperative Societies and the District Unions. Data of previous 5 years in respect of *karaya* gum is presented in Table 24.

Table 24. *Karaya* gum collection in Madhya Pradesh during previous five years

Sl.No.	Year	Quantity (tons)	Sale price (₹ lakh)	Sale price (₹/kg)@
1	2008-09	21.9	22.9	100.0
2	2009-10	8.7	8.7	100.0
3	2010-11	6.5	6.5	100.0
4	2011-12	12.2	14.6	120.0
5	2012-13	8.2	10.2	125.0

@ Figures are rounded off the nearest five

Karaya, dhawada, khair, babul, salai gums were notified in Madhya Pradesh state as "specified forest produce" under the M.P *Van Upaj* (*Vyapar Viniyaman*) Act, 1969 and only the State Government or an agent appointed by the State Government could collect these gums. In 1997, the State Government lifted the ban on extraction of *salai* gum in Gwalior, Shivpuri, Ujjain and Khandwa forest circles. It was also permitted in *Narmada Sarovar* submergence areas of Badwani and Jhabua forest divisions. *Dhawada, babul* and *khair* gums are grouped together as Class-II gums to distinguish them from *karaya* and *salai* gums. These gums have been taken out of the list of specified produce in June 2003. Federation had carried out trade of the specified gums as an agent of the State Government, through Primary Forest Produce Cooperative Societies till 2002-03.

Survey has been conducted in Seoni, Mandla and Balaghat districts of Madhya Pradesh. *Dhawada* (*A. latifolia*), *karaya/kullu* (*S. urens*) and *saja* (*T. tomentosa*) are the gums produced in the Seoni (Bhimgarh, Chhopara, Dhuma), Mandla (Pindarai, Bamhani, Mohgaon, Lingapondi, Bichhia, Chabbi), Balaghat (Kochewahi, Baihar, Lamta, Langi, Paraswada), Chhindawada (Amarwada, Damua, Patalkot), Betul (Savani) and Hosangabad (Pipariya) districts. Average annual production of all the gums in the above mentioned areas are around 250 tons. Average price of *dhawada* and *saja* gum prevailing in the market were about ₹ 150 per kg.

Gums production in Maharashtra

Data and informations were collected from survey in different districts of Maharashtra related to gums production. *Dhawada* (*A. latifolia*), gum *karaya/kullu* (*S. urens*), *jhingan* (*L. grantis*), *babool* (*A. nilotica*) and *khair* (*A. catechu*) are the gums produced in Maharashtra. The major gum producing districts and areas are Gondia (Salekasha, Amgaon, Goregaon, Dhapewada, Tiroda and Navegaon Bandh), Garhchiroli (Armon, Wadsa and Desaiganj), Chandrapur (Mul) and Wardha (Dhagabhawan, Navargaon, Hingni, Bordhara, Sellu and Karanja range). *Karaya* gum collection in Maharashtra during previous two years is presented in Table 25. Annual production of various gums in the above mentioned districts is around 200 tons.

Table 25. *Karaya* gum collection in Maharashtra during previous two years

Sl. No.	Year	Quantity (tons)	Sale price (₹ lakh)	Sale price (₹/kg)@
1	2011-12	23.2	10.4	45.0
2	2012-13	9.7	4.4	45.0

@ Figures are rounded the nearest five

Pine resin production

Pine resin is secretion of coniferous trees. These are valued for their chemical properties and associated uses, such as in the production of varnishes, adhesives and food glazing agents. Extensive *chir* pine forests are found in the Himalayas between an elevation of 1000 to 1900 m. *Chir* pine yields commercially important oleo-resin which forms the raw material for rosin and turpentine oil industry in India. *Chir* pine is widely tapped for resin on commercial basis, particularly in the hills of Himachal Pradesh, Uttarakhand, Jammu and Kashmir and Arunachal Pradesh. Major share of resin production comes from Himachal Pradesh and Uttarakhand. Production of resin in those states during the year 2012-13 is observed about 8000 tons. Resin production in both of the states during previous five years is presented in the Figure 10.

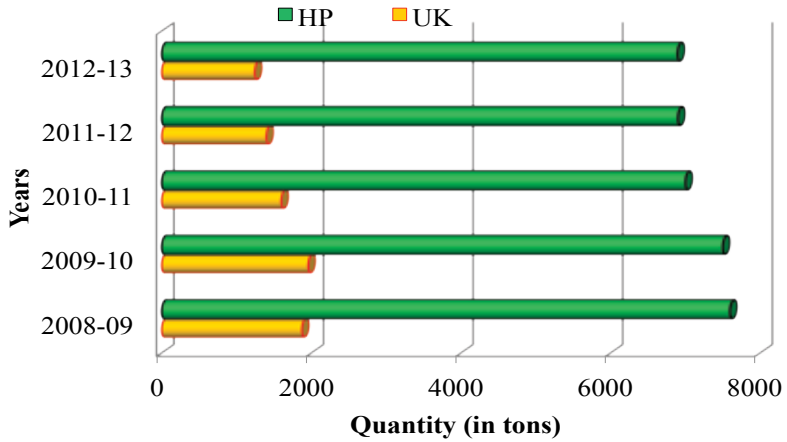

Figure 10. Resin production in Himachal Pradesh (HP) and Uttarakhand (UK) during previous five years

Export and import of natural resins and gums

Data on export and import of natural resins, gums and gum-resins were collected from Directorate General of Commercial Intelligence and Statistics, Kolkata. Total export of natural resins, gums and gum-resins during the year 2012-13 was 340384.6 tons valued ₹ 21761.2 crores and total import was 89746.6 tons valued ₹ 785.3 crores. Details of export and import of natural resins, gums and gum-resins is presented in the Table 26. Trend in export of natural resins and gums from India and import in India during previous five years is illustrated in Figure 11 and Figure 12, respectively.

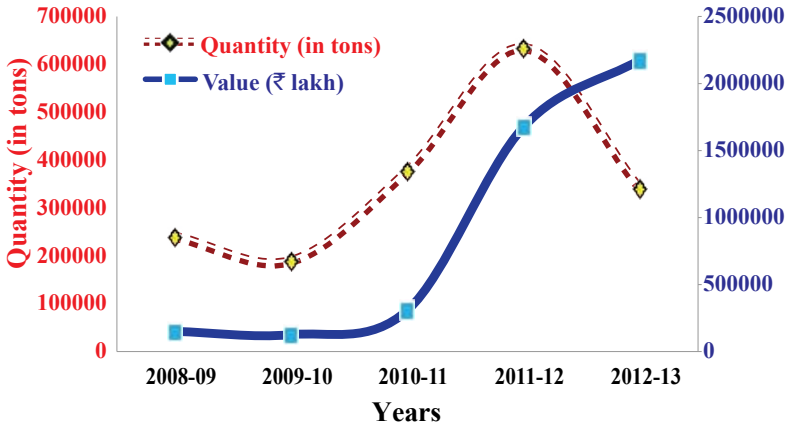

Figure 11. Trends in export of natural resins and gums from India during previous five years

Major exported items from India are lac, *guar* gum, *karaya* gum, asafoetida and major imported items are lac, rosins, gum *arabic* and asafoetida. Majority of farmers/collectors engaged in resins and gums tapping are landless, small and marginal, using traditional practice of resins and gums tapping. In the context of the increasing national and global demand for natural and eco-friendly products, the demand for natural resins and gums are also showing an increasing trend over the time.

Table 26. Export and import of natural resins, gums and gum-resins

Sl. No.	Name of product	Export 2012-13		Import 2012-13	
		Quantity (tons)	Value (₹ lakh)	Quantity (tons)	Value (₹ lakh)
A. Natural Resins					
1	Copal	0.0	0.0	2009.0	673.3
2	Dammar Batu	20.4	11.0	14080.5	3891.9
3	Gum Rosin	51.5	41.6	47347.3	38271.0
4	Lac	4361.3	48027.6	0.0	0.0
5	Mastic Gum	9.0	3.4	0.0	0.0
6	Other Resins	236.9	1288.6	608.5	634.3
	Total	**4679.1**	**49372.2**	**64045.3**	**43470.5**
B. Gums					
1	African Gum	0.1	0.2	0.0	0.0
2	Asian Gum	633.5	3380.0	11.0	4.6
3	Gum *Arabic*	237.1	457.8	22892.1	8118.3
4	*Guar* Gum Refined Split	70515.2	339053.8	311.0	1955.6
5	*Guar* Gum Treated and Pulverized	260982.3	1775618.6	149.4	618.1
6	*Karaya* Gum (Indian *Tragacanth*)	576.4	2220.8	71.9	197.9
7	*Tragacanth* (Adracanth)	4.7	6.5	2.1	4.0
8	*Xanthum* Gum	0.5	2.5	498.0	922.5
9	Other Natural Gums	971.1	2347.4	338.2	505.9
	Total	**333920.9**	**2123087.6**	**24273.7**	**12326.9**
C. Gum Resins					
1	Asafoetida	1584.5	2928.7	940.4	22146.4
2	Myrrh	1.7	6.3	26.7	38.2
3	Olibanum or Frankincence	104.9	119.2	44.5	31.8
4	Other Gum Resins	93.5	604.8	416.0	521.1
	Total	**1784.6**	**3659.0**	**1427.6**	**22737.5**
	Grand Total	**340384.6**	**2176118.8**	**89746.6**	**78534.9**

Source: DGCIS, SHEFEXIL & APEDA Annual Reports

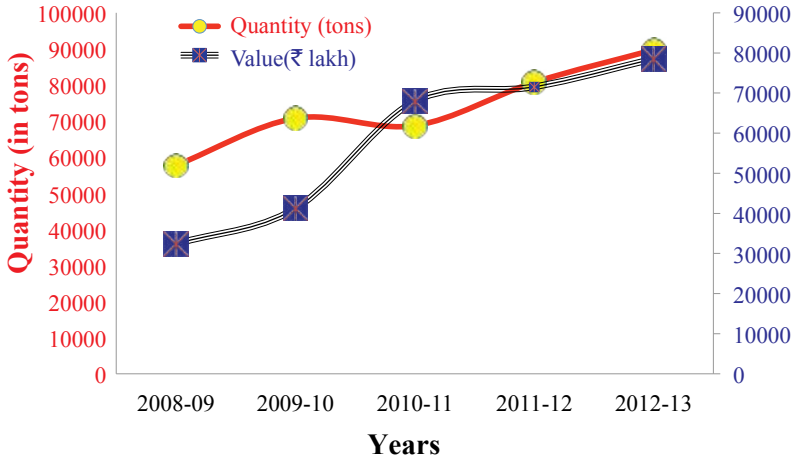

Figure 12. Trends in import of natural resins and gums in India during previous five years

Overall production of the lac in the country is estimated 19577 tons which is higher than the previous year production of 17900 tons. However, lac production is shown a decline in Andhra Pradesh, Uttar Pradesh, Odisha and West Bengal. During current year 2012-13, lac production tends to the level of the bumper production over the previous 32 years. It is interesting to mention that the production level of lac had increased from the lowest level of 9035 tons during 2010-11 to 17900 tons (about 100 % increase) during 2011-12 and it was recorded about 19577 tons during the first year of XII plan (2012-13 to 2016-17). District wise lac production statistics and major lac producing areas in the country are presented in Table 27 and Table 28, respectively.

Proper attention and action for intensification of effort for increasing natural resins and gums production, exploitation of untapped potential area, quality consciousness, more research support for product development will definitely improve the socio-economic condition of natural resins and gums tappers/collectors/ processors and export earning of the country.

Table 27. Lac production scenario in India during 2012-13

(in tons)

Sl. No.	Name of states / districts	Name of lac crops				Total production
		Baisakhi	*Jethwi*	*Katki*	*Aghani*	
I	**Andhra Pradesh**	**30**	**2**	**60**	**1**	**93**
II	**Assam**	**50**	**0**	**80**	**0**	**130**
III	**Chhattisgarh**					
1	Bastar	25	40	10	50	125
2	Bilaspur	100	20	60	50	230
3	Dhamtari	30	30	15	15	90
4	Durg	20	0	15	0	35
5	Janjgir-Champa	60	25	15	20	120
6	Kanker	50	285	60	360	755
7	Korba	310	215	170	300	995
8	Mahasamund	50	5	60	5	120
9	Raipur	30	100	20	100	250
10	Rajnandgaon	105	20	50	20	195
11	Surguja	100	0	50	0	150
12	Others	50	45	50	50	195
	Total	**930**	**785**	**575**	**970**	**3260**
IV	**Gujarat**	**15**	**25**	**5**	**10**	**55**
V	**Jharkhand**					
13	Garhwa	20	0	40	0	60
14	Gumla	40	1200	30	1000	2270

Sl. No.	Name of states / districts	Name of lac crops				Total production
		Baisakhi	*Jethwi*	*Katki*	*Aghani*	
15	Latehar	15	20	20	15	70
16	Palamau	50	0	150	10	210
17	Ranchi	650	2150	430	1020	4250
18	Simdega	40	1480	100	1100	2720
19	West Singhbhum	160	400	50	300	910
20	Others	180	120	120	110	530
	Total	**1155**	**5370**	**940**	**3555**	**11020**
VI	**Madhya Pradesh**					
21	Annuppur and Shahdol	10	3	8	1	22
22	Balaghat	710	5	150	5	870
23	Chhindwada	10	5	5	5	25
24	Dindori	35	5	5	5	50
25	Hosangabad	30	10	5	10	55
26	Mandla	190	5	35	10	240
27	Narshinghpur	20	2	5	5	32
28	Seoni	950	5	150	10	1115
29	Others	50	5	50	10	115
	Total	**2005**	**45**	**413**	**61**	**2524**
VII	**Maharashtra**					
30	Bhandara	25	0	10	0	35
31	Chandrapur	30	0	10	0	40

Sl. No.	Name of states / districts	Name of lac crops				Total production
		Baisakhi	*Jethwi*	*Katki*	*Aghani*	
32	Garhchiroli	50	5	25	0	80
33	Gondia	500	0	500	0	1000
	Total	**605**	**5**	**545**	**0**	**1155**
VIII	**Meghalaya (Garo hills)**	**145**	**0**	**5**	**0**	**150**
IX	**Odisha**					
34	Balasore	20	1	20	5	46
35	Koraput	15	1	10	5	31
36	Mayurbhanj	5	1	5	5	16
37	Nabarangpur	10	15	10	35	70
38	Sundergarh	0	40	0	40	80
39	Keonjhar	0	2	0	10	12
40	Others	20	10	10	15	55
	Total	**70**	**70**	**55**	**115**	**310**
X	**Uttar Pradesh**	**50**	**0**	**50**	**0**	**100**
XI	**West Bengal**					
41	Bankura	20	0	20	0	40
42	Midnapur	300	0	250	0	550
43	Purulia	40	25	20	50	135
44	Others	10	10	20	15	55
	Total	**370**	**35**	**310**	**65**	**780**
	Grand Total	**5425**	**6337**	**3038**	**4777**	**19577**

Table 28. Lac producing areas in the country

Sl. No.	Name of state/ district	Major lac producing areas
I	**Andhra Pradesh**	
1	Adilabad	Utnoor
2	Vishakhapatnam	Paderu
II	**Assam**	
3	Kamrup	Boko
4	Karbi-Anglong	Amtreng, Baithalangsu
5	Marigaon	Nellei
6	Nagaon	Amsoi, Hojai
III	**Bihar**	
7	Gaya	Raniganj
8	Jehanabad	Malichak
IV	**Chhattisgarh**	
9	Balrampur	Chando, Dharmi, Wandrafnagar
10	Bastar	Keshkal
11	Bilaspur	Gaurella, Kota, Lorami, Pendra
12	Dhamtari	Gatta Silli, Nagri, Sihawa
13	Durg	Balod, Daudi, Dondi-Lohara, Kusumkasa
14	Gariyaband	Amlipadar, Chhaila, Chhura Gariyaband, Indagaon, Mainpur, Udanti
15	Janjgir-Champa	Sakti, Saragaon
16	Kanker	Antagarh, Bhanupratapur, Biragaon, Kondagaon, Korar, Narharpur, Sambalpur

Sl. No.	Name of state/ district	Major lac producing areas
17	Korba	Bhaisama Bazar, Chaitama, Chhuri, Haldi Bazar, Kartala, Katghora, Korbi, Madanpur, Pali, Pasan, Pasarkhet
18	Korea	Bhartarpur, Kusmi
19	Mahasamund	Bagbahara, Basana, Khalari, Mahasamund, Pithora, Tendukona
20	Narayanpur	Narainpur
21	Raigarh	Dharmjaigarh, Lailunga, Pathalgaon, Tamnar
22	Raipur	Abhanpur
23	Rajnandgaon	Aawadhi, Bharitola, Khardi, Manpur, Mohala-chowki
24	Sarguja	Chalgi, Mainpat, Pasta, Pratappur, Premnagar, Raghunathnagar, Ramanujganj,
V	**Gujarat**	
25	Panchamahal	Dakor, Godhara, Ghoghamba, Nadiad and Santrampur
26	Vadodara	Chhota Udepur, Devhant, Jambaguda, Jatpurpavi, Jhonjh, Kawant, Keori, Kundal Ghata, Tejgadh, Zoz
VI	**Jharkhand**	
27	Chatra	Tandwa
28	Garhwa	Bargarh, Garhwa, Godarmana, Rakshi, Ramganga, Ramkonda, Ranka
29	Gumla	Chainpur, Dumari, Kanshir, Palkot, Patratoli, Raidih
30	Khunti	Murhu, Soeko Torpa, Karra, Rania,Tapkara
31	Latehar	Balumath, Barwadih, Brahmani, Chandwa, Garu Latehar, Manika, Sarju, Satbarwa

Sl. No.	Name of state/ district	Major lac producing areas
32	Palamu	Matalong, Panki, Raj Chaipur,
33	Ranchi	Angara, Banta, Birbanki, Bundu, Jonha, Namkum, Ormanjhi, Silli, Maranghada, Sonahatu, Tamar
34	Simdega	Bano, Hating Hode, Jaldega, Kolebira, Lachragarh
35	West Singhbhum	Anandpur, Bandgaon, Baskata, Chaibasa, Chakradharpur, Goelkera, Lodai, Manoharpur, Sonuwa, Toklo
VII	**Madhya Pradesh**	
36	Anuppur	Jaitahari, Keshwahi, Kotma, Venkatnagar
37	Balaghat	Baihar, Katangi, Lalbarra, Lamta, Langi, Parashwada, Waraseoni
38	Chhindawada	Damoa
39	Dindori	Bazak, Bhanupur, Karanjia, Ramnagar, Rampur
40	Hosangabad	Bankhedi, Babai, Daggrai, Darawpadaw, Hapa, Jonahata, Kekra, Lokamti, Pipariya
41	Mandla	Bichhia, Chabbi, Ghughari, Kalpi, Mahegaon, Mavai, Nainpur, Narainganj, Navas-Bablia
42	Narshinghpur	Chichli, Godarwara, Kalakhar, Kalyanpur, Nayakheda, Salechauka
43	Seoni	Barghat, Ghansore, Kahani, Kanewara, Keolari, Khamaria, Khari
44	Shahdol	Burhar, Jaitpur, Sohagpur
VIII	**Maharashtra**	
45	Bhandara	Gobarwahi, Nakadongri

Sl. No.	Name of state/ district	Major lac producing areas
46	Chandrapur	Bandh, Navargaon
47	Garhchiroli	Allapalli, Bamragarh
48	Gondia	Amgaon, Chopa, Goregaon, Hirapur, Kampta, Kati, Kotjamura, Kurodhi, Salekasa, Tiroda
IX	**Meghalaya**	
49	Garo Hills	Damra, Dodno, Nongpoh, Tura
X	**Odisha**	
50	Balasore	Haldipada, Jaleshwar, Nilagiri
51	Keonjhar	Telkoi
52	Koraput	Ramgiri
53	Mayurbhanj	Jashipur, Kaptipada, Karanjia, Kusumi, Padampokhari, Sarat, Thakurmunda, Udala,
54	Nabarangpur	Chandahandi, Raighar
55	Sundergarh	Khandadhar, Kutra, Rajgangpur
XI	**Uttar Pradesh**	
56	Sonbhadra	Doodhi
57	Allahabad	Koraon, Meja
XII	**West Bengal**	
58	Bankura	Idpur, Khatra, Raipur, Ranibandh
59	Midnapur	Katai, Kuti, Moyna, Panskurah, Ramnagar, Tamluk
60	Purulia	Ayodhya Pahar, Bagh Mandi, Balarampur, Jhalda, Kashipur, Kutidih, Raghunathpur, Tulin

NOTE

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