

## Production, export and import of natural resins and gums in India

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The forestry sector supports about 50 million population inhabiting forests and sub-forest areas and 70% of employment in the sector is in minor forest produce. It is an admitted fact that neither the forests nor the tribals and poor inhabiting should be removed for environmental protection. The only approach appears to be developing minor forest products like natural resins and gums based economic activities in these areas to uplift the poor and maintain required forest cover or vegetation.



Gums and resins are low volume – high value produce. These are an important Non Timber Forest Products (NTFPs) and therefore important source of livelihood for those living in forest and sub-forest areas. Majority of NTFPs are available only for short period (around three months) while resins and gums, which can be harvested around six to twelve months in a year, provides a steady source of income to the dependents. India is among the leading producers of gums and resins, harvesting about 2.80 lakh tons of these valuable natural products. Of these, about 80 per cent are gums, 19 per cent are resins and a small fraction is of gum-resins. India is traditionally the largest producer of Lac, *Guar* gum and *Karaya* gum. In recent years, due to ‘back to the nature’ trend there has been a revival of interest in natural resins and gums extracted from forests by rural and tribal people who depend on these resources to sustain their livelihood. The natural gums are non-toxic, biodegradable and eco-friendly.

Natural resins are solid or semi-solid materials, usually a complex mixture of organic compounds called *terpenes*, which are insoluble in water but soluble in certain organic solvents. With the exception of Lac (insect origin) all other natural resins are of plant origin. Gums are polymeric material that can be dissolved or dispersed in water to give a thickening and gelling effect. Important gum yielding trees are *Babul*, *Khair*, *Kullu*, *Dhawada*. Guar gum is a

seed based natural gum. Gum-resins are natural mixtures of gums and resins in variable proportions, therefore they possess properties of both the groups. They contain traces of essential oils, and are partly soluble in water. They have a penetrating and characteristic odour and taste. The important gum-resins are Asafoetida, Myrrh, Guggul, Olibanum. Resins are largely used in surface coating formulations for several applications like wood furniture varnishes, paints, lacquers, food and pharmaceuticals, adhesives, insulations, cosmetics, handicrafts, jewelry etc. The gums and gum-resins are mostly used in food (thickening agents, stabilizers, emulsifiers), pharmaceuticals, cosmetics, textiles, chemical industries. In several application areas there are no substitute for these natural products while some synthetic alternatives are available and used.

### State-wise production of natural resins and gums in India:

#### Production of tree based gums:

##### **Chhattisgarh :**

Important Gums producing districts– Bilaspur, Raipur, Surguja, Raigarh, Dharmajaigarh, Rajnandgaon, Mahasamund, Dhamtari, Korea, Bijapur, Dantewada and Kanker.

Important Gums produce in the state - Kullu (*Sterculia urens*), Dhawada (*Anogeisus latifolia*), Babool (*Acacia nilotica*), Khair (*Acacia catechu*), Saja (*Terminalia tomentosa*), Char (*Buchanania lanzan spreng*), Tanwar, Dikamali (*Gardenia gummifera*), Bahera (*Terminelia belerica*) and Jhingan (*Lavea*



*grantis*).

Approximate annual production– 3500 tons

##### **Andhra Pradesh:**

Important Gums producing districts – Srikakulam, Vizianagram, Visakhapatnam, East Godavari, West Godavari, Chittur, Khammam, Mahboobnagar, Warangal and Adilabad.

Important Gums produce in the state - Gum Karaya (*Sterculia urens*), Gum Kondagogu (*Cochlospermum religiosum*), Gum Olibanum (*Boswellia serrata*), Gum Dikamali (*Gardenia gummifera*) and Gum Thiruman (*Anogeisus latifolia*).

Approximate annual production – 800 tons

**Table 1 : Export of natural resins and gums during last five years**

Sr. No.	Year	Resins		Gums		Gum-resins		Total	
		Quantity (tons)	Value (Rs. Lakh)						
1.	2006-07	9649.32	16091.56	190842.10	114711.60	544.16	988.70	201035.58	131791.90
2.	2007-08	10115.74	13700.45	206215.95	113628.25	919.11	1301.43	217250.80	128630.10
3.	2008-09	7862.70	13141.31	230804.67	136025.80	1053.05	1589.78	239720.42	150756.89
4.	2009-10	6778.19	11403.64	180774.64	112494.71	1499.96	2289.57	189052.79	126187.92
5.	2010-11	7025.77	22822.86	368804.00	283198.80	1481.87	2601.28	377311.60	308622.90
Average		8286.34	15431.96	235488.27	152011.83	1099.63	1754.15	244874.24	169197.94

Source: Directorate General of Commercial Intelligence and Statistics, Kolkata

**Table 2 : Import of natural resins and gums during last five years in India**

Sr. No.	Year	Resins		Gums		Gum-resins		Total	
		Quantity (tons)	Value (Rs. Lakh)						
1.	2006-07	49559.56	22349.97	19504.98	5905.62	1088.67	7995.67	70153.21	36251.26
2.	2007-08	46134.29	15828.44	15832.11	4823.58	1347.43	11364.82	63313.83	32016.84
3.	2008-09	40231.93	15512.05	16396.35	5422.87	1115.98	11474.94	57744.26	32409.86
4.	2009-10	48585.68	20668.43	21259.00	7039.95	936.51	13513.35	70781.19	41221.73
5.	2010-11	47735.68	39933.03	19709.24	7051.32	1305.84	20966.05	68750.76	67950.40
Average		46449.43	22858.38	18540.34	6048.67	1158.89	13062.97	66148.65	41970.02

Source: Directorate General of Commercial Intelligence and Statistics, Kolkata

**Gujarat :**

Important Gums producing districts – Kuchachh, Sabarkantha, Banskantha, Panchmahal, Dahod, Vadodara, Narmada, Bharuch, Navsari, Balsar and Dang.

Important Gums produce in the state - Salai Gum (*Boswellia serrata*), Prosopis gum (*Prosopis juliflora*), Khair gum (*Acacia catechu*), Dhawada gum (*Anogeissus latifolia*), Babul gum (*Acacia arabica*) and Guggal gum (*Commiphora wightii/mukul*).

Approximate annual production – 70 tons

**Madhya Pradesh:**

Important Gums producing districts – Morena, Ujjain, Jabalpur, Shyampur, Shivpuri, Damoh, Khandawa, Guna, Khargaon, Chhattarpur, Indore, Narsinghpur and Raisen.

Important Gums produce in the state - Kullu (*Sterculia urens*), Guggal (*Commiphora mukul*), Dhawada (*Anogeissus latifolia*), Palas (*Butea manosperma*), Babool (*Acacia nilotica*) and Salai (*Boswellia serrata*).

Approximate annual production – 700 tons

**Orissa:**

Important Gums producing districts– Balasore, Rayagada, Koraput, Malkangiri, Kalahandi, Mayurbhanj.

Important Gums produce in the state- Dhawada gum

(*Anogeissus latifolia*), babul gum (*Acacia arabica*), Karaya gum (*Sterculia urens*), Baheda gum (*Terminelia belerica*), Palas (*Butea monosperma*) and Salai gum (*Boswellia serrata*).

Approximate annual production – 300 tons

**Jharkhand :**

Important Gums producing districts – Latehar, Chatra, Garhwa, Daltonganj, West Singhbhum.

Important Gums produce in the state - Jhingan (*Lavea grantis*), Char (*Buchanania lanzan spreng*), Dhawada gum (*Anogeissus latifolia*), Gum Karaya (*Sterculia urens*) and Babul gum (*Acacia arabica*).

Approximate annual production – 120 tons

**Maharashtra:**

Important Gums producing districts – Gondia,

Bhandara, Garhchiroli, Chandrapur, Wardha.

Important Gums produce in the state - Dhawada (*Anogeissus latifolia*), Kullu gum (*Sterculia urens*), Jhingan (*Lavea grantis*), Babool gum (*Acacia nilotica*) Khair gum (*Acacia catechu*).

Approximate annual production – 250 tons

**Rosin:**

Important rosin producing states– Jammu & Kashmir,



Himanchal Pradesh and Uttaranchal

Approximate annual production – 20,000 tons

**Guar Gum:**

Guar seed production- 9.00 lakh tons (approximate)

Guar gum production – 2.4 lakh tons (approximate)

Approximate contribution of different states in guar seed production was Rajasthan (50 %), Haryana (35 %), Punjab (5.5 %) Gujarat (3 %) and other states (6.5 %).

**Export and import of natural resins and gums:** Copal, Damar batu, Mastic gum, Gum rosin, Lac and other resins were natural resins exported by and imported in India. Gum arabic, Asian gum, African gum, Karaya gum, Tragacanth, Guar gum (Refined split and treated pulverized), Xanthum gum and others are natural gums exported by and imported in India. Asafoetida, Myrrh, Oilbanum and others were gum-resins exported by and imported in India.

**Export of natural resins and gums from India:** Data on export of natural resins, gums and gum-resins during last five years *i.e.* 2006-07 to 2010-11 has been presented in Table 1. The average exported quantity of all natural resins and gums during the last five year was 244874.24 tons valued Rs. 169197.94 Lakh. The average exported quantity of natural resins, gums and gum-resins during last five years was 8286.34 tons, 235488.27 tons and 1099.63 tons, respectively while in terms of value it was Rs. 15431.96 Lakh, Rs. 152011.83 Lakh and Rs. 1754.15 Lakh respectively. The overall growth rate in natural resins and gums exported from India shows increasing trend both in terms of quantity and value. The major countries to which natural resins exported were Germany, Egypt and Pakistan; in case of gums it was USA, China and Germany; and in case of gum-resins it was UAE, USA and Thailand.

**Import of natural resins and gums in India :** Data on import of natural resins, gums and gum-resins during the

last five year *i.e.* 2006-07 to 2010-11 has been presented in Table 2. The average imported quantity of natural resins, gums and gum resins during last five years was 46449.43 tons, 18540.34 tons and 1158.89 tons respectively while for value term it was Rs. 22858.38 Lakh, Rs. 6048.67 Lakh nad Rs. 13062.97 Lakh. Overall natural resins were imported from Indonesia, China and Thailand; gums were imported from Nigeria, Sudan and France; and gum-resins were imported from Afghanistan, Iran and Pakistan.

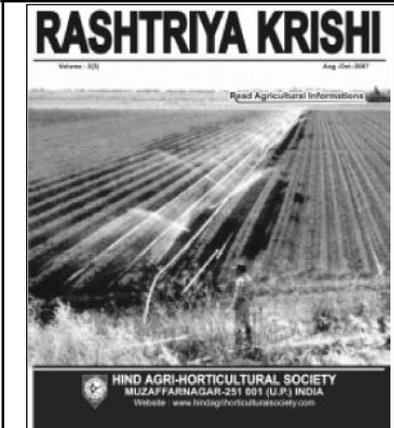
The constraints related to export of natural resins and gums can be attributed to small and scattered quantity of produce, fluctuation in domestic production and prices, adulteration in raw material, limited export promotional measures, improper international market information, lack of future trading and prior agreement as expressed by the exporter. India has a great potential in production and export of natural resins and gums because of availability of resin and gum yielding trees, manpower, favorable climate and R&D support. The national production of tree based resins and gums are comparatively lower and the main reason can be attributed to the tapping pattern. Majority of farmers/collectors engaged in resins and gums tapping are landless, small and marginal, using traditional practice of resins and gums tapping. In view of the increasing national and global demand for natural and eco-friendly products, the demand for natural resins and gums is increasing. Proper attention and action for intensification of effort for increasing natural resins and gums production, exploitation of untapped potential area, quality consciousness, more R&D support for product development will definitely improve the socio-economic condition of natural resins and gums tappers/collectors and export earning of the country.

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