

Potential and Commercial Utilization of Medicinal Plants

Dr. Bala Prasad
Ex-Special Secretary, Ministry of Panchayati Raj, Govt. of India
and Ex-PCCF & HoFF, Manipur

19-5-2021

Structure of Presentation on Potential and Commercial Utilization of Medicinal Plants of India

- **Introduction**
- **Potential of Medicinal Plants**
- **Commercial Utilization of Medicinal Plants**
- **Market Analysis and Emerging Trend**
- **Schemes of Govt. of India for enhancing potential and sustainable utilisation**
- **Future Road Map**
- **Conclusion**

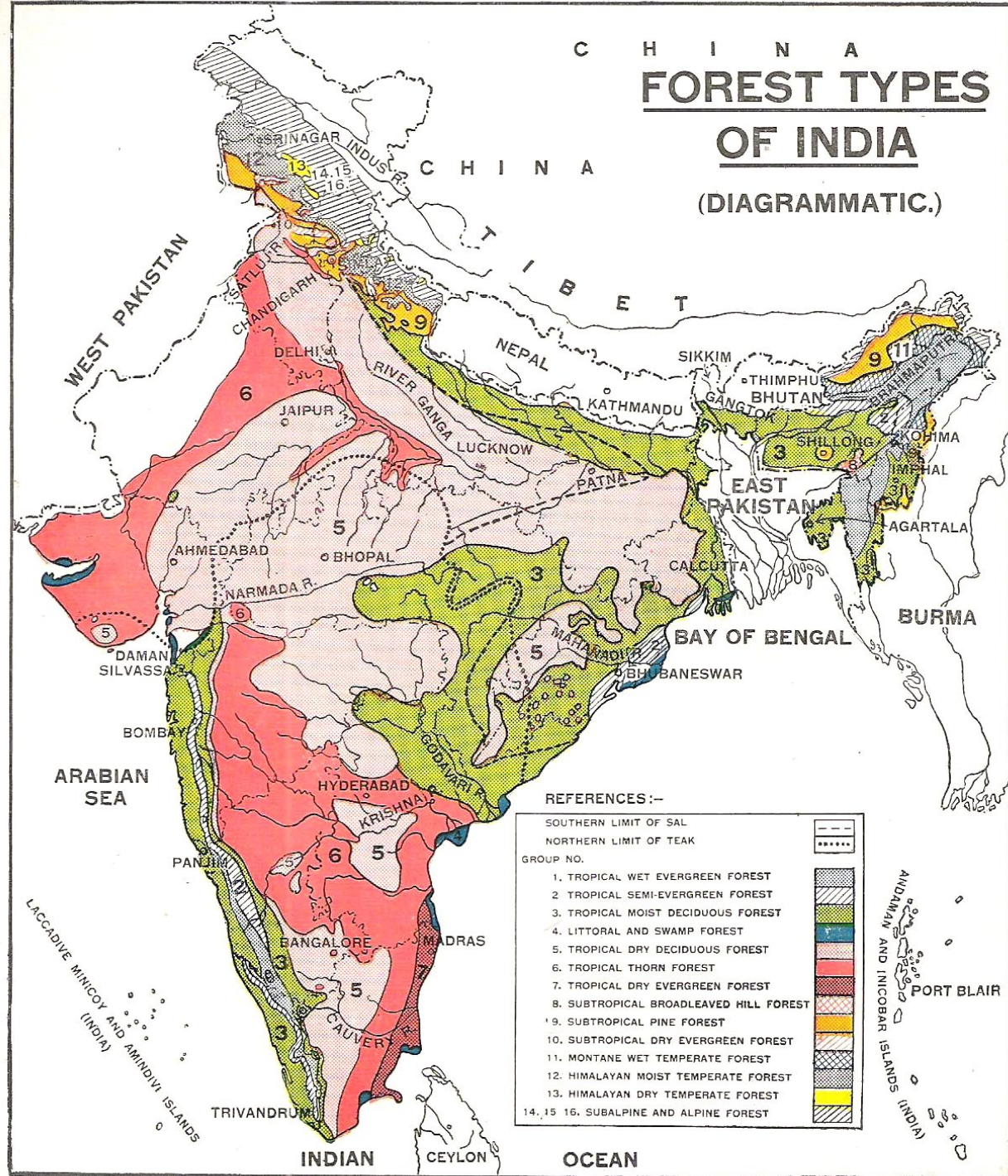
India is a repository of more than 7263 Medicinal Plants found in Himalayan to Marine and Desert to Rain Forest Ecosystems



C H I N A FOREST TYPES OF INDIA

OF INDIA

(DIAGRAMMATIC.)

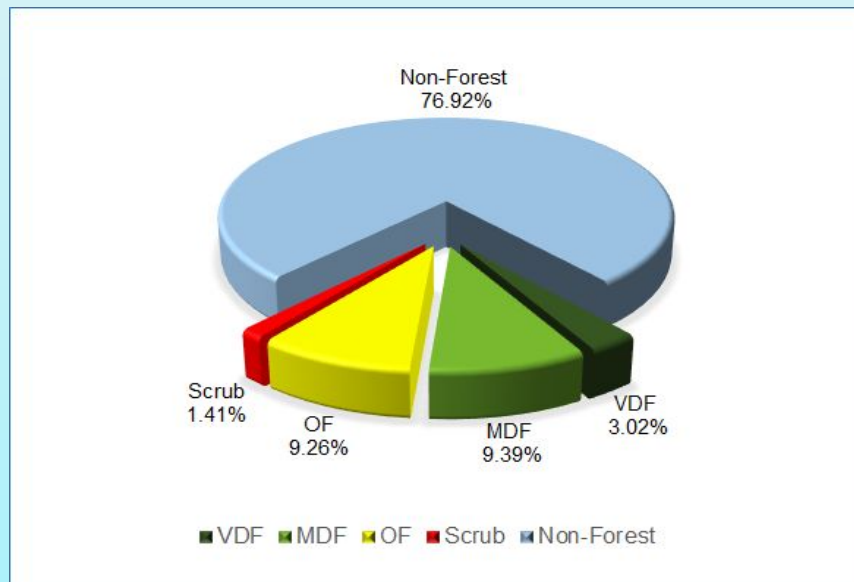


Forest Cover in the Country : 2019 Assessment

Forest Cover Map 2019

Category	Area (sq km)	Percentage of Geographical Area
Very Dense Forest	99,278	3.02
Moderately Dense Forest	3,08,472	9.39
Open Forest	3,04,499	9.26
Total Forest Cover*	7,12,249	21.67
Scrub	46,297	1.41
Non-Forest	25,28,923	76.92
Total Geographical Area	32,87,469	100.00

*Tree Patch Size – 1 ha or more



Forest Cover in India – 71.22 million ha

Change in Forest Cover between 2017 and 2019 Assessments

Class	2017 Assessment		2019 Assessment		Net Change
	km ²	% of GA	km ²	% of GA	km ²
VDF	98,158	2.99	99,278	3.02	+ 1120
MDF	3,08,318	9.38	3,08,472	9.38	+ 154
OF	3,01,797	9.18	3,04,499	9.26	+ 2702
Total	7,08,273	21.54	7,12,249	21.66	+ 3976

- There is an increase of **3976 km² (0.56 %)** of forest cover in the country as compared to the previous assessment
- First time, there is simultaneous increase in all the three categories of forest cover, indicating qualitative improvement in forests

Change in Forest & Tree Cover between 2017 and 2019 Assessments

Class	2017 Assessment		2019 Assessment		Net Change
	sq km	% of GA	sq km	% of GA	
Forest Cover	7,08,273	21.54	7,12,249	21.67	+ 3,976
Tree Cover	93,815	2.85	95,027	2.89	+ 1,212
Total of Forest & Tree Cover	8,02,088	24.39	8,07,276	24.56	+ 5,188

- there is an increase of **5,188 km² (0.65 %)** of total forest and tree cover in the country as compared to the previous assessment
- In the 4 years i.e. between 2014 to 2018, Forest & Tree cover in the country has increased by 13,209 sq km

Agro-climatic zones of India



#	Agro-climatic zones	Indian States
1.	Western Himalayan Region	J&K, HP, UP, Uttarakhand
2.	Eastern Himalayan Region	Assam, Sikkim, W. Bengal & all North-Eastern states
3.	Lower Gangetic Plains Region	W. Bengal
4.	Middle Gangetic Plains Region	UP, Bihar
5.	Upper Gangetic Plains Region	UP
6.	Trans-Gangetic Plains Region	Punjab, Haryana, Delhi & Rajasthan
7.	Eastern Plateau and Hills Region	Maharashtra, UP, Orissa & West Bengal
8.	Central Plateau and Hills Region	MP, Rajasthan, UP
9.	Western Plateau and Hills Region	Maharashtra, MP & Rajasthan
10.	Southern Plateau and Hills Region	AP, Karnataka, Tamil Nadu
11.	East Coast Plains and Hills Region	Orissa, AP, TN, & Pondicherry
12.	West Coast Plains and Ghat Region	TN, Kerala, Goa, Karnataka, Maharashtra
13.	Gujarat Plains and Hills Region	Gujarat
14.	Western Dry Region	Rajasthan

Potential of Medicinal Plants

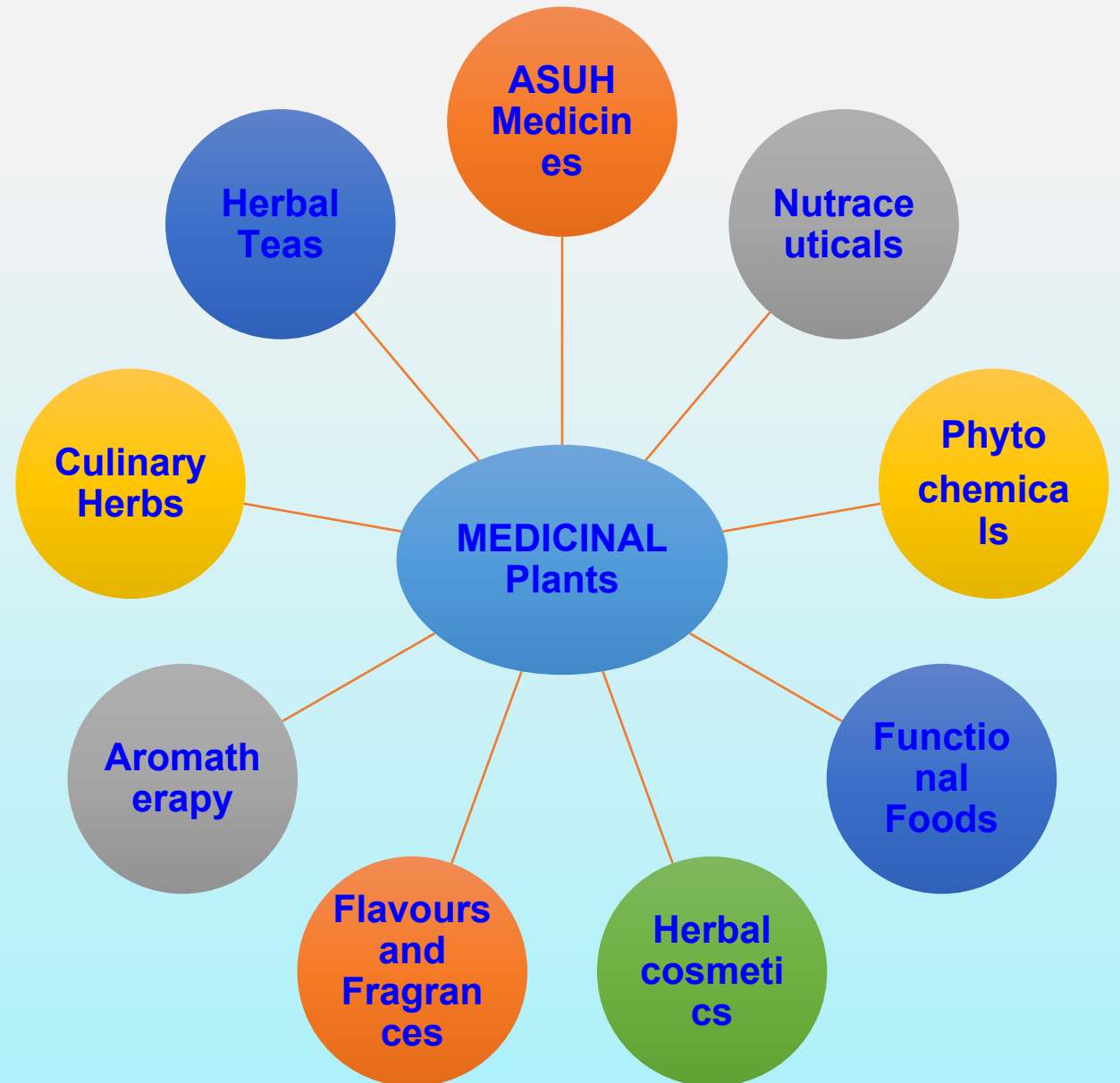
The Medicinal Plants Products industry inter-related sub-sectors including

1. ASUH Medicines
2. Nutraceuticals
3. Herbal Teas
4. Functional Foods
5. Phytochemicals
6. Flavours and fragrances
7. Aromatherapy
8. Culinary herbs and
9. Spices
10. Herbal cosmetics
11. Veterinary Herbal Products

Another way of classifying is:

1. Medicinal Herbs
2. Medicinal Essential Oils
3. Gums & Resins
4. Base Oils
5. Spices
6. Specialty/organic foods

Segmentation of Herbal Markets



AYURVEDA – FIRST MEDICINAL PLANTS BASED MEDICAL SYSTEM OF WORLD

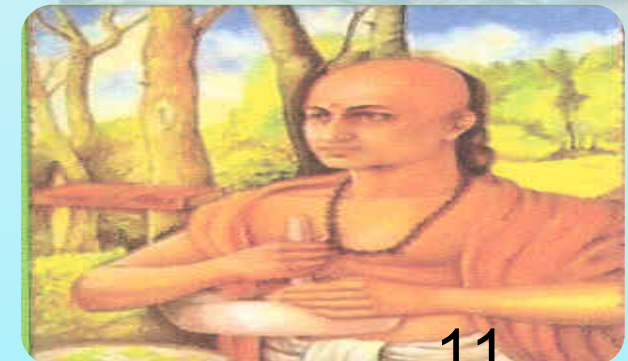
Charaka: Father of Ayurvedic Medicine and pioneer in classification of medicinal plants for therapeutic uses



Sushrut: Father of Ayurvedic Surgery and pioneer in therapeutic uses of medicinal plants in surgical problems



Vagbhata: Pioneer in therapeutic uses of medicinal plants in health problems by enriching and discovering the scientific knowledge covering many medicinal plants



AYUSH

A

AYURVEDA

Y

YOGA & NATUROPATHY

U

UNANI

S

SIDDHA , SOWA RIGPA

H

HOMOEOPATHY

NATIONAL MEDICINAL PLANTS BOARD

Strengths of AYUSH systems of Medicine

- **Preventive,**
- **Promotive**
- **Curative**
- **Rejuvenative**
- **Rehabilitative**
- **Cost effective and**
- **Efficacious**

EPIDEMIOLOGICAL SHIFT

LIFE STYLE DISEASES AT THE CENTRAL STAGE OF HEALTH AGENDA:

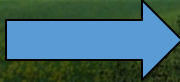
- DIABETES
- CANCER
- HYPERTENSION
- CARDIOVASCULAR DISEASES
- GERIATRIC CARE
- DEFICIENCIES OF MACRO & MICRO NUTRIENTS

AYUSH have proven capability to manage these diseases in better way and enhance general immunity

COVID-19 Preventive & Post COVID Care Kit



DELHI – AIA – MODEL VIEW



National Institute of Ayurveda



Central Councils for Research in AYUSH



Stautus of Ayurveda in different countries

Sl. No.	Region	Legally Practised	Practised as Massage / food supplement / supervision
1	ASEAN	Malaysia	Indonesia, Thailand, Singapore
2	Middle East	UAE	Saudi Arabia
3	Africa	Mauritius South Africa	Rest of Africa
4	Central Europe		Hungary, Slovenia, Serbia/ Austria
5	Western Europe		Germany, UK
6	Eastern Europe	Russia	
7	North America	USA (14 states) Canada	Rest of USA, Brazil, Argentina
8	South America		Argentina/Brazil/
9	Oceania		Australia, New Zealand

Ayurved Commerce -

AYUSH Industry – 25,000 Crs.

254 Colleges @ Rs 5 Crs. p.a. - 1,270 Crs.

478750 Vd.'s @ Rs 6 lacs p.a. - 28,725 Crs.

F20-21 Min. of AYUSH Budget - 2,122 Crs.

TOTAL Minimum Commerce is Rs.57,117 Crs.

Tulsi Cultivation

Village –
Kemakkmbedu,
Block –
Ellapuram,
District –
Tiruvallur,
Tamil Nadu



Plantation of *Gloriosa superba* (Kalihari)



NMMP

Mr.C.Vayapuri, S/o.Chinnannagoundar, Thadapuram, Edapady
Area - 0.40.0 Ha.

Growth of Medicinal Plants sector in volume during 2005-06 to 2014-15

Sl. No.	Demand (Dry Wt. in MT)	2005-06*	2014-15	Growth in Quantity	Growth in %
1.	Herbal Industry	177000	195000	18000	10.16
2.	Rural House holds	86000	167500	81500	94.76
3.	Exports**	56500	134500	78000	138.05
4.	Wastage	-	14910	-	
Total		319500	511910	177500	55.55
5.	Botanicals	1289	1622	333	42.92
6.	species	960	1178	218	22.7
7.	traded in high volume	178	242	64	35.95

Growth of Medicinal Plants sector in Value during 2005-06 to 2015-16

(Rs. in Crore)

Sl. No.	Estimated Annual Demand (Dry Wt. in MT)	2005-06	2014-15	Growth in Value	Growth in %
1.	Domestic Herbal Industries	627.90	1950	1322.1	210.56
2.	Rural Household	86	1675	1589	1847.67
3.	Wastage		149	149	
4.	Exports	354.80	3211	2856.2	805.02
5.	Total	1068.70	6985	5916.3	553.60

Economically Important MFPs

Seasons	MFPs collected	Impact on Economy
January-March	Lac (resin), Mahuwa, flower and tamarind	Over 75 percent of tribal households in Orissa, Madhya Pradesh and Andhra Pradesh collect Mahuwa flower and earn Rs.5000 a year. 3 million people are involved in Lac production.
April-June	Tendu leaves, Sal seeds and Chironji	30 million forest dwellers depend on seeds, leaves and resins from Sal trees; Tendu leaf collection provides about 90 days of employment to 7.5 million people, a further 3 million people are employed in Bidi processing
July-September	Chironji, Mango, Mahuwa fruits, Silk cocoons and bamboo	10 million people depend on bamboo for livelihood; 1,26,000 households are involved in tussar silk cultivation only
October-November	Lac, kullu gum, resins used in incense sticks	3 lakh person days of employment from collection of gums

Sustainable Livelihood Systems Based on Minor Forest Produce

- **Collection and sale of Minor Forest Produce support livelihood security of 100 million forest dwellers (most of them are tribal);**
- **Low return to the gatherers due to unreasonably low prices paid to them is matter of concern;**
- **MFPs provide 35% of the income of tribal household in India;**
- **Small scale forest based enterprises are mostly based on MFP which provide upto 50% of income for 20-30% of the labour forces in India;**
- **Ministry of Tribal Affairs has started giving minimum support price for 86 MFPs;**
- **The season of the different sets of MFPs are spread over the whole year so that the tribal can collect them throughout the year and earn their livelihood.**

POTENTIAL MEDICINAL PLANTS FOR CENTRAL INDIA

Sl. No	Season of Collection	#	Botanical Name	Common Name	Part(s) Used
1	Feb-Apr	1	<i>Adhatoda zeylanica</i>	Vasa	Leaves, Flowers
		2	<i>Bowsellia serrata</i>	Raldhoop	Gum - resin
		3	<i>Terminalia arjuna</i>	Arjuna	Bark
		4	<i>Withania somnifera</i>	Ashwagandha	Roots
2	May-July	1	<i>Aegle marmelos</i>	Bael	Fruits
		2	<i>Azadirachta indica</i>	Neem	Leaves
		3	<i>Buchanania lanzan</i>	Chironji	Seeds
		4	<i>Butea monosperma</i>	Palash/ Teshu	Seeds
		5	<i>Eclipta alba</i>	Bhringraj	Whole Plant
		6	<i>Syzygium cumini</i>	Jamun	Seeds

POTENTIAL MEDICINAL PLANTS FOR CENTRAL INDIA

Sl.No	Season of Collection	#	Botanical Name	Common Name	Part(s) Used
3	Aug-Oct	1	<i>Cassia tora</i>	Chakramard	Leaves, Seeds
		2	<i>Phyllanthus amarus</i>	Bhumi amlaki	Stem, Leaves
		3	<i>Solanum nigrum</i>	Makoy	Whole Plant
		4	<i>Cyperus rotundus</i>	Nagarmotha	Roots
4	Nov -Jan	1	<i>Acacia sinuata</i>	Shikakayi	Fruits
		2	<i>Asparagus racemosus</i>	Shatavari	Roots
		3	<i>Phyllanthus emblica</i>	Amla	Fruits
		4	<i>Terminalia bellirica</i>	Behera	Fruits
		5	<i>Terminalia chebula</i>	Harad	Fruits
		6	<i>Tinospora cordifolia</i>	Giloe	Stem

Success Stories

Accelerated Growth in demand of Some Medicinal & Aromatic Plants has resulted in spectacular success in plantation/cultivation of these species e.g. **Ashoka (*Saraca asoca*)**, **Guggal (*Commiphora wightii*)**, **Arjuna(*Terminalia arjuna*)**, **Isabgol (*Plantago ovata*)**, **Ashwagandha (*Withania somnifera*)**, **Senna (*Senna alexandrina*)**, **Brahmi (*Bacopa monnieri*)**, **Haldi (*Curcuma longum*)**, **Kalmegh (*Andrographis paniculata*)**, **Giloe (*Tinospora Cordifolia*)**, **Tulsi (*Ocimum tenuiflorum*)**, **Amla (*Phyllanthus emblica*)**, **Lemon Grass (*Cymbopogon flexuosus*)**, **Marigold (*Tagetes erecta*)** etc.

Ashoka (*Saraca asoca*)

- Occurs in Western and Eastern ghats, Deccan plateau and the foothills of Eastern Himalayas
- Ashokarhist-the key Ayurvedic formulation for gynecological disorders
- Annual consumption of bark-2000MT
- IUCN categorized the species as globally vulnerable
- High incidence of use of Adulterants, viz *Polyalthia longifolia*, *Shorea robusta*, *Trema orientalis*, *Bauhinia variegata*, *Brownea ariza*
- NMPB launched special projects for the species in Orissa, Karnataka, Kerala and Gujarat

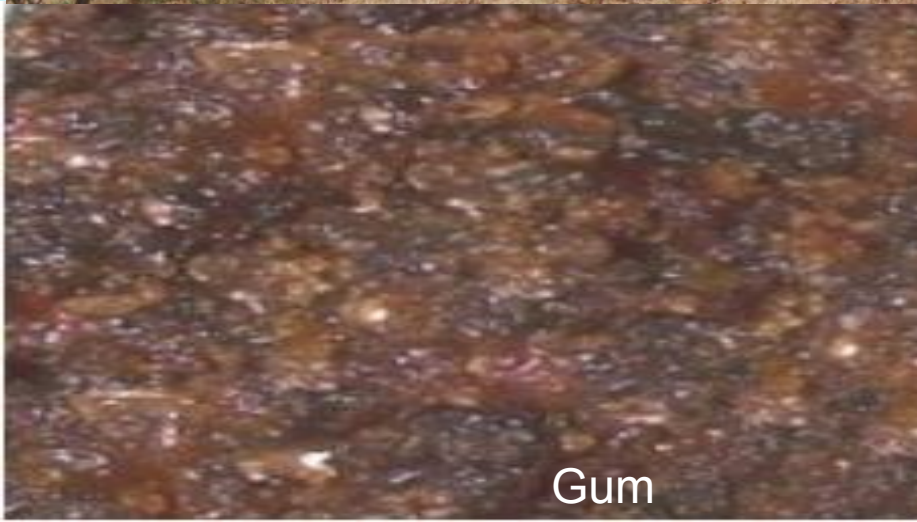


Bark

Guggal (*Commiphora wightii*)



- Used in more than 100 Ayurvedic preparations
- Guggulsterone a & b well known for anti-hyperlipidemic, anti-arthritis activity,
- Plant has more than 100 patents
- Domestic consumption >1000MT
- Occurs in Rajasthan, Gujarat, MP, Maharashtra and Karnataka
- More than 90% demand met through imports-largely from Iran, Afganistan, and



Gum



Arjuna(*Terminalia arjuna*)



Destructive harvesting



Non destructive harvesting



]Bark is used in traditional Ayurvedic herbalism for generations, primarily as a cardiac tonic.

]Beneficial in the treatment of coronary artery disease, heart failure, biliousness, sores, antidote to poison, congenital, venereal, viral diseases and hypercholesterolemia.

]Also possess antibacterial, antioxidant and antimutagenic activities.

Bija Sal (*Pterocarpus marsupium*)



Vijaysar is native to India and found mostly in Indian subcontinent. Vijaysar found in western ghat jungles are considered good for controlling Diabetes. Vijaysar increases digestive agni and increases insulin production in body.

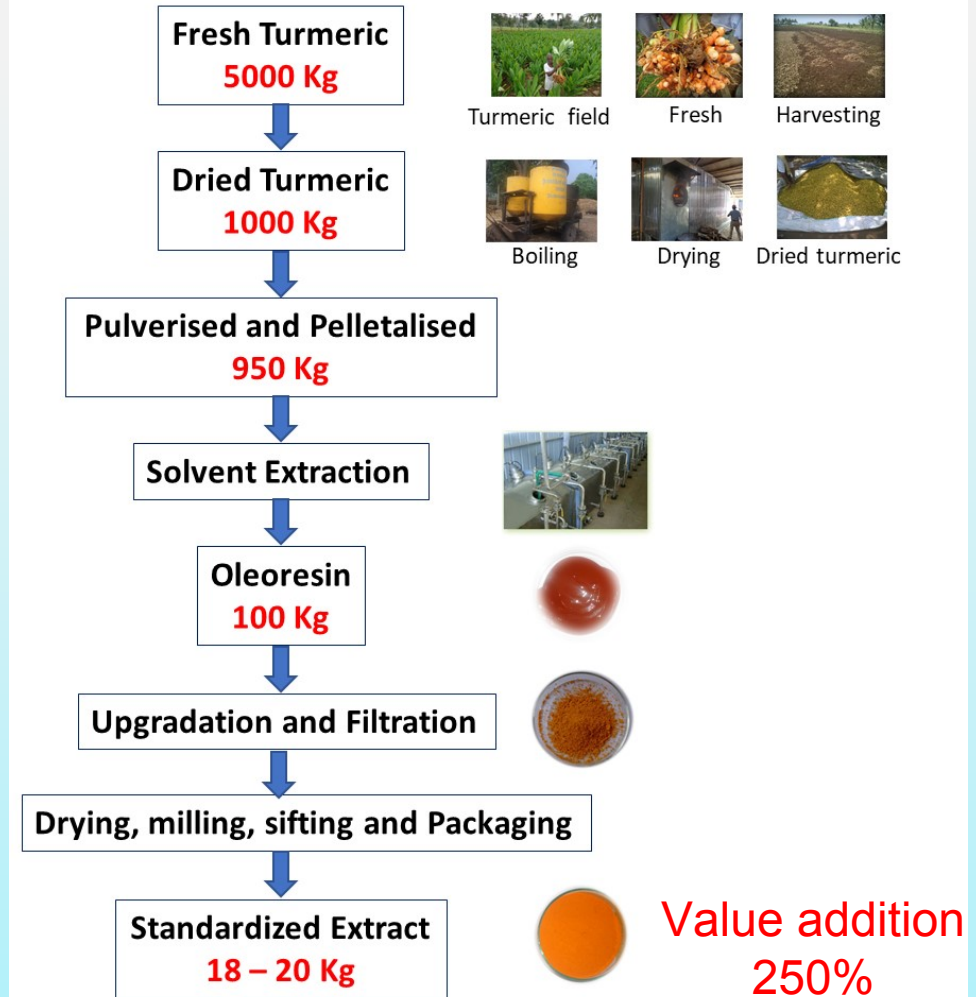
Isabgol (*Plantago ovata*)



Turmeric (*Curcuma longa*)



Value Addition: From Turmeric fresh rhizomes to Standardized Extract



Withania somnifera **(Ashwagandha)**



Distribution	Throughout the drier parts of India
Part Used	Root
Therapeutic Uses	They are useful in leucoderma, constipation, insomnia, tissue-building and nervous breakdown, dropsy, leucoderma, rheumatism, cough.
Chemical Composition	It contains an essential oil, ipuranal, a crystalline alcohol, whittaniol, hentriacontane, phytosterol and fatty oil. It also contains alkaloids withanine and somniferene. Withanolide A and Withaferin A.

Andrographis paniculata (Kalmegh)



Plantation of Kalmegh in Uttar Pradesh, India

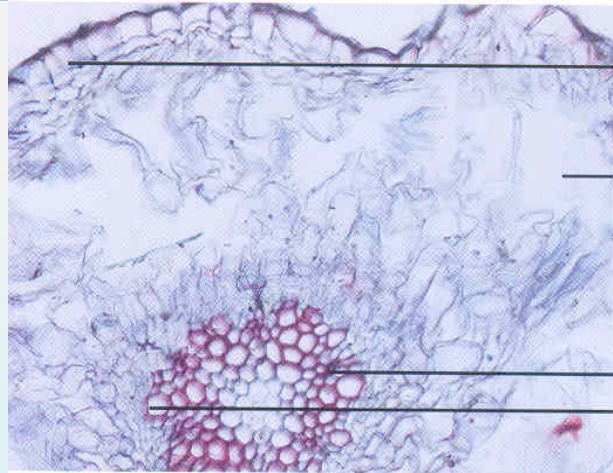
Marigold (*Tagetes erecta*)



Aloe Vera and Brahmi Cultivation



Bacopa monnieri (Brahmi) – Whole Plant



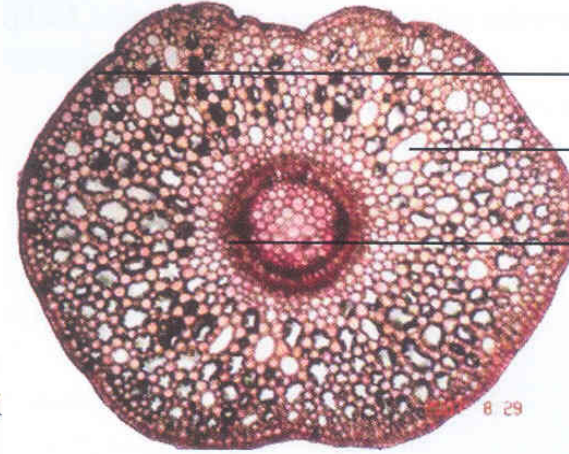
Root TS (x100)

Epidermis

Air chamber

Primary xylem

Secondary xylem

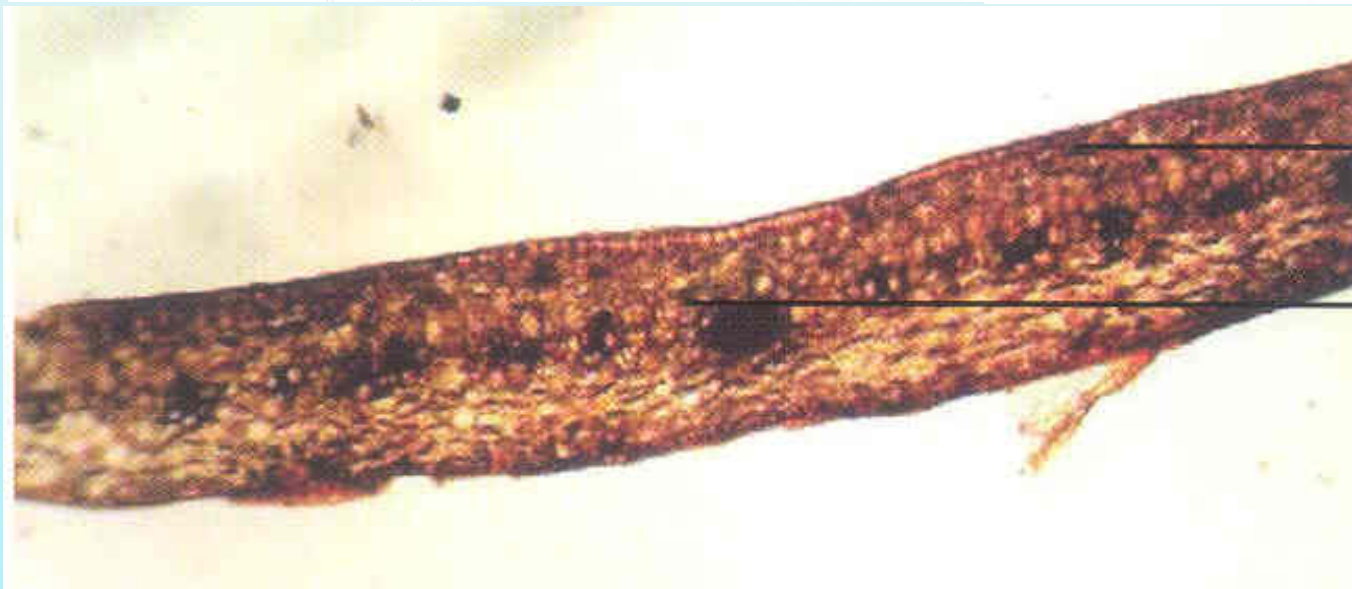


Stem TS (x40)

Epidermis

Cortex

Vascular tissue



Leaf TS (x100)

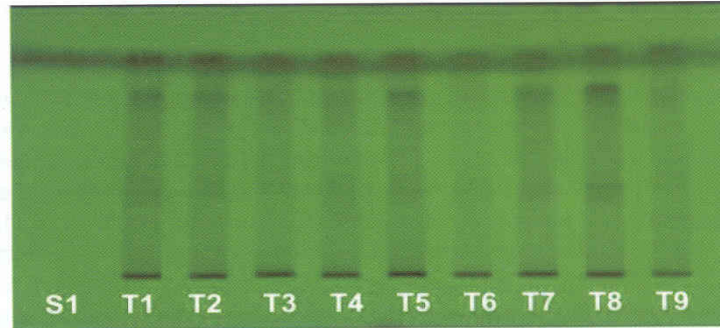
Vascular bundle

Mesophyll

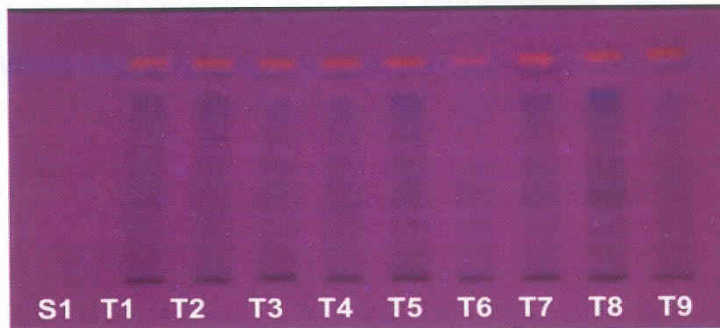
Bacopa monnieri (Brahmi) – TLC and HPLC

TLC profile of Brahmi:

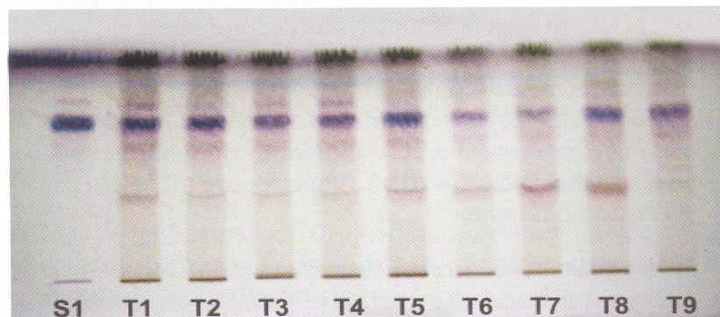
254 nm



366 nm

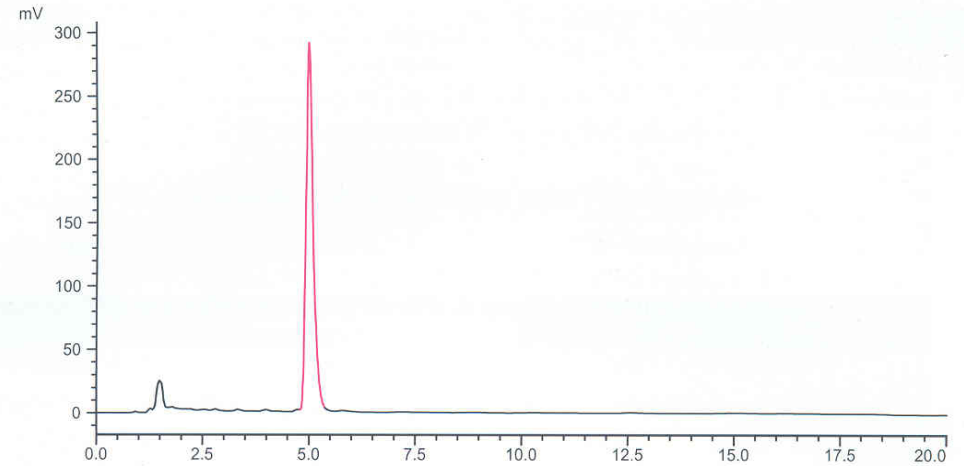


Visible

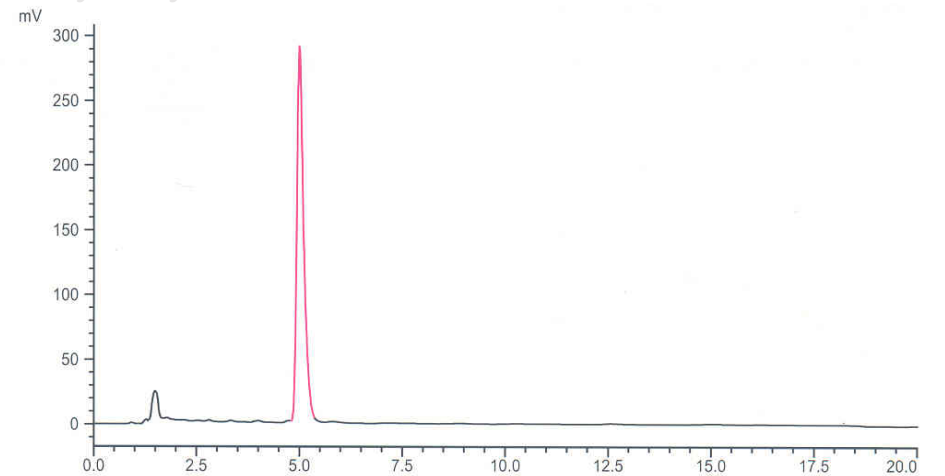


S1 : Bacoside A
T1 : Brahmi reference material
T2 – T9 : Different samples of Brahmi

HPLC Profile of Brahmi:



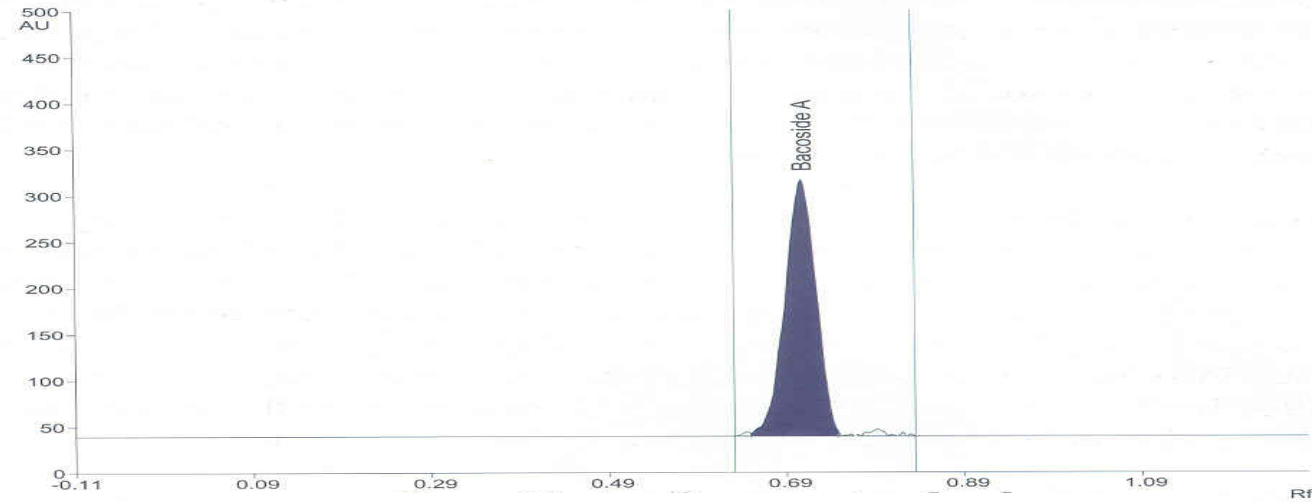
Bacoside A reference standard (after hydrolysis)



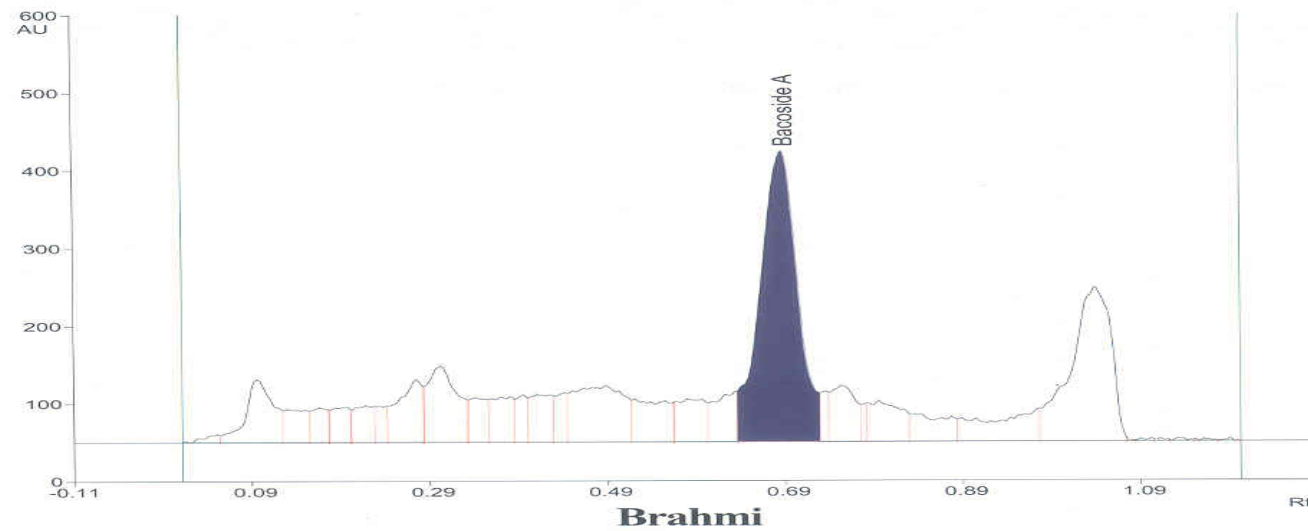
Brahmi

Bacopa monnieri (Brahmi)–HPTLC

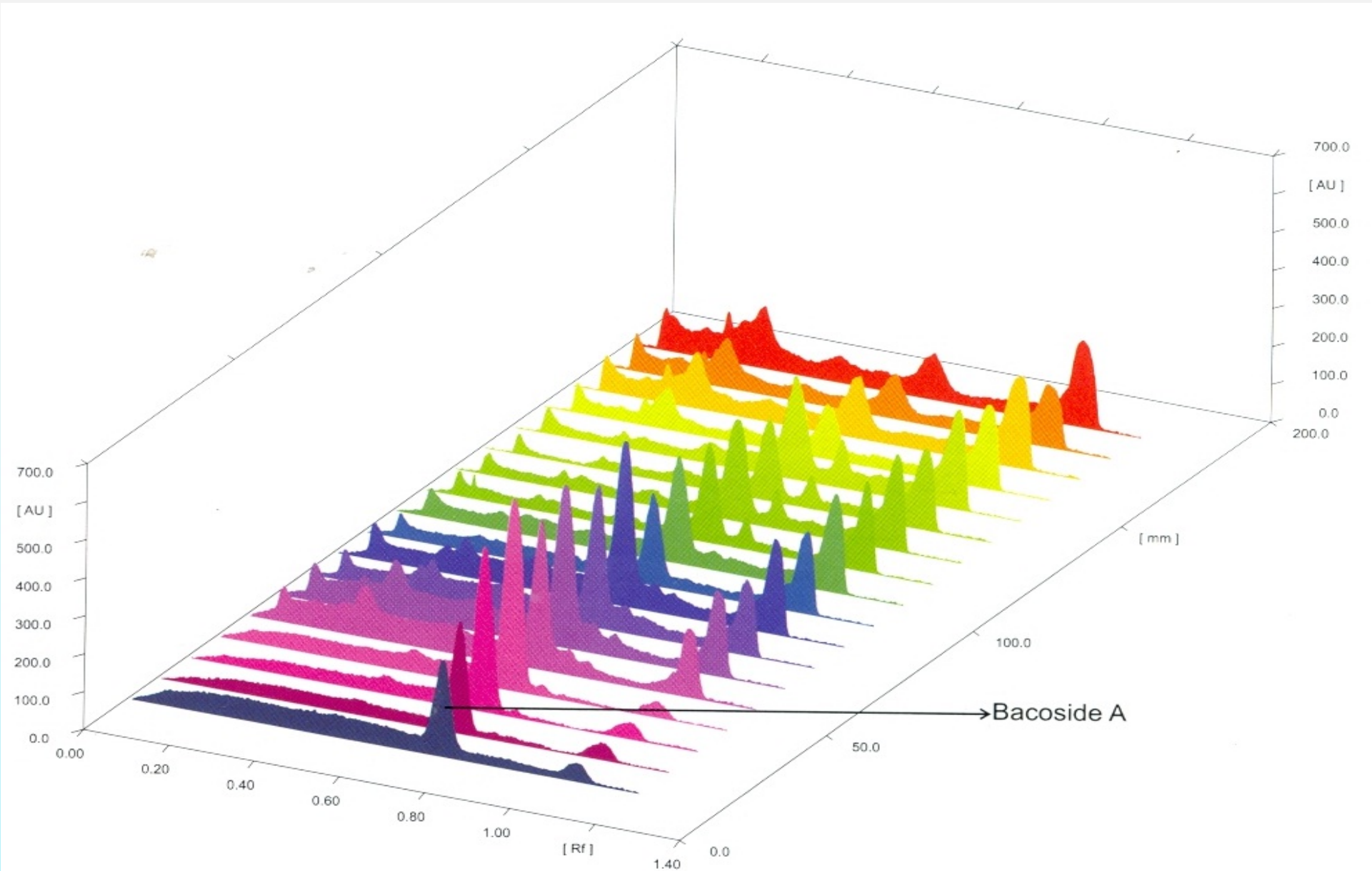
HPTLC Profile of Brahmi:



Bacoside A reference standard



Bacopa monnieri (Brahmi)–HPTLC



Overlay chromatogram

Exports of Herbal Products In Absolute USD

HS code	Description	Fy-19	Fy-20	Gr%
12112000	GINSENG ROOTS FRSH/DRID W/N CUT CRSHD/PWDRD	5,924.37	21,854.42	268.89
12113000	COCA LEAF FRSH/DRID W/N CUT CRSHD/PWDRD	13,513.06	16,251.40	20.26
12114000	POPY STRAW FRSH/DRID W/N CUT CRSHD/PWDRD	0.00	4.88	
12119012	NUX VOMICA DRIED RIPE SEEDS	39,146.28	24,223.83	-38.12
12119013	PSYLLIUM SEED (ISOBGUL)	55,35,658.70	39,33,443.04	-28.94
12119014	NEEM SEED	24,919.47	22,237.42	-10.76
12119015	JAJ0BA SEED	0.00	13,473.68	
12119021	BELADONA LEAVES	40,679.95	10,157.87	-75.03
12119022	SENNA LEAVES AND PADS	1,25,81,780.62	1,19,89,012.71	-4.71
12119023	NEEM LEAVES/POWDER	2,77,831.40	2,83,770.70	2.14
12119024	GYMNEMA POWDER,	4,77,365.08	3,08,722.83	-35.33
12119026	PYRETHRUM	26,422.95	34,011.95	28.72
12119029	OTHER LEVS,PWDR,FLURS AND PODS FRSH/DRD W/N CUT CRSHD/PWDRD	2,14,37,815.39	1,33,06,977.61	-37.93
12119031	CASCARA SAGRADA BARK	456.64	0.00	-100.00
12119032	PSYLLIUM HUSK (ISOBGUL HUSK)	20,12,21,248.21	19,11,11,349.41	-5.02
12119041	BELLADONA ROOTS	518.15	2,904.93	460.63
12119043	IPECAC DRIED RHIZOME AND ROOTS	11,753.81	11,689.71	-0.55
12119044	SERPENTINA ROOTS	51,850.28	41,478.52	-20.00
12119045	ZEDOVARY ROOTS	1,49,70,054.44	1,64,70,019.79	10.02
12119046	KUTH ROOT	1,22,458.95	30,156.22	-75.37
12119047	SARSAPARILLA	4,13,849.66	6,98,124.90	68.69
12119060	VINCA ROSEA (HERBS)	9,65,211.52	7,12,908.09	-26.14
12119091	CHIRATA	31,780.95	12,426.39	-60.90
12119092	TUKMARIA	43,09,698.60	50,23,390.93	16.56
12119099	OTHER PLANTS AND PARTS OF PLANTS USD IN PRFMRY, PHARMCY, INSECTICDL/FUNGICDL PURPOSE, FRESH/	2,22,24,832.17	2,16,52,198.25	-2.58
13021100	SAPS AND EXTRACTS OF OPIUM	14,66,951.76	13,40,434.85	-8.62
13021916	EXTRACTS, NEEM	1,45,94,602.99	1,38,51,761.23	-5.09
	Total Herbal Products	30,08,46,325.40	28,09,22,985.56	-6.62

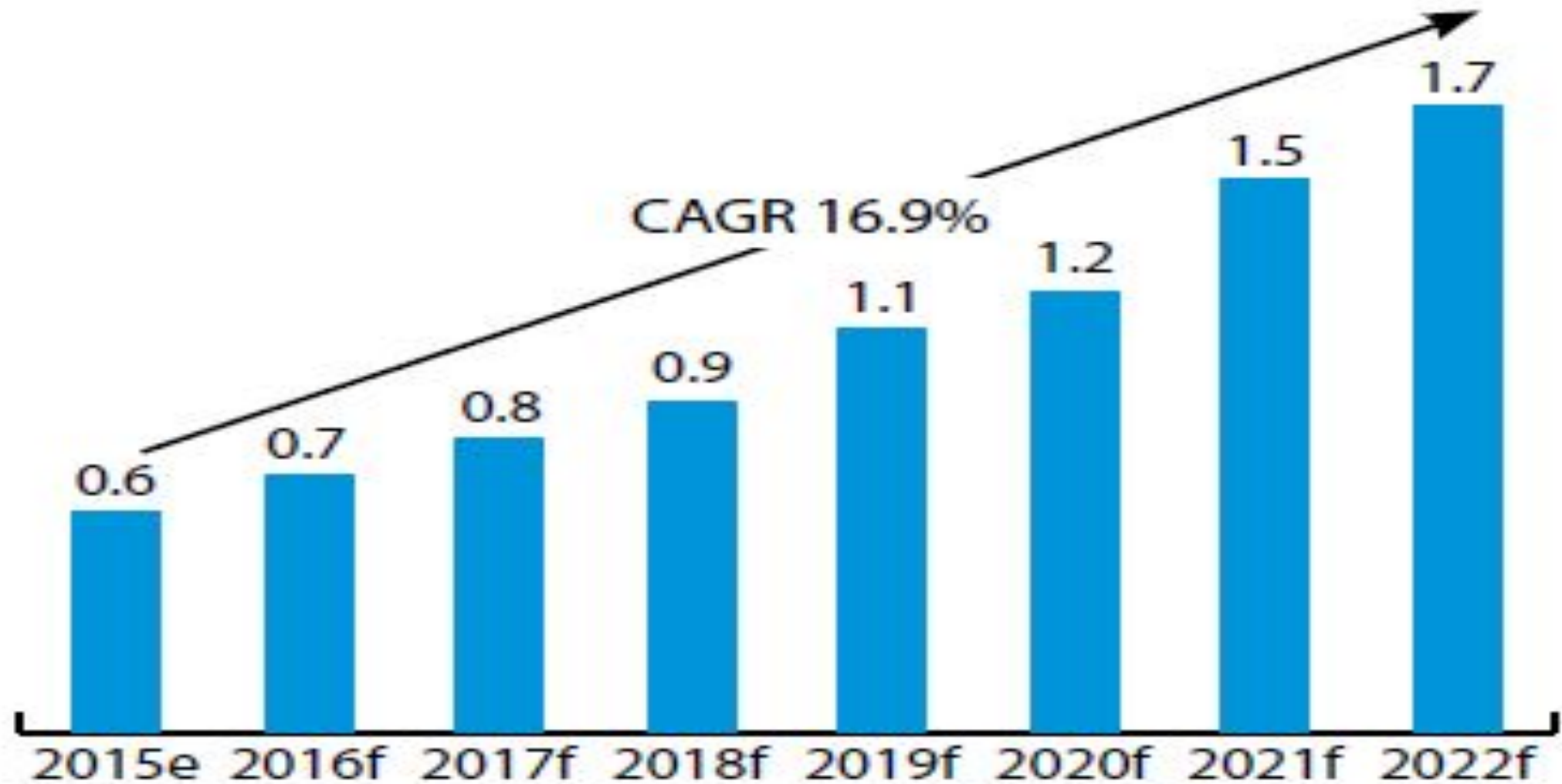
Exports of Ayush Products in absolute USD

30039011	MEDICANTS OF AYURVEDIC SYSTEM	1,42,60,034.44	1,61,51,669.10	13.27
30039012	MEDICANTS OF UNANI SYSTEM	58,237.50	59,578.38	2.30
30039013	MEDICANTS OF SIDDHA SYSTEM	19,017.16	39,994.22	110.31
30039014	MEDICANTS OF HOMOEOPATHIC SYSTEM	2,97,659.22	1,73,522.71	-41.70
30049011	MEDICAMENTS OF AYURVEDIC SYSTEM	12,88,50,810.72	12,60,63,728.49	-2.16
30049012	MEDICAMENTS OF UNANI SYSTEM	5,53,953.47	23,37,695.51	322.00
30049013	MEDICAMENTS OF SIDDHA SYSTEM	3,66,663.67	2,49,208.21	-32.03
30049014	HOMEOPATHIC MEDICINE	13,17,659.54	10,71,041.67	-18.72
35079071	PAPAIN,PURE (PHARMACUTICAL GRADE)	15,02,189.16	10,23,589.09	-31.86
	Total Ayush products	14,72,26,224.88	14,71,70,027.38	-0.04
	Aush & Herbals together	44,80,72,550.28	42,80,93,012.94	-4.46

Global Nutraceutical Industry (in USD billion)



India - Herbal Supplements Market (Billion US\$), 2015-2022

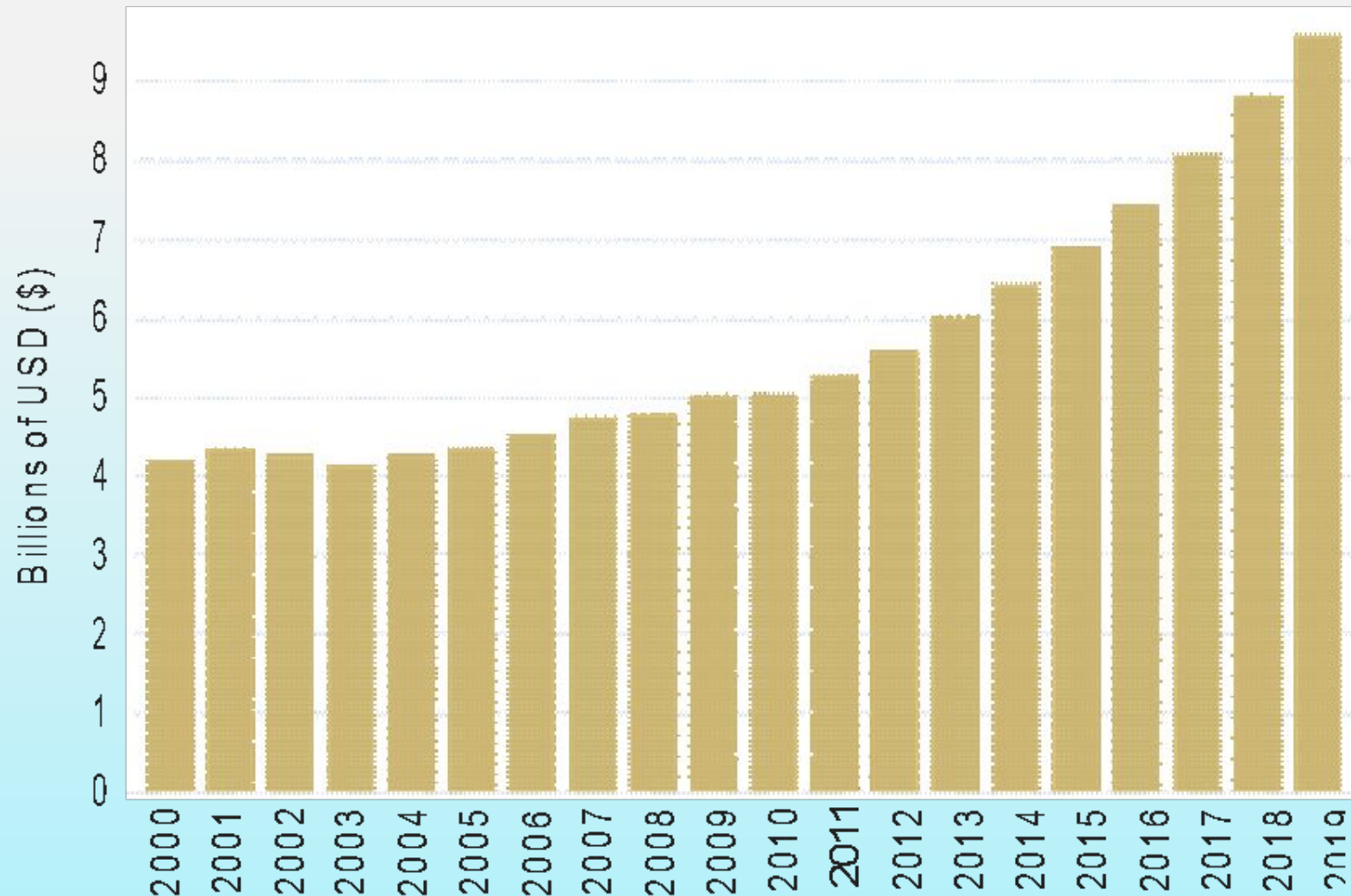


Top Herbal, Medicinal plants procured for Dietary and health supplements and Nutraceutical Exports from India

Product	Derived from	Volume used In tons	Growth rate	Acreage	% contracted	% bought from open market
Curcumin	Turmeric	82,000	20%	13,000	25%	75%
Lutein	Marigold Flowers	156,000	20%	40,000	90%	10%
Coleus	Plectranthus scutellarioides	13000	10%	4,000	65%	35%
Ashwagandha	Withania somnifera	15000	15%	5,000	30%	70%
12Hydroxy-citric acid	Garcinia combogia	6700	8%	2,000	Nil	100%
Fenugreek extract	Methi seeds	8000	10%	3,000	Nil	100%
Bacopa extract	Bacopa Monieri	10500	7%	2,000	35%	65%
Gymnema extract	Gymenema Sylvestre	6500	10%	2,000	15%	85%
Kalmegh extract	Andrographis Paniculata	22500	7%	10,000	Nil	100%
Amla Extract	Amla Fruit	8000	15%	3,000	10%	90%

Herbal Extracts and Nutraceuticals Manufacturers procure over 10 lakh MTs of Herbal and Medicinal plants annually through contract farming and from open market.

Total US Retail Sales of Herbal Supplements



Source: Nutrition Business Journal

US sales of herbal supplement has shown accelerated growth particularly during 2011 to 2019 from \$5.302 billion to \$9.602 billion. It is also heartening to note that from species wise analysis on the basis of average sale during 2016-2018 out of top 40 species sixteen are produced in India

S. No	Names	Botanical names	Average sales [in million USD]
1	Horehound	<i>Marrubium vulgare</i> Linn	63
2	Echinacea	<i>Echinacea purpurea</i> (L.) Moench	39
3	Cranberry	<i>Vaccinium macrocarpon</i> Alt.	38
4	Turmeric	<i>Curcuma longa</i> Linn.	34
5	Flax seed oil	<i>Linum usitatissimum</i> Linn.	24
6	Garcinia	<i>Garcinia indica</i>	22
7	Green tea	<i>Camellia sinensis</i> (Linn.) Kuntze	20
8	Black Cohosh	<i>Cimicifuga racemose</i> (L.) Nutt.	20
9	Aloe	<i>Aloe vera</i> (L.) Burm. F.	17
10	Ginger	<i>Zingiber officinale</i> Rosc.	14

S. No	Names	Botanical names	Average sales [in million USD]
11	Valerian	<i>Valeriana officinalis</i> Linn.	13
12	Milk Thistle	<i>Silybum marianum</i> (L.) Gaertn.	13
13	Chia seed	<i>Salvia hispanica</i> Linn.	13
14	Ivy leaf	<i>Hedera helix</i> Linn.	12
15	Saw Palmetto	<i>Serenoa repens</i> (W. Bartram)	12
16	Fenugreek	<i>Trigonella foenum-graecum</i> L.	12
17	Garlic	<i>Allium sativum</i> Linn.	11
18	Rhodiola	<i>Rhodiola rosea</i>	10
19	Yohimbe	<i>Pausinystalia johimbe</i>	10
20	Ginkgo	<i>Ginkgo biloba</i>	8

S. No	Na36mes	Botanical names	Average sales [in million USD]
21	Elderberry	<i>Sambucus nigra</i> Linn	8
22	Coconut oil	<i>Cocos nucifera</i> Linn.	8
23	Maca	<i>Lepidium meyenii</i> Walp	7
24	Cinnnamon	<i>Cinnamomum verum</i>	7
25	Ginseng	<i>Panax ginseng</i>	6
26	Senna	<i>Senna alexandrina</i>	5
27	Boswelia	<i>Boswellia serrata</i>	5
28	Guarana	<i>Paullinia cupana</i>	5
29	Acai	<i>Euterpe oleracea</i>	5
30	Horny Goat Weed	<i>Epimedium saggitatum</i>	5

S. No	Names	Botanical names	Average sales [in million USD]
31	Red yeast rice	<i>Monascus purpureus</i> Went.	4
32	Mate	<i>Ilex paraguariensis</i> A.St.-Hill.	4
33	Fennel	<i>Foeniculum vulgare</i> Mill.	3
34	Cannabis	<i>Cannabis</i> spp.	3
35	Green Coffee extract	<i>Coffea robusta</i> Linn.	3
36	Aswagandha	<i>Withania somnifera</i> Dunal	3
37	Goji Berry	<i>Lycium chinense</i> Mill.	3
38	St. John's Wort	<i>Hypericum perforatum</i> Linn.	2
39	Wheatgrass/ Barley	<i>Hordeum vulgare</i> Linn.	0.9
40	Burdock	<i>Arctium lappa</i> Linn.	0.8

Curcuma longa Linn.

It has long had medicinal herbal use, particularly in Ayurvedic medicine, and a rhizome constituent, curcumin, is currently exciting scientific interest for its potential in treating a range of diseases.

- **Family:** Zingiberaceae
- **Common Name:** Turmeric, Haridra
- **Distribution:** India, tropical southeast Asia
- **Part Used:** Rhizomes
- **Folk-lore uses:** blood purifier, remedy for inflammatory conditions including psoriasis, and digestive and liver disorders.
- **Ayurvedic Therapeutic Use:** Improves skin complexion (Varnya), Skin diseases (Tvag Roga), Blood purifier (Raktvikar), Wounds and ulcers (Vrana)
- **Modern Use:** Clinical trials have shown it is effective in reducing the symptoms of rheumatoid arthritis and post-operative inflammation / Dyspeptic complaints / Loss of appetite/ Management of Plaque Psoriasis and scalp psoriasis. Promotes Immunity and is anti allergic.
- **US sales turnover: 34 million USD**



Zingiber officinale Rosc.

Ginger was highly recommended by none other than Confucius, who is reputed to have flavoured all his food with it. It has many medicinal uses, including treating motion sickness and nausea.

- **Family:** Zingiberaceae
- **Common Name:** Ginger, Adrak, Sunthi
- **Distribution:** South eastern Asia
- **Part used:** Rhizomes
- **Folk-lore uses:** It is traditionally used to relieve various conditions associated with “cold” symptoms as well period pain, cold hands and feet, arthritis and rheumatism.
- **Ayurvedic Therapeutic Use:** Flatulence (Adhmana), Digestive impairment (Agnimandya), Distended abdomen (Anaha).
- **Modern Use:** It is Carminative, expectorant, and astringent. Ginger has been clinically proven as a safe, effective remedy for the prevention and treatment of nausea. It can also benefit other digestive symptoms such as indigestion, colic and flatulence. Also useful in loss of appetite, travel sickness and dyspeptic complaints.
- **US sales turnover: 14 million USD**



Allium sativum Linn.

The Sumerians planted *Allium* sp. more than 5000 years ago, while the ancient Egyptians had about 8000 medicinal uses for them. During World War I, garlic juice was used in field dressings to prevent gangrene.

- **Family:** Liliaceae
- **Common Name:** Garlic, Lasun
- **Distribution:** Central to Southern Asia, Mediterranean region
- **Part used:** Bulbs
- **Folk-lore uses:** A potent natural antibiotic can help to prevent and treat infections of lungs and is a traditional cure for coughs and colds. Use as antimicrobial, in the treatment of gastrointestinal infections.
- **Ayurvedic Therapeutic Use:** Jirna, Jvara, Krimiroga, Gulma, Kustha, Arsa, Kasa and Svasa.
- **Modern Use:** In modern studies it is found suitable for Arteriosclerosis, Hypertension, high cholesterols. Garlic produces a number of beneficial effects on the cardiovascular system, many of which have been confirmed by clinical trials.
- **US sales turnover:** 11 million USD



Aloe vera (L.) Burm. F.

The Ancient Egyptians called it the “Plant of Immortality” and Cleopatra used its juices to help preserve her beauty. It is a succulent plant with very fleshy light green leaves and create a fan from the stemless base.

- **Family:** Liliaceae
- **Common Name:** Aloe, Ghrita kumari,
- **Distribution:** Africa, naturalized throughout the world
- **Part used:** Leaves
- **Folk-lore uses:** Best known for healing of burns, Anti-inflammatory and healing properties.
- **Ayurvedic Therapeutic Use:** Jvara, Udararoga, Kastartava, Yakrdvikara
- **Modern Use:** Preliminary research indicates that they may be beneficial in a range of conditions, including non-insulin-dependent diabetes mellitus and high blood lipid levels.
- **US sales turnover:** 17 million USD



Foeniculum vulgare Mill.

Some varieties of fennel have a particular sweetness and some ornamental qualities, while other are eaten as a vegetable or used to flavour pickles and baked goods. No wonder Charlemagne demanded in 812 that fennel be planted in every monastery garden.

- **Family:** Umbelliferae / Apiaceae
- **Common name:** Saunf, Fennel
- **Distribution:** Middle East, Eastern Africa, India
- **Part used:** Ripe fruits (Seeds), Leaves, stem
- **Folk-lore uses:** Fennel has calming effect on the digestive system, relieving flatulence, bloating and abdominal discomfort.
- **Ayurvedic Therapeutic Use:** Sula, Agnimandya, Kasa, Pravahika, Raktadosa, Arsas.
- **Modern use:** Fennel has long been used to treat respiratory complaints with catarrh and coughing, and is suitable for treating these conditions in adults and children.
- **US sales turnover:** 3 million USD



Linum usitatissimum Linn.

Beautiful blue flowered flax is one of the oldest known crop plants. It produces a fibre that's used to make linen and flaxseed oil, also known as linseed oil, which is a source of linolenic acid (omega-3). Seeds, whole or cold milled are used in cooking.

- **Family:** Linaceae
- **Common Name:** Flaxseed, Linseed, Alsi
- **Distribution:** Cultivated in temperate & tropical regions
- **Part used:** Whole plant, seeds, stems
- **Folk-lore uses:** Internal - irritable colon, diverticulitis and as mucilage for gastritis and enteritis. Decoction is used for bladder catarrh and inflammation, gastritis.
- **Ayurvedic Therapeutic Use:** Krimiroga, Kustha, Prameha, Siroroga
- **Modern Use:** Modern studies shows usefulness in Constipation and Inflammation of the skin
- **US sales turnover:** 24 million USD



Withania somnifera (L.) Dunal

Ashwagandha is an evergreen shrub that grows in India and has a long history of use in traditional medicine. The herb is also known as Indian ginseng.

- **Family:** Solanaceae
- **Common Name:** Ashwagandha, Winter cherry
- **Distribution:** India, Middle East and Parts of Africa
- **Part used:** Roots
- **Folk-lore uses:** It can reduce anxiety and stress, help fight depression, boost fertility and testosterone in men, and even boost brain function.
- **Ayurvedic Therapeutic Use:** Rejuvenates the body (Rasayan), Increases strength (Balya), Antidepressant (Avasadak), Neurological Disorders (Vatavyadhi).
- **Modern Use:** Promotes physical fitness, Strong Rejuvenator, Promotes sleep, Aphrodisiac, Supports fertility, an easy and effective way to improve health and quality of life.
- **US sales turnover: 3 Million USD**



Boswellia serrata Roxb. Ex Colebr.

Boswellia is a multiple-use tree species used for fodder, timber and is tapped for an oleo-resin. The main commercial uses of *B. serrata* oleo-resin are medicinal, religious, and in cosmetics and perfumery. India is the only producer of *B. serrata* oleo-resin, mainly from the states of Madhya Pradesh, Andhra Pradesh, Gujarat and Jharkhand.

Family: Burseraceae,

- **Common name:** Shallaki, Salai gugal, Kundur, Indian Frankincense, Indian Olibanum
- **Distribution:** India, Pakistan, Sudan, Somalia, Africa
- **Part used:** Gum – Oleoresin
- **Folk-lore Uses:** The gum resin is used in the treatment of chronic lung diseases, diarrhoea, dysentery, pulmonary diseases, menorrhoea, dysmenorrhoea, gonorrhoea, syphilitic affection, piles and liver disorders.
- **Ayurvedic Therapeutic Use:** Jvara, Pradara, Mukharoga, Uka
- **Modern Use:** The oleo-gumresin contains α , β and γ boswellic acid having antitumor, analgesic and sedative properties. It contains marked anti-inflammatory and anti-arthritic activity.
- **US sales turnover: 5 Million USD**



Cassia angustifolia Vahl Pennel

An annual leguminous herb cultivated extensively in the southern parts of the country for its pods and leaves which are used in Ayurveda as well as in modern system of medicines. It is mainly valued for cathartic properties and is specially useful in constipation.

- **Family:** Fabaceae
- **Common names:** Senna, Sonamukhi, Indian Senna,
- **Distribution:** India, Saudi Arabia, Egypt, Yemen
- **Part used:** Leaves and Pods
- **Folk-lore Uses:** Historically, Senna was used in the form of senna pods, or as herbal tea made from the leaves, as a laxative.
- **Ayurvedic Therapeutic Use:** Udararoga, Vibandha
- **Modern Use:** Modern medicine has used extracts since at least the 1950s as a laxative. Senna is an FDA-approved nonprescription laxative. It is used to treat constipation and also to clear the bowel before diagnostic tests such as colonoscopy. The laxative principles sennoside A and sennoside B, isolated from leaves and pods of senna, constitute important ingredients in purgative medicines.
- **US sales turnover: 5 Million USD**



Garcinia indica

Garcinia indica is evergreen trees and dioecious in nature. It is a tropical fruit and popular for its weight loss properties. The fruit is a berry with fleshy endocarp.

- **Family:** Guttiferae / Clusiaceae
- **Common Name:** Malabar Tamarind, Brindleberry, Kudam puli
- **Distribution:** India, Indonesia, Sri Lanka, Malaysia, Africa
- **Part used:** Fruits
- **Folk-lore uses:** It is being used for diabetes, cancer, ulcers, diarrhea, and constipation, extract supplements can help speed up weight loss, reduce appetite, and boost exercise endurance.
- **Ayurvedic Therapeutic Use:** Anaha (Distension of abdomen due to obstruction to passage of urine and stools), Ajrna (Indigestion), Arsa (Piles), Aruci (Tastelessness), Gulma (Abdominal lump), Hidroga (Heart disease), Sula (Pain / Colic), Vibandha (Constipation).
- **Modern Use:** The rind contains a chemical called hydroxycitric acid (HCA), which has been studied for its effect on appetite. Garcinia supplements with HCA are marketed for weight loss.
- **US sales turnover: 22 Million USD**



Trigonella foenum-graecum L.

Fenugreek is an erect, annual, aromatic herb, up to 30-45cm high. Fresh tender pods, leaves and shoots which are rich in iron, calcium, protein, vitamins A & C, are eaten as curried vegetable since ancient times in India, Egypt and other countries. Seeds are used as condiments.

Family: Fabaceae

- **Common name:** Methi, Fenugreek, Bird foot, Greek hayseed
- **Distribution:** Indian subcontinent, Eastern Mediterranean Region, China, North & East Africa, Ukraine and Greece.
- **Part used:** Seeds and Leaves
- **Folk-lore uses:** It prevents constipation, removes indigestion, stimulates the spleen and is appetizing and diuretic. It also controls diabetes. Fenugreek leaves paste use for long and lustrous hair.
- **Ayurvedic Use:** Grahani, Jvara, Prameha, Aruci
- **Modern Use:** Bioactive compounds isolate from fenugreek seeds include saponins (fenugreekine, Protodioscin, diosgenin), alkaloids (trigonelline, gentianine, carpaine), amino acids (4-hydroxyisoleucin, arginine), flavonoids, etc. It is well known for anti-diabetic.
- **US sales turnover: 12 Million USD**



Important Observation

- **Out of 16 top Indian medicinal plants nearly 5 are already being exported in large volume.**
- **For rest we have huge opportunity and we need to put more efforts to increase their export volume.**
- **Considering our strength in having different agro-climatic conditions, India should consider to domesticating some exotic medicinal plants which have huge demand in international market.**
- **Simultaneously we need to focus on Quality Planting Material, Cultivation Protocols Validation, Value Addition and Capacity Building at primary level.**

**Schemes of Govt. of India for
Enhancing Potential and Sustainable
Utilisation of Medicinal Plants**

Ministry of Environment, Forest and Climate Change (MoEFCC)

- **National Afforestation Program**
- **National Mission for Green India**
- **Joint Forest Management Programme**
- **Compensatory Afforestation Programme**

NMPB -Central Sector Scheme on Conservation, Development and Sustainable Management of Medicinal Plants

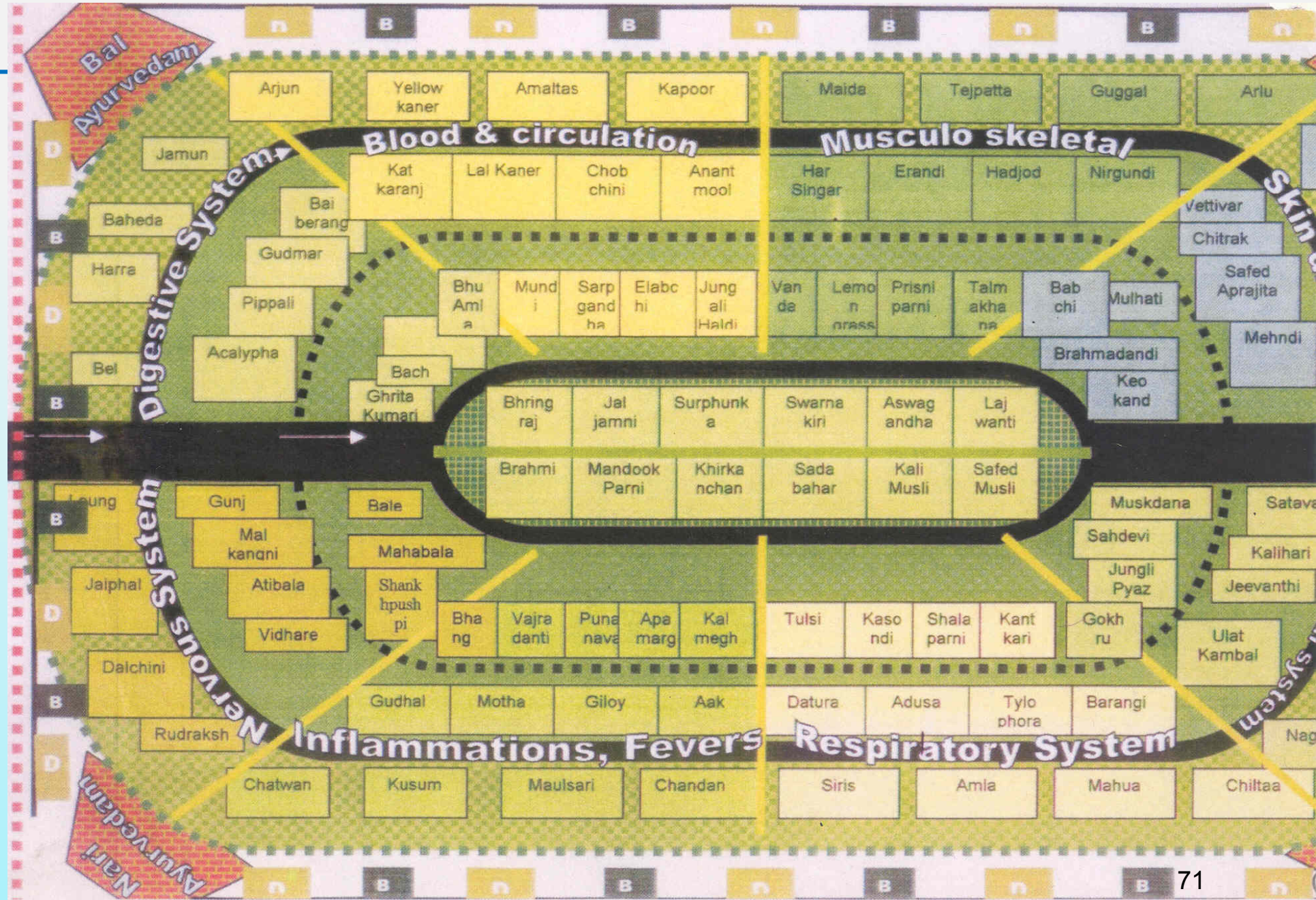
- **99,137.20 ha of Conservation & Resource Augmentation of MAPs in forest areas**
- **50,483 ha of cultivation of MAPs under contract farming (2000-09) and 2,27,348 ha of cultivation under Center Sponsored Scheme/NAM (2009-2020) covering 85 species**
- **Subsidy @ 30%, 50% & 75% of cost of cultivation as per species per ha**
- **14 projects under NMCG - Namami Gange program with Rs. 15 Cr (2016-20)**
- **1,254 nurseries and 9 seed germplasm centers have been supported by NAM**
- **36 medicinal plant QPM nurseries are supported under CSS**
- **603 PHM (Post Harvest Management) units / warehouses were created**
- **1,160 number of JFMC/ Van Panchayat / BMCs supported for value addition.**

Major Components of the Scheme

- **Setting up of Medicinal Plants Conservation & Development Areas (MPCDA) including upgradation of existing MPCAs.**
- **In-situ resource augmentation through assisted natural regeneration.**
- **Ex-situ conservation- Plantation of Medicinal Plants outside designated forests.**
- **Engaging Eco Task Force involving ex-servicemen/ Territorial Army for rehabilitation of critical Medicinal Plant Habitats**
- **Support to Joint Forest Management Committees (JFMCs)/ Panchayats/ Van Panchayats/SHGs/BMCs for setting up of local cluster for value addition, drying, warehousing and augmenting marketing infrastructure, etc.**
- **Research & Technology Development and Quality Assurance**



Herbal Garden at President House, New Delhi, India



Support to Joint Forest Management Committees(JFMCs)/ Panchayats/ Van Panchayats/BMCs/SHGs

- **Support for creation of facilities such as value addition, drying, cleaning, grading, processing, extracting, warehousing etc.**
- **Marketing support will be provided for organizations of stakeholders.**
- **Packaging/ handling equipment, testing facilities for individual JFMC or pooled facilities.**
- **Support for limited resource augmentation and production of seedlings of Medicinal Plants.**
- **Capacity Building of primary collectors, Women Self Help group (SHG) for livelihood augmentation of local communities.**

Cost Norms at a glance

Sl. No.	Component	Cost Norm	Remarks
1	In-situ conservation		
	A) Establishment of Medicinal Plants Conservation and Development Areas (MPCDAs)	Rs. 20,000 per hectare	100% Central Assistance
	B) Revisit and up gradation of MPCA	Rs. 5000/- per hectare	100% Assistance
	C) Assistance for mainstreaming Medicinal Plants in Management/Working Plans	Rs. 1.5 lakh per forest Division/ Wildlife Division	100% Assistance
	B) in-situ resource augmentation	Cost norms of MoEFCC under National Afforestation Programme	100% Assistance

Sl. No.	Component	Revised Cost Norm	Remarks
2	Ex-situ conservation		
	i) ex-situ conservation	Cost norms of MoEFCC under CSS National Afforestation Programme	
3.	Eco Task Force for rehabilitation of critical medicinal plant habitats		
	Eco Task Force	Project based	100% assistance to the eligible organization
4.	Support to JFMC/ Panchayats/Van Panchayats/ SHGs		
	Value addition, drying, warehousing and augmenting marketing infrastructure etc.	Rs. 15 lakhs per JFMC/ Panchayats/Van Panchayats/ SHGs/BMCs	100% assistance per JFMC/ Panchayats/Van Panchayats/ SHGs/BMCs

Sl. No.	Component	Cost Norm	Remarks
5.	Research, Technology Development and Quality Assurance		
	i)R&D Projects on theme areas	Project based	100% assistance for Govt. Institutions/PSUs, Govt. Aided Institutions etc. and Non-profit making Philanthropic Organizations with requisite expertise. 50% assistance for projects received from private sector organizations.
	ii)Network research projects involving two or more institutions	Project based	100% assistance for Govt. Institutions/PSUs, Govt. Aided Institutions etc. and Non-profit making Philanthropic Organizations with requisite expertise. 50% assistance for projects received from private sector organizations.
	iii)Raw drug repository	Rs. 10 crores for national and Rs. 5 crores for regional	100% assistance to Govt. Institutions/PSUs. For private organizations assistance would be decided by SFC in project mode.

Sl. No.	Component	Revised Cost Norm	Remarks
6	Awareness Building, Exposure Visits, Education and Capacity Building of Stakeholders through IEC		
	Workshops/Seminar/Arogya	a) Rs. 1.00 lakhs for District level, b) Rs. 2.00 lakhs for State level, c) Rs. 3.00 lakhs for Regional level, d) Rs. 5.00 lakhs for National level, e) Rs. 10.00 lakhs for International level.	100% assistance

S. No.	Component	Revised Cost Norm	Remarks
	Participation in exhibition/ fair	For participation by other Agencies a) Rs. 1.00 lakh for State level, b) Rs. 2.00 lakhs for National level c) Rs. 3.00 lakhs for International level	100% assistance for Govt. Organizations For Private organizations including industries 50% of the prescribed cost or actual expenditure whichever is less
7	PROMOTION OF HERBAL GARDENS		
	Herbal Gardens of State and National Importance	As per the project proposal	100% assistance
	Institutional/ Public Herbal Garden	a) Rs. 3 lakhs per hectare for establishment b) Annual maintenance of the Herbal Garden @ upto Rs. 60,000/- per year per ha. for next four years.	100% assistance

Ministry of AYUSH and National Medicinal Plants Board (NMPB)

Achievements in medicinal plants under National AYUSH Mission

Cultivation of medicinal plants (area covered)	48379 ha.
Nurseries	199
Post-Harvest Management (Drying sheds/driers, storage & godowns)	328
Marketing infrastructure (DCC / RCC / Retail Outlets)	38
Seed Germ Plasm Centres	9

“Medicinal Plants” Component under Centrally sponsored Scheme of National AYUSH Mission (NAM)

Medicinal Plants Component under NAM

- supports cultivation of medicinal plants on farmers land**
- establishment of nurseries for supply of planting materials**
- post-harvest management**
- processing, marketing infrastructure etc.**
- Subsidy @ 30%, 50% & 75% based on cost of cultivation**
- Presently 140 species prioritized for cultivation**

COMPONENTS OF THE SCHEME & NORMS OF ASSISTANCE

Sl.No.	Programme	Estimated Cost	Admissible Assistance
1.	NURSERY		
	Production of planting material		
	a) Public sector		
	i) Model nursery (4 ha.)	Rs. 25 lakhs	Maximum of Rs. 25.00 lakhs
	ii) Small Nursery (1 ha.)	Rs. 6.25 lakhs	Maximum of Rs. 6.25 lakhs
	b) Private Sector (Initially on Pilot basis)		
	i) Model nursery (4 ha.)	Rs. 25 lakhs	50% of the cost limited to Rs. 12.50 lakhs
	ii) Nursery (1 ha.)	Rs. 6.25 lakhs	50% of the cost limited to Rs. 3.125 lakhs
2.	CULTIVATION		
	i) Species that are highly endangered and in high demand by AYUSH industry	As per <u>Annexure – I</u>	75% of the cost of cultivation

COMPONENTS OF THE SCHEME & NORMS OF ASSISTANCE...

S.No.	Programme	Estimated Cost	Admissible Assistance
	ii) Species that are endangered and sources of supply are declining	As per <u>Annexure – I</u>	50% of the cost of cultivation
	iii) Other species in demand by AYUSH industry and for exports	As per <u>Annexure – I</u>	30% of the cost of cultivation
3.	POST HARVEST MANAGEMENT		
	i) Drying sheds	Rs. 10.00 lakhs	100% assistance for Govt. / Semi-Govt. / Public Sector and 50% for SHGs / Cooperatives / Private Sector

COMPONENTS OF THE SCHEME & NORMS OF ASSISTANCE....

Sl. No	Programme	Estimated Cost	Admissible Assistance
	ii) Storage Godowns	Rs. 10.00 lakhs	100% assistance for Govt. / Semi-Govt. / Public Sector and 50% for SHGs /Cooperatives/ Private Sector
4.	PROCESSING AND VALUE ADDITION		
	i) Processing unit	Rs. 400 lakhs	100% assistance in case of Govt. / Semi-Govt. / Public Sector limited to Rs. 400 lakhs / unit.
	ii) Organic / GAP certification	Rs. 5 lakhs for 50 ha.	As per NHM
	iii) Demonstration plots	-	Project based depending upon species cultivated and infrastructure created limited to Rs. 10.00 lakhs / plot of minimum 2 acres
	iv) Setting up of seeds / germplasm centres	-	Rs. 25 lakhs / centre

COMPONENTS OF THE SCHEME & NORMS OF ASSISTANCE....

Sl. No.	Programme	Estimated Cost	Admissible Assistance
	v) Market promotion	Rs. 10 lakhs	50% of the project cost
	vi) Market Intelligence	Project based	Project based
	vi) Buy back intervention	Project based	Project based
	vii) Marketing infrastructure:-	<ul style="list-style-type: none"> - Rs. 20 lakhs for rural collection center - Rs. 200 lakhs for district collection center 	Project based. 100% assistance to Public sector and 50% assistance to Private sectors /SHGs/ Cooperatives
	viii) Testing charges reimbursement	50% of testing charges maximum Rs. 5,000/- test	
	ix) Crop insurance	50% of premium	

Welcome to Vindhya Herbals
A Unit of M.P. State Minor Forest Produce
(Trade & Development) Cooperative
Sanjeevani Ayurveda Kendra
Federation



M.P. STATE MINOR FOREST PRODUCE (TRADE & DEVELOPMENT) CO-OPERATIVE FEDERATION, BHOPAL (UNDER M.P. STATE MINOR FOREST PRODUCE CO-OPERATIVE FEDERATION, BHOPAL) HAS ESTABLISHED A CHAIN OF SALE OUTLETS, NAMED "SANJEEVANI AYURVEDA KENDRA". THESE OUTLETS SELL VINDHYA HERBALS PRODUCTS AND SOME OUTLETS PROVIDES CONSULTATION OF AYURVEDIC DOCTORS AND SPECIALIZED DOCTORS. THERE ARE 27 "SANJEEVANI AYURVEDA KENDRA" OUTLETS IN MAJOR DISTRICTS OF MADHYA PRADESH



SCHEME MECHANISM

- **Fixation of MSP for the selected MFPs by Ministry of Tribal Affairs, based on the recommendation of a Pricing Cell within TRIFED.**
- **Procurement and marketing operation by State procurement agencies at the pre fixed MSP for which “Revolving Fund” is provided by Government of India.**
- **Creation of infrastructural facilities by State Agencies with the financial support from Government of India.**
- **Reimbursement of losses, if any, to State Agencies to the extent of 75% by Government of India.**
- **Government of India provides 75% of the financial support to State Agencies for different activities under the scheme. Rest 25% to be borne by respective State Governments.**

Revised Minimum Support Price of MFP on 1-5-2020

(in Rupee per KG)

Sl. No.	Minor Forest Produce	Existing MSP	Revised MSP
1	Tamrind with seeds (<i>Tamarindus indica</i>)	31	36
2	Wild Honey	195	225
3	Gum Karaya (<i>Sterculia urenus</i>)	98	114
4	Karanj seed (<i>Pongamia pinnata</i>)	19	22
5	Sal seed (<i>Shorea robusta</i>)	20	20
6	Mahua seed (<i>Madhuca longifolia</i>)	25	29
7	Sal leaves (<i>Shorea robusta</i>)	30	35
8	Chironji pod with Seed (<i>Buchannia lanjan</i>)	109	126
9	Myrobalan (<i>Terminalia chabula</i>)	15	15

STATE	IMPLEMENTATING AGENCIES
Andhra Pradesh	Girijan Cooperative Corporation Ltd.
Maharashtra	Maharashtra State Cooperative Tribal Development Corporation Ltd.
Gujarat	Gujarat State Forest Development Corporation Ltd.
Chhattisgarh	Chhattisgarh Minor Forest Produce (Trading & Development) Cooperative Federation Ltd.
Odisha	Tribal Development Co-operative Corporation of Orissa Ltd.TDCCOL
Odisha	Odisha Forest Development Corporation Ltd.
Madhya Pradesh	Madhya Pradesh Laghu Vanupaj Vyapar Avem Vikas Sahkari Sangh Ltd
Rajasthan	Rajasthan Tribal Areas Development Co. Federation Ltd.
Jharkhand	Jharkhand State Minor Forest Produce Cooperative Development & Marketing Federation Ltd.
Jharkhand	Jharkhand State Cooperative Lac Marketing Federation Ltd. (JHASCOI APF)

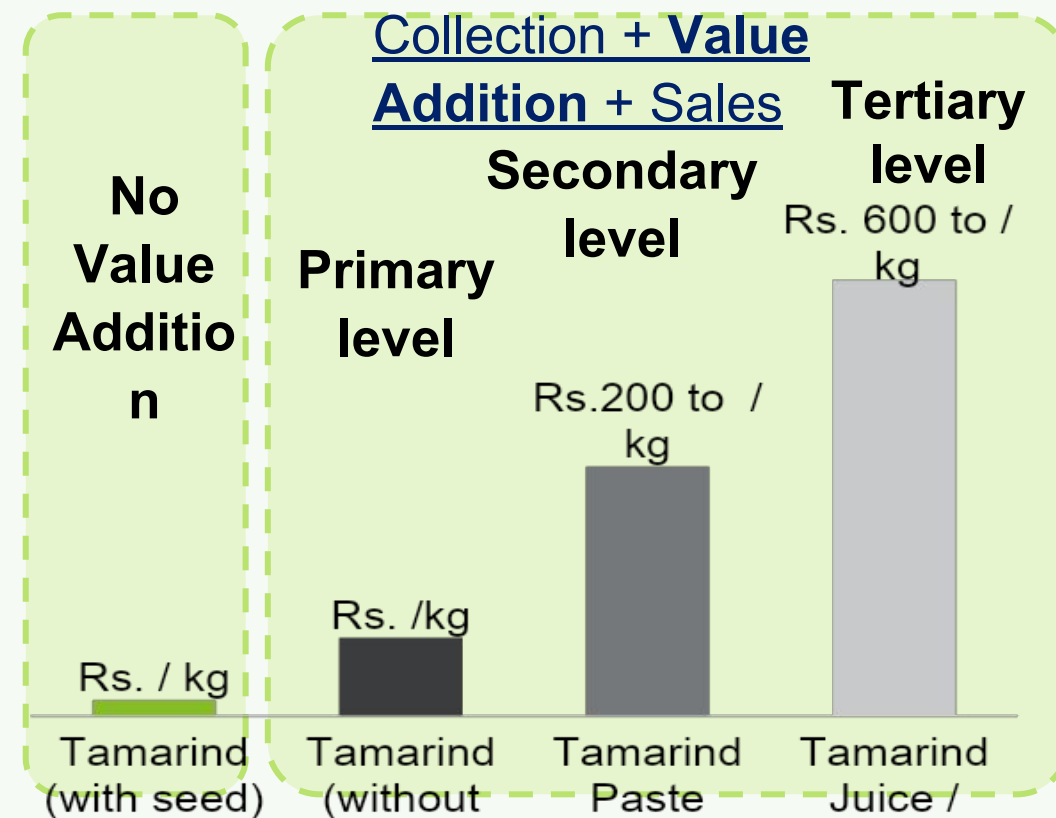
MSP for MFP Scheme Implementation Status

Rs. in Crore

Sl. No.	Particulars	Progress Till 31/03/2021	Progress During the Period From 1/4/2021 To 29/04/2021	Cumulative Progress (Till 29/04/2021)
1	MFPs procured by States under the Scheme MSP For MFP with GOI Funds (58 items)	190.43	13.31	203.74
2	MFPs procured with State Funds	793.65	0.30	793.95
3	Sub-Total	984.08	13.61	997.69
4	Revolving Fund released (18 States)	321	00	321
5	Infrastructure fund released (14 States)	88	00	88
6	Total Funds released under the scheme	1393.08	13.61	1406.69

PMVDY – What is Van Dhan?

- Initiative targeting **livelihood generation** for **tribals gatherers** and transforming them into **entrepreneurs**
- It shall promote and leverage the collective strength of tribals (through SHGs) to achieve scale
- Idea is to set-up **tribal community owned Van Dhan Vikas Kendras (VDVKs)** in predominantly forested tribal districts
- A Kendra shall constitute of 15 tribal SHGs, each comprising of upto **20** tribal NTFP gatherers or artisans i.e. about **300 beneficiaries per Kendra**
- About **3000 Van Dhan Vikas Kendras** are proposed to be set up across the country in a year, in the catchment area of **village haat bazaars**
- **Any tribal gatherer** who is into collection of MFPs or wants to start collection & value addition of MFPs can participate in the Scheme by being a part of the VDVK group



PMVDY – In summary

Rural SHG led Entrepreneurship model



Formation of Van Dhan Vikas Kendra (VDVK) - approximately 300 Member from 15 smaller Self Help Groups each of about 20 Members

Individual Contribution of Rs.1000 to Rs.5000 as per scale of Working capital requirements

Skilling/ Training



MFP Processing Equipment



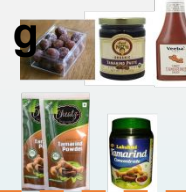
Storage and Logistics



Working Capital



Branding



Marketing



TRIFED funds Rs.1 Lakh per 20 member Groups (Rs.15 Lakhs per VDK) under PMVDY. Reasonable flexibility in expenditure heads is allowed under the Scheme Tool kits/ Equipment, Training , Processing, Packaging & Branding, Handling & Transportation, Storage etc. as approved by competent authority in the State in compliance with GFR

TRIFED has over 107 Retail outlets, Periodic Exhibitions (Aadi Mahotsav) and has already tied up domestic and international e-Commerce portals and will support SHG led Entrepreneurs in marketing their quality produces under VanDhan Naturals brand



Several replicable, scalable models of Van Dhan Kendras



**Mera Van Mera
Dhan Mera Udyam**

Strong foundations

**Achievements till Nov 2020 –
MSP for MFP & Van Dhan Yojana**



On ground implementation with excellent Stakeholder participation...

Large array of highly salable Natural Products



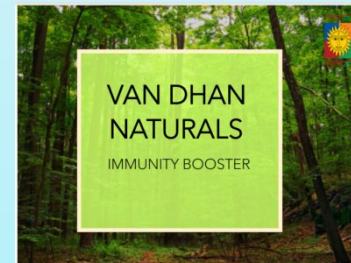
**Mera Van Mera
Dhan Mera Udyam**



To be marketed as
**IMMUNITY
BOOSTERS**

Strong foundations

**Achievements till June 2020 –
MSP for MFP & VanDhan Yojana**

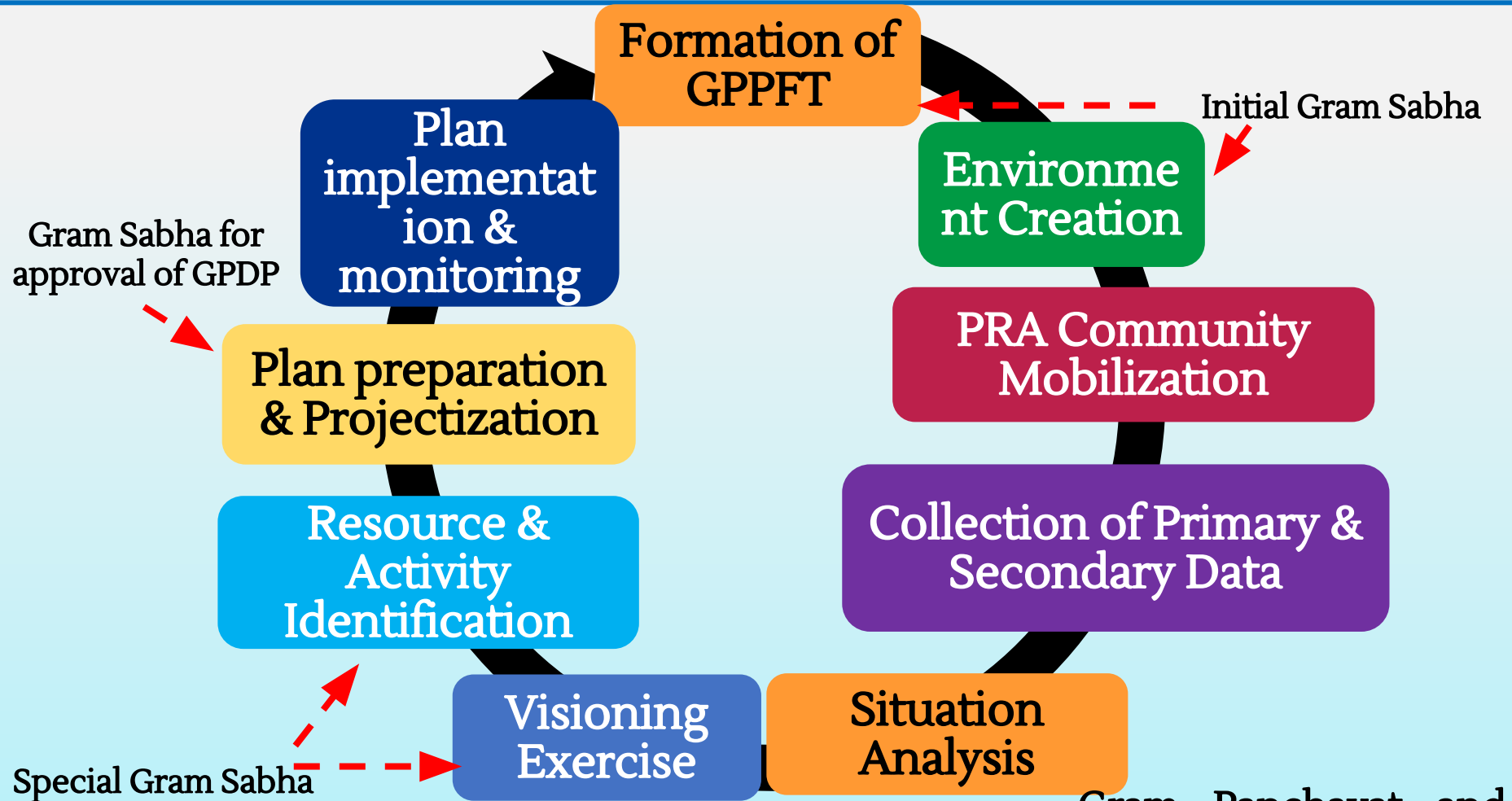


Pradhan Mantri Van Dhan Yojana

(Rs. in Crore)

	Particulars	Progress Till 31/03/2021	Progress From 1/4/2021 To 29/04/2021	Cumulative Progress (Till 29/04/2021)
I	No of States and UTs involved: (in Number)	25	0	25
ii	Van Dhan Vikas Kendras (VDVKs) approved/Sanctioned (in No)	37259	0	37259
iii	Tribal Entrepreneurs onboarded	6.62 Lakhs	0	6.62 Lakhs
iv	Cumulative amount sanctioned (Rs/Crore)	329.98	0	329.98
V	Sale made by Van Dhan Vikas Kendra Clusters- Van Dhan Naturals	7.43	0.41	7.84
vi	Sale of Handlooms & Handicrafts	28.37	1.28	29.65 Cr.

Preparation of GPDP



Gram Panchayat and its committee will take active part and ensure preparation of GPDP

PERMISSIBLE WORKS IN MGNREGA

Focus on

- Durable assets
- Productive/Income generation assets

Individual Assets

- Farm ponds, dug wells, etc.
- Vermi compost, NADEP Pits.
- Goatshed, Dairyshed, Poultry shed.
- Afforestation, Tree plantation etc.
- Land Development/Diversification.
- 90/95 days work in PMAY-Gramin.

Community Assets

- Major water conservation measures.
- Grameen Haats for Producers.
- Workshed for Women SHGs.
- Solid Waste management.
- Village Roads, Parks, Drains.
- Anganwadi buildings.

NATURAL RESOURCE MANAGEMENT (NRM)

- **181 works relate to NRM**
- **81 are exclusively on water.**

Mission Water Conservation launched in 2016 mandates **65%** expenditure on water related works in **2129 water stressed Blocks.**





Nursery (MGNREGA & Forest Dept.), Odisha



Block Plantation, Tamil Nadu

How to use Medicinal Plants for Sustainable Development of India? (1/2)

- Joint Forest Management Committee to be supported for developing potential and commercial Utilisation of medicinal plants
- Optimum resource augmentation to be ensured with help of JFMC
- Forest Departments / Corporation/ Federation should undertake plantation, gap filling and underplanting of NTFPs, particularly which are destructively harvested and endangered e.g. Ashok (*Saraca asoca*), Bijasal (*Pterocarpus marsupium*), Arjun (*Terminalia arjuna*) Ashwagandha (*Withania somnifera*), Kalmegh (*Andrographis paniculata*), Giloe (*Tinospora cordifolia*) etc.
- If required Medicinal Plants afforestation works may be taken with support from NMPB, MGNREGA etc.
- Right holders may be got selected as MGNREGA beneficiaries

How to use Forestry for Sustainable Development of India? (2/2)

- Forest Schemes particularly Green India Mission, NAEB, CAMPA etc. to give due weightage to medicinal plants in afforestation
- Medicinal plants to be integrated into Forest Working (Management) Plan
- ICFRE and State Forest Research Institutes should undertake research projects for developing agro-forestry models for NTFP species and sustainable harvesting of NTFPs, particularly which are destructively harvested e.g. Ashok (*Saraca asoca*), Bijasal (*Pterocarpus marsupium*), Arjun (*Terminalia arjuna*) etc.
- Promoting agro-forestry or cultivation of medicinal plants
- Ensuring marketing support through TRIFED or Forest Corporation
- Assessment of growing stock, harvesting, and export of NTFPs on annual basis with spatial and temporal analysis

CONCLUSION

The global acceptance and accelerated domestic growth will go a long way in boosting medicinal plants sector in India. There is great scope of medicinal plants sector in emerging national and global scenario. The adoption of market oriented strategy, production and marketing of quality medicinal plant products, active participation of Forest Department and supporting Ayurveda, Unani, Siddha and nutraceutical industries would go long way in creating enormous sustainable employment opportunities and making substantial contribution in the transformation of country.

THINK GLOBALLY AND ACT LOCALLY



THANK YOU