

(VI)

SCOPE OF CULTIVATION OF MEDICINAL AND AROMATIC PLANTS
IN JHARKHAND

Jharkhand State is rich in luxuriant forests. The total forest area is around 16,20,718 ha in 20 districts. The forests of Jharkhand are rich in medicinal and aromatic plants. Some of the important sites where medicinal herbs, shrubs and trees are found are :

1. Parasnath Hill - Giridih District
2. Karua Pahad - Dumka District
3. Sunder Pahadi - Godda District
4. Saranda Forest - West Singhbhum District.

Due to anthropogenic and other biotic factors, the forests are dwindling on a faster rate. The honey combing of forest villages and revenue hamlets is adding to the horrendous problem. On the other hand in recent years, there has been an increase in the demand for plant-based raw materials. This has increased the exploitation of forest for raw materials for herbal medicines. Therefore there is an urgent need for conservation of medicinal herbs, shrubs and trees in the forests. One way to achieve this Himalayan task is by encouraging cultivation of medicinal and aromatic plants outside the forest area. In consequence, the pressure of gradually increasing demand of medicinal herbs could be minimised on the natural forests. Thus more and more extinct herbs, shrubs and trees will be preserved from extermination.

This note enumerates possibilities of

cultivation of medicinal and aromatic plants in degraded forest area as well as in wastelands outside the forests. The land use pattern of different area of Jharkhand is given in Table 1.

Considering the data in Table 1, Jharkhand has tremendous opportunities of medicinal and aromatic species plantation. The action plan in this regard could be as under :

1. Identification of species.
2. Conservation of medicinal herb, shrubs & trees
3. Herbal gardens in barren vacant hills
4. Plantation of medicinal herbs, shrubs and trees on blank, semi-blank forest areas.
5. Encouragement of commercial cultivation of medicinal and aromatic plants outside the forest area.
6. Collection, processing and manufacturing of ayurvedic medicines, and
7. Formation of co-operatives of medicinal & aromatic plant growers.

Depending upon the soil, temperature and rainfall, Jharkhand State can be grouped into the following agroclimatic zones :

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|-------------|------------------|
| 1. Zone I | Singhbhum area |
| 2. Zone II | Ranchi |
| 3. Zone III | Palamau |
| 4. Zone IV | Santhal Parganas |

Table 1

Land use pattern of different area of Jharkhand

District	Land not available for cultivation ('000 ha)		Wasteland ('000 ha)	Total ('000 ha)
	Barren land	Land put to non-agri. use		
Sonthal Pargana	83	113	81	277
Hazaribagh	89	59	213	361
Giridih	53	45	180	278
Dhanbad	38	68	77	183
Ranchi	108	99	402	609
Palamau	84	43	338	465
Singhbhum	114	125	278	517
Total	569	552	1569	2690

5. Zone V Giridih
6. Zone VI Hazaribagh

The potentiality of species-wise plantation in different zones are as follows :

1. Zone I - Sarpagandha, Kamegh, Satavar, Muskdana etc
2. Zone II - Lemon grass, Bach, Aswagandha, Safed musli, Kalihari etc
3. Zone III - Kalmegh, Satavar, Aswagandha etc.
4. Zone IV - Kalmegh, Satavar, Aswagandha etc.
5. Zone V - Lemon grass, Palmarosa grass, Kalmegh, Sarpagandha, Safed mushi etc.
6. Zone VI - Lemon grass, Kalmegh, Safed mushi, Kalihari etc

A large expanse of land mass is not put to agricultural use in Jharkhand. This land could be effectively utilised by taking up three tiers of forestry activity. The problematic lands and their possible rehabilitation can be as shown in Table 2.

Due to increasing demand of plant based raw materials for pharmaceuticals, the business of crude drugs and intermediary chemicals stands at an estimated US\$2000 million worldwide. Hence, government policies should be formulated for encouraging farmers, tree growers to take up cultivation of medicinal and aromatic species. Due to its potentiality of land as well as labour, Jharkhand has the potential to become a leader in generating plant-based raw materials for pharmaceuticals and intermediaries in future.

Table 2

Problematic lands and their possible rehabilitation measures

Problematic type of land	Selection of species		
	Ground Tier	Middle Tier	Main tree
Lateritic, Rocky	Anantmul	Gudmar	Neern, Amla, Bel
Sandy Loam	Khas, Isabgol, Safed musli, Aswagandha, Akarkara	Sinduri	Bel, Khair, Arjun, Gambhar, Jamun
Saline Soil	Satavar, Khas	Adusa, Karonda, Ber	Neem, Amla, Babul, Harra, Arjun
Alkaline Soil	Khas	Gugal Karonda	Amla, Karanj, Arjun, Sissoo, Siris
Waterlogged areas	Bach, Brahmi, Manduk Parni	Gulbakawali	Arjun, Jamun, Eucalyptus

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