

## **PART - I**

### **CHAPTER—II**

#### **COMPOSITION AND CONDITION OF THE CROP**

1-2.1 According to Champion's standard classification the forests of Ranchi East Forest Division are as below:-

- (i) Northern Tropical moist deciduous forest 3b/c, (B2a)
- (ii) Northern Tropical dry deciduous forest b/c2

The following distinct types of forests are noticeable in different parts of this division.

1. Sal Forests.
2. Miscellaneous Forests.
3. Scrub with Lantana.

**1-2.2 SAL FORESTS:** - Sal is the pioneer species in Ranchi East Forests division. In some patches of narrow valley the crop tends to be moist. The forests in eastern, southern, central and northern zones are found every where but they have suffered badly from over-exploitation. Due to repeated cutting the crop is severely destroyed and have reached to sapling and rooted waste stage. In the central Zone the topography is easier and the forests have reduced in several places to patches of few acres by the intense pressure of population and cultivation. Commonly the crop consists of Sal saplings. The quality of Sal is IV of seedling origin and 'C' of coppice origin.

**1-2.3 The associates** of Sal are *Terminalia tomentosa*, *Diospyros melanoxylon*, *Buchanania la tifolia*, *Anogeissus la tifolia*, *Adina cordifolia*, *Butea frondosa*, *Albizia spp.*, *Lantana grandis*, *Boswellia serrata*, *Eagle marmelos*, *Ougenia dalbergoides*.

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#### **1. Sal Forests.**

1-2.3 The associates of Sal are *Terminalia tomentosa*, *Diospyros melanoxylon*, *Buchania latifolia*, *Anogeissus latifolia*, *Adina cordifolia*, *Butea frondosa*, *Albizia spp.*, *Lannea grandis*, *Boswellia serrata*, *Eagle marmelos*, *Ougenia dalbergoides*.

*Lagerstromia paiviflora*, *Embilca officinalis*, *Terminalia chebula*, *Terminalia belerica*, *Schleichera trijuga* etc.

**1-2.4** The common shrubs are - *Flemingia chhapar*, *Croton indigofera*, *Pulchella Wediandia excerta*, *Woodfordia floribunda*, *Symplocos racemosa* and *Holarrhen antidysentrica* etc.

**1-2.5** Amongst the climbers the following are prominent: - *Bauhinia' vahli*, *centilang adraspetana*, *Mullatia auriculata*, *Combretum decandrum*, *Spatholobus roxburg*, *Acacia pinnata* etc.

The devastation of forests has been heavy and some of the hills are either bare or having only a few poles over a bed of lantana and other thorny species

**1-2.6 MISCELLANEOUS FORESTS:** - There is a great impact of geology on distribution of the miscellaneous forests. Mostly dry deciduous miscellaneous are found in quartzite and Gondwana formation along with Sal. Compositions of crop are found according to aspect, biotic factors and miscellaneous forests occur in all the zones. Somewhere it is confined patch, else where it forms a continuous belt. In the eastern and south Tamar thana and part of Still the forests are driest in the division and few species are prominent. Sal mostly in sapling stage is seen mixed with ml spp. along Dhalbhum border. In upper storey are *Terminalia tomentosa*, .

*latifolia*, *Terminalia belerica*, *Terminalia chebula*, *Adina cordifolia*, *Madhuca latifolia*, *Butea frondosa*, *Diospyros melanoxylon*, *Hymenocallis excelsa*, *Cassia fistula*, *Bursaria serrata*, *Lagerstromia parviflora*, *Schleichera trijuga*, *Sterculia urens*, *Albizia Spp.*, *Buddleia marmelos* etc.

**1-2.7** In the under storey are found *Holarrhena antidysenterica*, *Antidesma diandrum*, *Croton oblongifolius*, *Nyctanthes arbor-tristis*, *Gardenia Spp.*, *Zizyphus Spp.*, *Acacia pinnata*. Invasion of Lantana is almost menacing in the plains. The commonest climbers are *Bauhinia vahili*, *Milletia auriculata* and *Combretum decandrum* etc. Sabal grass (*Eulaliopsis lineata*) is found in this division. Khair is noticeable rarely along the border of Hazaribagh division. Its occurrence is so limited and diameter size is so small that the commercial exploitation for manufacture of Katha is not possible.

**1-2.8 THORNY SCRUB WITH LANTANA :-** This is the dry deciduous scrub forest falling under group 2S/2 of Champion's classification. In Miscellaneous forest a distinct category of thorny scrub on bare hills can be recognized. This is noticeable in parts of Tamar, Kanke, Mahilong ranges, etc. In the Central zone of Ranchi East Forest Division due to intensive pressure of population and cultivation consequently hills are either bare or are seriously invaded by thick growth of thorny scrubs and mostly lantana. Eastern and Southern Zones have also suffered considerably from over felling as well as from shifting cultivation in the past. In Sonahatu thana nothing but bare hills occur. Glaring example of this type are Birgaon, Ichadih and Nawadih of Tamar Range, parts of Horhap Khalsa in Mahilong Range and Bhandra P.F. of Bero Range.

**1-2.10 INJURIES TO WHICH THE CROP IS LIABLE :-** Man is the most potent agency causing considerable damage to the forests. Damage by other agencies in fact may be considered negligible in comparison to the amount of damage by human agency alone. Damage by human agency may be classified as under.

**(A) IN-DISCRIMINATE CUTTING:** - Indiscriminate cutting and illicit felling are the real factors responsible for a disappearance of forest from many of the hills and

Plains which are now a mass of rock; or a bed of Lantana. The lazy habit of cutting the trees at breast height (pollarding) has resulted in malformed growth of crop and rendering the timber yielding capacity practically useless.

**(B) SHIFTING CULTIVATION:** - The practice of shifting cultivation has resulted in many blank patches or the invasion of Sal forests by miscellaneous spp. like Kend Piar or Thorny spp. By practising this shifting cultivation the forests loses its quality as more xerophytes species comes up after some time. Soil deterioration and sub-sequent soil erosion set in making it impossible for the original valuable species grow again.

**1-2.11 GRAZING:** - Grazing is one of the greatest factors causing serious destruction of forest wealth. The problem of grazing is alarming in forest in the vicinity of the villages. In remote areas it is comparatively less. Wherever g occurs the soil becomes very compact and hard,

resulting in erosion due to e run-off water. Consequently the soil becomes useless for seed germination. Se and saplings get mechanically damaged by trampling and browsing. Dama grazing is more conspicuous in the forests situated in the plains.

**1-2.12 FIRE:** - Forest fires in the hot weather are responsible for good deal of unsoundness and disease among the trees. Regeneration gets burnt. Growth gets retarded and humus layers are destroyed. Fire damage becomes easily conspicuous under the existing conditions. Natural fires are very rare and it is invariably caused by human action viz, accidental neglect and deliberate. Fires are caused by villagers to facilitate picking mahua flowers or to enrich fields by getting fields from the slopes, and also to get fresh crop of grass for their cattle during the subsequent season. Crown fires are unknown in this division. Surface or ground fire which prevalent in this region affects the ground vegetation only and scorches the boles of trees. Surface fire kills the cambium and makes the trees susceptible to insect attack. Ordinary fire kills the seedling and affects the germination.

In the scattered patches the damage by fire is limited to those patches and the fire does not spread. In the big forest blocks occurring on the district borders with Gumla, Hazaribagh and Singhbhum, the fires become extensive.

#### **DAMAGE BY OTHER AGENCIES.**

**1-2.13 FROST:** - Frost causes considerable damage to coppice shoots and young seedling particularly on the plateau above 3000's and the valley areas along the foot hills. In recent years the damage by frost has been so severe that it calls for; immediate attention and suitable silvicultural operations. The adverse effect of frost is noticeable in Chadlagi P.F. and Rorad P.F. of Pesrar Beat. It is alarming in Indhan of Jaria Range. The mortality is heavy along the river beds and in low-lying areas.

**1-2.14 DROUGHTS:** - No serious damage is caused to the existing forests by drought. But it does increase the difficulties in afforesting the dry eroded patches which are so• common along the exterior boundaries in the plain tracts. The dryness of the air, the dry and sterile nature of the soil and the prevalence of hot westerly winds render it difficult for the seedling to survive the hot weather.

**1-2.15 LANTANA:** - Lantana now have become a nuisance in parts of Angara, Bundu and Horhap beats. This is proving the worst vegetative pest and the menace is on the increase.

Lantana invariably invades the blank areas wherever it gets the opportunity. Though it serves as fire-wood in the deficit areas during dry season the harm caused by it over-weigh the small benefit.

It hinders the growth of Sal sapling which are invariably found hidden underneath. The problem should not be over looked and its eradication has got to be sought.

**1-2.16 CLIMBERS:** - Damage by climbers may be physiological and mechanical. They engulf the foliage of the trees and suffocate the plant and cause reduction in seed production. Plant may be broken, stems become damaged and fluting is caused. The commonest climbers, as already mentioned, are *Bauhinia*, *vahili*, *Milletia auriculata*, *Spatholobus roxburghii* and

*Combretum* *decandrum.* *in*  
scrubby dry areas *Zizyphus oenoplls* is very common. These climbers casue. considerable damage by arresting growth of trees and making them branches and crooked. Climbers suppress regeneration and hinder development of young crop damage by climbers is more in moister areas but on the whole attack by climbers in not appreciable in this division.

#### **PARASITES AND EPIPHYTES:**

**1-2.17** *Loranthus longifoious* is fairly common among the dense Sal pa laterite soil. The pest causes malformation in the tree stems which might even result in death of the tree. Another common parasite is *Viscum ariculatum*. But damage by it is less serious. Fungi are also met with. Damage by epiphytes is negligble.

**1-2.18 OTHER ANIMALS:** - Damage by other animals is negligible.

**1-2.19 INSECTS:** - Damage by Sal borers and defoliators is negligible.

## **PART—I**

### **CHAPTER — III** **UTILISATION OF THE PRODUCE** **Agricultural customs and wants of the population.**

**1-3.1 POPULATION AND THEIR MAIN PROFESSION:** The principal inhabitants in Ranchi **East Forest Division** are the aboriginal tribes the commonest being Oraons and Mundas. Among the non-aboriginals Momins are very common in Ranchi. In other thanas like Khunti, Tamar and Silli people of all religions and castes, mostly Hindus live in varying proportion. *The* trader class, the Baniyas, are concentrated in the towns and larger villages.

The main profession of the people is agriculture and the main crop is paddy. Cultivation is still in a backward condition and primitive methods continue to be employed. Three kinds of paddy are grown, namely Tewan which is harvested in June: Gora which is harvested in August and Ropa which ripens in October or November. Millet, pulses and Oil seeds are also grown. The Momins are engaged in weaving and manufacturing of bed sheets and towels on cottage scale. Landless people in the entire tract of Ranchi, Silli and elsewhere in smaller numbers depend for their livelihood on forest or by trade based on forest produce. In Tamar, Bundu and part of Silli thana, some of the population used to depend entirely upon cultivation of lac for their livelihood. With the dwindling of the lac trade the population has taken to other sources of livelihood e.g. stone sizing etc.

The industry of the tract dealt with consists of shellac manufacture, weaving, basket making, bin charcoal manufacturing etc. The industries are mainly of local importance except of course shellac which is exported with the coming of the Heavy Engineering Corporation and ancillary industries in and around Ranchi, most of the land less population are taking to industrial life.

**1-3.2 WANTS OF THE PEOPLE:** - The wants of the people are comparatively few and simple, especially those of the Adivasis and the poorer section of the population. The houses are chiefly made of mud-walls with Narial thatched roof. The use of bricks for house building is mainly confined to towns and sub-divisional head quarters. It is now spreading to places where townships are taking shape gradually and in blocks. The items of furniture are of simple nature. The public in general require timber for house building, agricultural implements and fuel.

Tree above 8" dia. are used for rafter and purlins. Bamboos are required for roof battens while chops (fibres) are used as ropes. Green brush wood (Jhank) is used as are food for cattle and the poorer section also eat Mahua flower besides fruits of kend and piar.

**1-3.3** The requirement of major and minor forest produce have been summarized in the following table:

	<b>Articles</b>	<b>Species used</b>	<b>Species</b>
<b>II</b>	<b>HOUSE BUILDING:</b>		
a)	Posts	Sal, Asan Sandan, Sidha, Sins, Kend, Dhaura and Parasu.	Sal, Asan Sandan
b)	Ridge Pieces	Sal, Parasu, Sidha, Asan and Panjan	Sal, and Parasu
c)	Rafter	Sal, Parasu, Sidha, Asan, Kend and Dhaura.	Sal, and Parasu
d)	Battens	Bamboo, Brushwood	Bamboo
e)	Door & Window Frames.	Bija, Jamun, Sal, Kusum, Gamhar	Sal, Panjan, Bi
f)	Door, & Window leaves	Bija, Jamun, Sal, Kusum Gamhar Mahua.	Karam, Gamh Sal Mahua.
<b>II</b>	<b>FURNITURE</b>		
a)	Tables	Sal, Bija, Gamhar.	Bija & Gamhar
b)	Chairs	Sal, Bija, Gamhar, Sissoo	Bija & Gamhar
c)	Benches	Sal, Bija, Gamhar.	Sal & Gamhar.
d)	Shelves	Sal	Sal
e)	Bed frames	Sal, Bija, Panjan, Sissoo	Panjan & Bija
f)	Boxes	Sal, Bija & Gamhar	Bija & Gamhar,
<b>III</b>	<b>AGRICULTURAL AND OTHER IMPLEMENTS</b>		
a)	Ploughs	Sal, Asan, Kusum.	Sal.
b)	Yokes	Sal, Gamhar,	Gamhar
c)	Leveling board	Asan, Sal.	Sal
d)	Handles of axes	Dhaura, Dhaman, Bamboo•	Dhaura & Bami
e)	Bahongi poles	Bamboo & Dhaman	.
f)	Drums	Gamhar.	

IV	CARTS:		
a)	Carts axle	Sandan, Dhaura, Kusum & Panjan.	Dhaura, Sanda
b)	Fallows	Sal, Panjan	Sal
c)	Hubs	Panjan	
d)	Spokes	Sal & Panjan	Panjan.

e)	Body frame of carts.	Sal, Dhauntha.	Sal & Dhauntha
V	<b>OTHER HOUSEHOLD:</b>		
a)	Dhenkis	Sal, Kusum	Sal.
b)	Samats	Sal, Asan, Kend.	Asan
c)	Combs, Grains, Oil	Papara, Gamhar, Salai, Shurkund.	Papara, Gamhar, Shurkun
d)	Koihus	Sal, jamun, Kusum.	Sal, Kusum
VI	Fuel:		
a)	Charcoal	Generally all species Sidha, Gunjan, Arjun, Sal, Asan,	Asan, Dhaura Panjan, Sal, Dharus.

### 1-3.4 The requirement of other minor forest produces are the following

(a) Bamboos are used for roof batens, house walls, fencing, baskets, bows and arrows. Turis and Doms require green bamboos making baskets and there by earning their livelihood.

(b) Rope and strings made of Sabai (*Fulaliopsis bimata*) and bark fibres Mahulan (*Bauhinia vahill*) for roofing.

- (c) Thatch grass ( *Heteropogon contortus*) for mat making.
- (d) Khajur leaves ( *Phoenix acualis*) for mat making.
- (e) Leaves of Sal and mahulan ( *Bauhinia vahlii*) for making cups and plates.
- (f) Flowers and fruits of mahua for food, liquor and edible oil, fruits of Kend, Jamun, *Gardenia gumifera* and *Gardenia latifolia*, ber, piar and kernel of seeds of piar called chiraunji for food and also for sale and barter etc.
- (g) Gethi a fleshy tuberous root of *Dioscorea* sps. Creeper is used as food.

**1-3.5 MARKETS AND MARKETABLE PRODUCTS :-** The bulk of the produce is consumed locally either in the villages or in the towns like Rañchi, Khunti, Silli, Tamar, Bero, Jariya etc. Ranchi is a large consuming centre. Timbers, Poles, Pit- Props, Tram line sleepers, and firewood from forests are exported through the railway station. Bamboos were also supplied to paper mills at Dalmianagar in a limited quantity. The locally manufactured bin (very limited) shellac and baskets are also exported elsewhere.

**1-3.6 LINES OF EXPORT: -** The main line of export is the Eastern Railway loop line from Sona East Banki Gomoh and the broad gauge line from Ranchi to Muri. The narrow gauge line between Ranchi and Lohardaga is not utilised much for transport of forest produce because of the difficulty in train shipment to broad gauge.

Only in a few cases some poles and firewoods are exported. The railway stations more commonly used for exporting the forest produce are Tatisilwai, Silli. There is a network of P.W.D. and District Board roads which help extraction of forest produce but still considerable parts of the forests have not developed due to the absence of roads. Besides these roads, Forest Department maintains a large number of feeder roads from the forests to the main roads for extraction of forest produce. In recent years much attention has been paid by the forest department for the development of the communication and extraction facilities. However further development of roads is needed.

**1-3.7 METHOD OF EXPLOITATION AND EXTRACTION :-** The exploitation of coupes and extraction of the forest produces there of are carried out by the State Trading Wing of the forest department while the exploitation, extraction and selling of Kendu leaf, other minor produces are carried out by the Jharkhand State Forest Development Corporation.

Fellings are done exclusively by Saw and its usefulness is still unknown to many of the labourers. Felling by axe is wasteful since the point of cutting can not be taken down sufficiently low. The wastage of timber on account of this high cutting by axe is considerable.

The forest produce is extracted by head load, Bullock carts, Motor truck. Bullock and Bullock carts are used to transport firewood by local people and right-holders. These carts with narrow wheels cut up and pulverised the kutchha surface of the forest road causing them dusty at places. This dust gets blown away by the wind or washed away by the rains exposing the under

lying rocks or stones and make the surface very rough and difficult at places. Quite a good quantity of firewood is taken out from the forests through head load also.

In hilly and precipitous area, the produce is carried by dragging to the loading points on the road. Sometimes this involves heavy cost if the road is far away from the coupe.

**1-3.8 WORKING SEASON:** - The work of felling and extraction starts about the middle of OCTOBER and last still the end of following JUNE.

## **PART—I**

### **CHAPTER -IV ESTABLISHMENT AND LABOUR SUPPLY**

**1-4.1 SUPERIOR STAFF:** - Since the creation of the division there has always been a Gazetted Officer of the rank of Deputy Conservator of Forests in charge of this division with his Head Quarter at Ranchi along with an Assistant Conservator of Forest. The Executive, clerical and other staff at present are as follows: -

	POST	Sanctioned strength	Working strength
A	D.F.O.	1	1
B	A.C.F.	2	7
C	<u>Range Officer of Forest</u> Foresters 20 22	7	7
	Forest Guards/Nakaguard	151	105
D	<u>Clerical staff</u> Head Clerk	1	1
	Assistant Clerk	12	12
E	<u>Menial Staff</u> Orderly Peons	14	10
	Chaukidars	7	6
	Dak Walla	2	2
	Malis and Sweeper	5	4
F	Jeep-Driver	1	2
G	Draftsman	1	1

H	DepoMoharir	3	---
I	Others	9	---

**1-4.2 LABOUR SUPPLY** :- Sufficient unskilled labourers are available locally for the working of coupe and for carrying out developmental programmes. It is fairly plentiful all the years round, except during the period of sowing, tending and harvesting of paddy crop when slight difficulty is felt.

1-4.3 However, towns like Ranchi and Khunti where industries are growing in recent years the difficulty in finding labourers is much experienced. The scarcity is further enhanced by the development works growing in and around Ranchi in community projects. As more and more development programmes advance procurement of labour locally will be a serious problem.

Skilled labour consisting of sawyers, carpenters, charcoal makers, basket makers, etc. are ordinarily easily available locally. In some cases masons carpenters are brought from outside.

## **PART -I**