The important minor forest produce of the region are bamboo, tendu leaves, myrobalans, lac, mahuwa flower, hides and horns, minerals, gum, kattha, kosa-cocoons, 'mahul leaves', 'baibirang', 'tikhoor', 'baichandi', honey and wax, thorn and barks, broom (phulbahari), tamarind, chil (shikakai), 'chironji', grasses, and 'tora seeds'.

The production of major forest produce has already been dealt with in chapter V.
BAMBOO

Bamboo is also ubiquitous in the forests of the region. It is utilized in housing and fencing purposes by the local population. Now, most of the bamboo output has been consumed by the paper mills at Amlai (District Shahdol) and Brijrajnagar (Orissa). Prior to the establishment of the paper mill at Amalai most of the output was being exported to the paper mill at Brijrajnagar.

Production

The region produces 80,158 tonnes of bamboo annually (App. XII). About 4 per cent of the production has been exploited through the Departmental agencies, 95 per cent by purchasers, and 1 per cent by the free granters and right holders. The maximum production comes from North Durg Division, which contributes 33.40 per cent to the production of the region. It produces 26,769 tonnes of bamboo annually. Other important bamboo producing Divisions are Raigarh, Kanker, Changbhakhar, Korea, South Bastar, South Durg, North Raipur, North Surguja, North Bilaspur, Bilaspur, and East Bastar. Their production is 15.38, 8.65, 7.88, 6.03, 5.10, 4.58, 4.51, 4.15, 3.82, 3.28, and 1.04 per cent of the region's total bamboo production respectively. Since most of the production has been exported to paper mills, the production areas are accessible to railheads, and production is also high in these Divisions.

Value (Fig. 27)

About 1.57 per cent of the total revenue of the
region is collected from bamboo (App. XIV). The annual revenue collection from bamboo is ₹1,424,490, which is equivalent to ₹22.95 per km² (App. X).

The revenue collection from bamboo is maximum in North Durg Division, where the value is ₹221,301, or 15.54 per cent of the region’s collection (App. XIII). Next is North Raipur Division where the collection of ₹220,322 has been recorded during the reported period and which is 15.47 per cent of the region’s total collection from bamboo. The value is ₹209,738 and 209,223 in Kanker and Bilaspur Divisions respectively and their contribution is equivalent to 14.72 and 14.69 per cent. In the region 12.89 and 10.24 per cent of revenue comes from South Bastar and North Bilaspur Divisions respectively. But, this fact changes while considering per km² value. It is maximum in Bilaspur Division which is ₹100.56, whereas the value is ₹79.98, 79.94, 55.42, and 43.93 in North Durg, North Raipur, Kanker, and South Bastar Divisions respectively.

Production Trend

Production is more or less regulated by consumption. This can be seen from the following facts. Bamboo production (App. IX) was 19,789 tonnes during pre-Plan i.e. the post-independence period (App. IX). It increased more than 299 per cent during 1966-67 — 68-69. The increase was recorded as 25 per cent during the First Five Year Plan, 26.46 per cent during the Second Plan, 102.25 per cent during the Third Plan, and 24.91 per cent during 1966-67 — 68-69. The remarkable change came during the Third Plan period with the establishment of the Orient Paper Mills, one of the major consumers of bamboo of the region.
The revenue collection was Rs. 353,245 during 1947-48 — 50-51, which increased to 303.26 per cent during 1966-67 — 68-69 (App. XI). The increase was maximum during the Third Plan period, i.e., 467.11 per cent. A remarkable change in the revenue collection was during the First and Third Plan periods. It was 155.74 per cent during the First and 133.62 per cent during the Third Plan period.

The rank of bamboo among the sources of revenue varies between the third and twelfth in the Divisions (App. XIV). Nine Divisions are in fourth rank and 4 in sixth rank, and one each in the third, fifth, eighth, ninth, and twelfth ranks (Figs. 29-33).

**TENDU LEAVES**

'Bidi' (Leaf cigarette) is a very common smoke in every part of the country. Tendu leaf is the most important raw material in ' bidi' manufacturing. It is used as a conical wrapper. About 60 per cent of the total tendu leaves production of the country comes from Madhya Pradesh (Shrivastava and Choubey, 1968, 216) and about 22 lac standard bags of the tendu leaves are annually collected in the State (Ibid, 215). One standard tendu leaf bag contains 1,000 bundles of 50 leaves each or 50,000 leaves. The region collects about 6.25 lac standard bags of tendu leaves annually (App. XII), which is 28.39 per cent of the State collection. About 75 per cent of the total production of the State is consumed locally and the balance is exported to the adjoining States (Ibid). Production

About 16.18 per cent of the region's collection comes
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SECOND ORDER
THIRD ORDER
FOURTH ORDER
FIFTH ORDER
INDEX

TIMBER
FIRE WOOD
BAMBOO
TENDU LEAVES
MINERALS

MAHUL LEAVES
BAM
TAMARIND
KOSA QOCOONS
TORA SEEDS
MAHUSA FLOWER

KAT THA (CATECHU)
BROOM
MYROBALANS
LAC

Boundaries - State, District, Forest Division

Source - Annual Administrative Report (forms 20 & 24) of Divisional Forest Offices

FIG. 29
from Raigarh Division, where the annual collection is more than 100,000 standard bags (App. XII). North Bilaspur Division produces 98,645 standard bags, i.e. 15.80 per cent of the region's production. Nearly 70 thousand standard bags of tendu leaves are produced from the forests of Kanker Division. South Durg and North Raipur Divisions collect 10.20 and 9.11 per cent of the region's collection respectively. The 'tendu' tree is found widely distributed in the forests of these Divisions. And the availability of cheap labour has been responsible for higher production in these parts. The lowest production is reported in East Bastar Division, where it is about 5,000 standard bags only; it is nearly 6000 standard bags in East Raipur Division. The high productive Divisions have the benefit of reilheads to find markets outside the region.

Value

The importance of tendu leaf can obviously be seen from appendix XIV. The collection of revenue from tendu leaves is highest of all forest produce. About 43.22 per cent of the region's total collection from forest comes from tendu leaves alone. The per km² collection is 9.87 per cent higher than that of timber and more than 10 times of firewood and about 30 times of bamboo. According to its importance in revenue collection in the Divisions it falls within the first three ranks. It has the first rank in seven Divisions, second in ten Divisions and third in one Division.

The maximum revenue from tendu leaves is collected in North Bilaspur Division, where the annual collection is more than Rs.171 lacs and per km² collection is Rs.2,929.48 (App. XI). In North Raipur Division the annual revenue collection is more than
Table 6.1

VALUE OF TENDU LEAVES

<table>
<thead>
<tr>
<th>Years</th>
<th>Average value (Rs.)</th>
<th>Variation (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1947-48 - 50-51</td>
<td>2,155,577</td>
<td>-</td>
</tr>
<tr>
<td>1951-52 - 55-56</td>
<td>1,318,409</td>
<td>- 38.84</td>
</tr>
<tr>
<td>1956-57 - 60-61</td>
<td>897,180</td>
<td>- 31.95</td>
</tr>
<tr>
<td>1966-67 - 68-69</td>
<td>39,213,855</td>
<td>1,037.80</td>
</tr>
</tbody>
</table>

(Source: Annual Administrative Report of Forest Divisions.

Rs.38 lacs and per km$^2$ collection is Rs.1,387.25. In South Durg Division the collection is recorded about Rs.29 lacs annually and per km$^2$ collection Rs.1,225.37. In Raigarh Division, where the production of tendu leaves is highest, revenue collection from tendu leaves is Rs.16 lacs where the per km$^2$ value comes to Rs.445.94. The lowest production is recorded in East Bastar Division where lowest revenue collection is recorded too. It collects Rs.1.74 lacs only or Rs.42.08 per km$^2$. It is followed by Korea Division, where collection is about Rs.3 lacs and per km$^2$ value is Rs.137.25. In North Bastar Division where total revenue from tendu leaves is reported as Rs.6.63 lacs the per km$^2$ value is slightly higher than that of Korea Division, i.e. Rs.137.93 per km$^2$.

Production Trend

Considering its production in terms of revenue, wide fluctuations were recorded. The revenue collection from tendu leaves was Rs.2,155,577 during pre Plan i.e. the post-Independence
period. It was followed by a decrease in revenue by 38.84 and 31.95 per cent during the First and Second Five Year Plans respectively. During the Third Five Year Plan an increase of 284.14 per cent was recorded. It was probably an impact of the nationalisation of tendu leaves' trade by the State Government in the year 1965. Again a great increase of 1,037.80 per cent has been recorded during 1966-67 — 68-69. The variation was more than 18 times of that collected during 1947-48 — 50-51.

HARRA (MYROBALANS)

Production

'Harra' is produced 25.40 per cent in Kanker Division, 15.77 per cent in North Bastar Division and 13.28 per cent in East Bastar Division (App. XIII). The forests of Bastar District give 57.16 per cent of the region's production. It is due to the aboriginal women's daily routine to collect 'harra' and 'mahuwa', which fall from the trees (Agarwal, 1968, 151). The value of the production of South Raipur, Raigarh, East Raipur, South Durg, Changbhakhar, North Surguja, Jashpur, and Korea Divisions is 9.95, 8.97, 7.57, 3.46, 2.67, 2.66, 1.95, and 1.95 per cent respectively. The production is recorded comparatively higher in tribal areas, where fruit gathering from forest is a traditional source of their livelihood.

Value

The contribution of myrobalans to the income of the region is only 0.08 per cent (App. XIV). In Kanker Division it gives the highest collection of Rs. 18,470 or Rs. 4.88 per km². Per km² collection is Rs. 3.21, 2.44, 2.38, 2.33, 1.84, and 1.06 in
South Raipur, East Raipur, North Bastar, East Bastar, Raigarh, and South Durg Divisions, respectively. Lowest per km² collection (Rs.0.01) is recorded at Bilaspur Division, where the total collection is also lowest, i.e. Rs.20 only. Its share in the revenue of North Raipur and Bilaspur Divisions is negligible. The region as a whole collects Rs.72,686 annually or Rs.1.17 per km².

According to its share in the income of the Division, 3 Divisions fall into fifth rank, 2 each in sixth and seventh, 3 each in eighth and ninth, 2 in tenth, and 1 each in eleventh, twelfth and seventeenth (Figs. 29-33).

Production Trend

<table>
<thead>
<tr>
<th>Years</th>
<th>Average value (Rs.)</th>
<th>Variation (%)</th>
<th>% variation in relation to 1947-48 = 50-51</th>
</tr>
</thead>
<tbody>
<tr>
<td>1947-48</td>
<td>267,248</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1951-52</td>
<td>353,353</td>
<td>32.22</td>
<td>32.22</td>
</tr>
<tr>
<td>1956-57</td>
<td>64,431</td>
<td>-81.77</td>
<td>-75.89</td>
</tr>
<tr>
<td>1966-67</td>
<td>72,686</td>
<td>86.15</td>
<td>-72.80</td>
</tr>
</tbody>
</table>

Source: A.A.R. of Forest Divisions.

In the table 6.2 the trend of decreasing value is remarkable. Nearly 90 per cent of the produce is exported to foreign markets, mainly in Europe where the growing use of synthetic material has replaced it, causing decrease in its production. Regular decrease is recorded since 1956-57, though
there is a slight increase during 1966-67 — 68-69.

**LAC**

Production

Lac was formerly produced in whole of the region. But during the reported period its production was concentrated in South Raipur, East Raipur, North and South Durg, North Bastar, Kanker, Bilaspur, North Bilaspur, Raigarh, and Jashpur Divisions. The region produced lac worth Rs.43,659 annually (App. X). 44.97 per cent of its collection comes from Bilaspur Division, 15.59 per cent from Raigarh Division, 10.46 per cent from Kanker Division, 9.64 per cent from East Raipur Division, and 5.31 per cent from North Durg Division (App. XIII). Other Divisions collect less than 5.00 per cent. North Bilaspur, South Durg, South Raipur, Jashpur, and North Bastar Divisions share 4.59, 4.33, 2.71, 2.35, and 0.05 per cent respectively.

Lac is a product of the forests of Surguja District. In the past it has been produced, but during the reported period production is nil in the forest Divisions of Surguja District. Likewise, in the south, it is produced in Kanker and North Bastar Divisions. But, other Divisions of Bastar District have not yet made any effort to produce lac, while there is no apparent difference in availability of suitable trees in comparison to Kanker and North Bastar Divisions.

Only 0.05 per cent of the total income of the region comes from lac production (App. XIV). The region's average per km² collection is Rs.0.70 only. The value is Rs.9.44 in Bilaspur, Rs.1.92 in Raigarh, Rs.1.66 in East Raipur, and Rs.1.21 in Kanker Division. On the other hand the share of North Bastar Division is
negligible. Lowest, next to North Bastar is recorded at Jashpur, where the value is Re.0.30, followed by Re.0.34 at North Bilaspur, Re.0.53 at South Raipur, Re.0.80 at South Durg, and Re2.84 at North Durg Division.

India has lost its foreign market which caused a high decrease in its production. This can be verified from the table 6.3 that a high decrease in revenue occurred after the First Five Year Plan.

Table 6.3
VALUE OF THE LAC PRODUCTION

<table>
<thead>
<tr>
<th>Years</th>
<th>Average value (£)</th>
<th>Variation %</th>
<th>Variation (%) in relation to 1947-48 - 50-51</th>
</tr>
</thead>
<tbody>
<tr>
<td>1947-48</td>
<td>412,274</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1951-52</td>
<td>371,140</td>
<td>-10.13</td>
<td>-10.13</td>
</tr>
<tr>
<td>1956-57</td>
<td>61,276</td>
<td>-83.49</td>
<td>-85.16</td>
</tr>
<tr>
<td>1961-62</td>
<td>77,677</td>
<td>+26.77</td>
<td>-81.19</td>
</tr>
<tr>
<td>1966-67</td>
<td>43,659</td>
<td>-43.79</td>
<td>-89.43</td>
</tr>
</tbody>
</table>

Source: A.A.R. of Forest Divisions.

The value was £412,274 during 1947-48 and 1950-51 which decreased by 89.43 per cent during 1966-67 - 68-69. Least decrease by 10.13 per cent was recorded during the First Plan period. The demand of lac produced in India is decreasing day by day, due to the use of other artificial raw materials instead of lac, competition and increasing production in other countries.
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TORA SEEDS
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BROOM
KOSA COCOONS

MYROBALANS
LAC
THORN & BARKS
HIDES & HORNS
BAIBIRANG
BAICHANDI
HONEY & WAX

FODDER GRASS
THATCHING GRASS
SABAI GRASS
CHR GRASS
OTHER GRASSES
CHIL

Bounded State, District, Forest Division
Source: Annual Administrative Report, Forest Divisional Forest Offices.

FIG. 31
GUM

Production

Gum is a product of the whole region. About 0.22 per cent of the total income of the region comes from gum (App. XIV). Total collection of the region is recorded to about Rs. 2 lacs annually (App. X) and per km² collection is calculated to Rs. 3.22. Bastar District alone gives nearly half of the regional production. Maximum collection comes from Kanker Division, where it is about Rs. 50,000 annually and per km² collection is Rs. 13.14. It shares 24.67 per cent of the total collection (App. XIII). In North Bastar Division it is recorded Rs. 24,318 and Rs. 24,088 in East Raipur. But per km² collection is higher in East Raipur Division. The value is Rs. 9.48 in the latter and Rs. 5.06 in the former. Nearly 10 per cent collection comes from South Raipur where per km² collection (Rs. 8.88) is higher than that of North Bastar. Other high gum producing Divisions are North Bilaspur (8.32 per cent), Raigarh (6.73), South Durg (5.77), and East Bastar (5.74). Per km² is recorded lowest (Re. 0.01) in North Durg Division, where its contribution to Division's income is also negligible.

Production Trend

Table 6.4

<table>
<thead>
<tr>
<th>Years</th>
<th>Average Value (Rs.)</th>
<th>Variation %</th>
<th>Variation (%) in relation to 1947-48 — 50-51</th>
</tr>
</thead>
<tbody>
<tr>
<td>1947-48 — 50-51</td>
<td>33,593</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>1951-52 — 55-56</td>
<td>60,580</td>
<td>80.34</td>
<td>80.34</td>
</tr>
<tr>
<td>1956-57 — 60-61</td>
<td>51,056</td>
<td>-15.72</td>
<td>51.98</td>
</tr>
<tr>
<td>1966-67 — 68-69</td>
<td>199,964</td>
<td>107.27</td>
<td>495.25</td>
</tr>
</tbody>
</table>

Source : A.A.R. of Forest Divisions.
The demand of gum is increasing. Gum production in 1947-48 — 50-51 was valued at ₹. 33,593, which increased nearly 6 times during the reported period. The production increased by 80.34 per cent during the First Plan, 51.98 per cent during the Second Plan, 187.19 per cent during the Third Plan, and maximum increase was recorded during the reported period by 495.25 per cent. A negative variation of 15.72 per cent was recorded during the Second Plan period when in almost every Division the production was comparatively low.

According to revenue collection it comes in between third and twelfth ranks (Figs. 29-33). Seven Divisions fall in seventh rank, three Divisions in fifth, two Divisions each in fourth, sixth and eighth ranks and one each in third and twelfth ranks.

MINERALS

Though Minerals (which include mainly stones) are not important forest produce in the region, they contribute 1.37 per cent to the income from forests (App. XIV). Its importance increased due to coal in the forest of Korea Division. 96.37 per cent of income of the region comes from Korea Division alone (App. XIII). It is in the first order in this Division. The collection during reported period is ₹.1,242,171, which is equivalent to ₹.20.01 per km². In Korea Division per km² value is calculated ₹.561.58. Next is Raigarh Division where collection is ₹.9.93 per km² and its share is 2.83 per cent to the region. Minimum collection is recorded in East Bastar and North Surguja, where per km² collection is Re.0.01 only.
Wide variation is remarkable in its production. The variation is calculated to 5.95 per cent during the First Plan period, 40.90 per cent during the Second Plan, 380.08 per cent during the Third Plan, and 2,980.04 per cent during the reported period.

MAHUWA FLOWER

It is a source of country liquor, prepared by its distillation. It is mainly produced in Raigarh and Jashpur Divisions. Only 0.06 per cent income of the region is due to this flower (App. XIV). The collection is more than Rs. 53 thousand annually or Re. 0.86 per km² (App. X). The Raigarh Division produces about 71 per cent of the total mahuwa flower production of the region and Jashpur produces about 23 per cent (App. XIII). The per km² revenue of it is Rs. 10.74 in Raigarh Division and Rs. 3.63 in Jashpur Division. Other mahuwa flower producing Divisions are North Bilaspur (Re. 0.34 per km²), East Bastar (Re. 0.25), Kanker (Re. 0.04), and North Bastar (Re. 0.01).

Gathering of mahuwa flower is a traditional practice of the aboriginal people. It is, therefore, seen that the mahuwa flower producing areas are concentrated in tribal areas. But, the production is very low in Bastar forests.

Variation in production recorded was 8.64 per cent during the First Plan period, 20.57 per cent during the Second Plan, and 585.66 per cent during the reported period. The highest variation during the reported period is due to negative variation during the Third Plan period caused by low production.
MAHUL LEAVES

Mahul leaves are mainly used for leaf plates and cups, locally known as 'pattal' and 'dona'. Most of its production is consumed locally and the balance is exported to Jabalpur, Nasik, and Madras etc. (Unpublished report from Korea Division, Baikunthpur). Its demand is high in the South India.

About 0.76 per cent income from forest comes from mahul leaves (App. XIV). Now the collection is estimated to be Rs.2,060,219 annually (App. X). The demand of mahul leaves is increasing. The value of production was Rs.50.48 in the Second Plan period which increased by 136.71 per cent during the Third Plan, and 1,623.92 per cent during the reported period. In between the Second Plan and the reported period its revenue increased to more than 40 times.

Nearly half of the production comes from the forests of North Durg Division (App. XIII). More than 27 per cent comes from North Bilaspur and 15.18 per cent from Raigarh Division. Other Mahul leaf producing Divisions are North Surguja (3.80 per cent), Bilaspur (2.43), and South Surguja (1.26). South Durg, South Bastar, and Jashpur Divisions are also producing area.

'KATTHA' (CATECHU)

It is an extract from the khair tree. It is mainly used in medicine and with betel leaf. About 0.62 per cent income of the region comes from kattha (App. XIV). Nearly Rs.558 thousand are collected from kattha (App. X), which is equivalent to Rs.9.00 per km². It is mainly produced in North Surguja Division.
Division produces 77.21 per cent of the kattha production of the region (App. XIII) valued at ₹431,220 or ₹97.68 per km². About 13.28 per cent production, valued at ₹74,157 or 34.79 per km² comes from Korea Division. Changbhakhar (6.79 per cent), North Raipur (1.57), and South Durg (1.13) are important Kattha producing Divisions. Bilaspur and Raigarh (0.01 per cent each) are also kattha producing areas. In the south the lack, rather absence, of the Khair tree is a cause of the absence of this product in these Divisions. The following table 6.5 gives the trend of catechu production in Chhattisgarh region.

### Table 6.5

<table>
<thead>
<tr>
<th>Year</th>
<th>Value (₹)</th>
<th>Variation %</th>
<th>Variation (%) in relation to 1947-48 - 50-51</th>
</tr>
</thead>
<tbody>
<tr>
<td>1947-48</td>
<td>128,130</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1951-52</td>
<td>361,362</td>
<td>182.03</td>
<td>182.03</td>
</tr>
<tr>
<td>1956-57</td>
<td>348,855</td>
<td>-3.46</td>
<td>172.27</td>
</tr>
<tr>
<td>1961-62</td>
<td>256,351</td>
<td>-26.52</td>
<td>100.07</td>
</tr>
<tr>
<td>1966-67</td>
<td>558,467</td>
<td>117.85</td>
<td>335.86</td>
</tr>
</tbody>
</table>

Source: A.A.R. of Forest Divisions.

With reference to table 6.5 it can be concluded that the variation is negative during the Second and the Third Plan, but it increased in the reported period. The maximum increase was recorded during the First Plan and the lowest during the Third Plan. The revenue collection increased by 4.36 times during pre-Plan, and post-Independence period and reported period.
KOSA COCOONS

Kosa cocoons are the source of tassar silk, locally known as 'kosa'. It is mainly a produce of the Bastar forests. It is reported that it is also produced in some parts of Raigarh District (Ambastha, 1972, 34).

The cocoon production is 62.99 per cent in East Bastar Division (App. XII). But the collection is higher and estimated to be 81.93 per cent (App. XIII). The production is 19.48 per cent in Kanker Division collecting only 4.25 per cent revenue. In North Bastar Division the production is recorded at 15.43 and collection as 12.74 per cent. In West Bastar Division collection is only 0.21 per cent against a production of 1.25 per cent and South Bastar collects 0.87 per cent revenue with 0.85 per cent of production. The following table 6.6 gives the trend of kosa cocoon production in Chhattisgarh region.

Table 6.6

<table>
<thead>
<tr>
<th>Years</th>
<th>Average production (No. in 000)</th>
<th>Variation %</th>
<th>Average value (Rs.)</th>
<th>Variation %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1947-48</td>
<td>3,321.71</td>
<td>-</td>
<td>3,323</td>
<td>-</td>
</tr>
<tr>
<td>1951-52</td>
<td>10,045.35</td>
<td>202.42</td>
<td>7,353</td>
<td>121.28</td>
</tr>
<tr>
<td>1956-57</td>
<td>3,826.67</td>
<td>-61.91</td>
<td>2,992</td>
<td>-59.31</td>
</tr>
<tr>
<td>1961-62</td>
<td>2,274.65</td>
<td>-40.56</td>
<td>5,109</td>
<td>70.76</td>
</tr>
<tr>
<td>1966-67</td>
<td>41,561.29</td>
<td>1,727.15</td>
<td>336,502</td>
<td>2,095.50</td>
</tr>
</tbody>
</table>

Source: A.A.R. of Forest Divisions.
CHHATTISGARH REGION
RELATIVE IMPORTANCE OF FOREST PRODUCE
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Source: Annual Administrative Report (forms 20a-24) of Divisional Forest Offices.

FIG. 33
Decrease in production as well as in revenue was recorded during the Second and Third Plan period. Production increased by 202.42 per cent and revenue by 121.28 per cent. During the Second Plan period the decrease was 61.91 per cent in production and 59.31 per cent in revenue. During the Third Plan period production decreased by 40.56 per cent, but the revenue increased by 70.76 per cent. A great change occurred during the reported period. Production increased about 13 times during this period and revenue 34 times.

TORA SEEDS

Tora seeds are used in extracting oil, which is used by the tribal people of the Bastar District. About 0.20 per cent income is received from tora seeds (App. XIV), which is equivalent to about Rs. 1.84 thousand or Rs. 2.96 per km². More than half of the crop is collected from South Bastar, where the total collection is Rs. 95,955 or Rs. 22.96 per km² with a production of 38.26 per cent. Rs. 40,987 or Rs. 9.87 per km² are collected in East Bastar Division, where the production is maximum (42.98 per cent). About 15.83 per cent production comes from West Bastar Division with a revenue of Rs. 39,513 or Rs. 7.41 per km². Kanker Division collects least amount (Rs. 3,155 or Re. 0.83 per km²) with a production of 1.26 per cent whereas North Bastar Division produced 1.67 per cent with a revenue of Rs. 4,193 or Re. 0.87 per km². Collection is comparatively higher in the southern part. The northern part is under influence more so the use of other oils reduces the proportion of tora oil.

Negative variation was recorded during the First Plan by 29.97 per cent in production and 25.53 per cent in revenue. During the Second Plan the variations were 32.57 per cent increase in production and 25.36 per cent increase in revenue. The maximum
Table 6.7
PRODUCTION AND VALUE OF TORA SEEDS

<table>
<thead>
<tr>
<th>Years</th>
<th>Average production (Quintals)</th>
<th>Variation %</th>
<th>Average value (Rs.)</th>
<th>Variation %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1947-48 - 50-51</td>
<td>7,364.85</td>
<td>-</td>
<td>43,397</td>
<td>-</td>
</tr>
<tr>
<td>1951-52 - 55-56</td>
<td>5,160.61</td>
<td>-29.97</td>
<td>32,317</td>
<td>-25.53</td>
</tr>
<tr>
<td>1956-57 - 60-61</td>
<td>6,841.23</td>
<td>32.57</td>
<td>40,514</td>
<td>25.36</td>
</tr>
<tr>
<td>1966-67 - 68-69</td>
<td>24,963.89</td>
<td>10.16</td>
<td>183,803</td>
<td>151.24</td>
</tr>
</tbody>
</table>

Source: A.A.R. of Forest Divisions.

Increase was recorded during the Third Plan with 80.57 per cent increase in revenue, while maximum increase (151.24 per cent) in revenue was recorded during the reported period with an increase of 10.16 per cent in production.

TAMARIND

With the proximity of markets in the south, tamarind is a localized forest produce of the Bastar District. About 0.19 per cent income (Rs.170,098 or Rs.2.74 per km²) of the region comes from this produce (App. XIV). The maximum production comes from East Bastar Division. It produces 73.51 per cent and gives 70.53 per cent of revenue of the region, valued at Rs.119,953 or Rs.28.88 per km². About 12.33 per cent production comes from South Bastar Division, with 13.56 per cent of revenue, valued at Rs.23,062 which is equivalent to Rs.5.52 per km². Kanker Division produces 6.02 per cent valued at Rs.11,217 or Rs.2.96 per km². About 4.59
per cent production comes from North Bastar Division with 5.44 per cent of revenue, which is equivalent to Rs.1.93 per km². The minimum production comes from West Bastar Division. It produces 3.55 per cent with 3.88 per cent revenue. Per km² collection is Rs.1.24.

Table 6.8
PRODUCTION AND VALUE OF TAMARIND

<table>
<thead>
<tr>
<th>Years</th>
<th>Average Production (Quintals)</th>
<th>Variation %</th>
<th>Average Value (Rs.)</th>
<th>Variation %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1947-48</td>
<td>50-51 6,984.77</td>
<td>-</td>
<td>28,355</td>
<td>-</td>
</tr>
<tr>
<td>1951-52</td>
<td>55-56 5,459.24</td>
<td>-21.84</td>
<td>48,140</td>
<td>69.78</td>
</tr>
<tr>
<td>1956-57</td>
<td>60-61 16,553.13</td>
<td>203.21</td>
<td>65,368</td>
<td>35.79</td>
</tr>
<tr>
<td>1961-62</td>
<td>65-66 23,306.83</td>
<td>40.80</td>
<td>100,339</td>
<td>53.50</td>
</tr>
<tr>
<td>1966-67</td>
<td>67-68 37,273.96</td>
<td>59.93</td>
<td>170,098</td>
<td>69.52</td>
</tr>
</tbody>
</table>

Source: A.A.R. of Forest Divisions.

The revenue from tamarind always showed a positive trend. A decrease in production by 21.84 per cent occurred during the First Plan period. But, due to high prices there was no decrease in revenue. During this period the maximum increase in revenue (69.78 per cent) was recorded, while the maximum increase in production (203.21 per cent) was recorded during the Second Plan period, which followed a period of low production.

GRASSES

Fodder, thatching (Bagai), Sabai, Chir, etc. are important grasses produced in the region. About 29.23 per cent production of grasses comes as fodder grass, 24.04 per cent as
thatching grass, 19.06 per cent as sabai grass, 0.97 per cent as chir grass, and the remaining as miscellaneous grasses.

The North Bilaspur Division produces about 53 per cent fodder grass. Other important fodder grass producing Divisions are South Durg (12.24 per cent), Kanker (12.24), South Raipur (6.81), North Durg (6.33), and Raigarh (2.25). About 62.21 per cent thatching grass is produced in South Durg Division. Other important grass producing Divisions are North Bastar (9.30 per cent), South Bastar (5.86), South Raipur (5.42), East Bastar (5.33), Korea (4.59), North Durg (2.76), West Bastar (2.42), and Kanker (1.36).

More than 75 per cent Sabai grass is produced in North Bilaspur Division, 23.30 per cent in Bilaspur, and remaining 1.42 per cent in West Bastar Division. Chir grass is produced only in Bilaspur Division. Other important grass producing Divisions are Jashpur (69.04 per cent), North Bilaspur (9.34), and South Raipur (9.16), etc.

About 0.03 per cent income of the region comes from grasses. The total revenue collected is reported as Rs. 30,645 or Re. 0.49 per km². The average collection is Rs. 2.58 per km² in South Durg and North Bilaspur Divisions followed by Jashpur (Rs. 1.68), Bilaspur (Rs. 1.33), and South Raipur (Re. 0.78).

Other Forest Produce

Other forest produce consists of hides and horns, baibirang, tikhoor and baichandi, honey and wax, thorn and barks, chil, and chiroanjli. These hardly give 0.01 per cent of
the total income of the region individually. These are mainly produced in the forests of Bastar.

About 82.20 per cent of hides and horns production comes from Bastar Forests. 99.20 per cent of baibirang, tikhoor and baichandi, 83.01 per cent of honey and wax, 100.00 per cent of chil and 48.33 per cent of chiroanji comes from Bastar forests. About 70 per cent of thorn and barks is produced from North Surguja. These altogether collect Rs.38,192 or Re.0.62 per km².

Factors Affecting Minor Forest Production

Market is a direct or indirect controller of the production of minor forest produce. A handsome return from forestry can attract persons. But, the lack of forest-based industries compel one to export the produce outside the region as raw materials. And the finished products are sold in the region with a great profit.

The lack of transport routes inside the forest as well as outside again affects the production. The long distance of Surguja forests from the rail-head was a drawback in the exploitation of forest produce of this region.

The rich forests of Bastar also have not been giving good revenue as they can. Dhamtari is the nearest rail-head to the north of this region, which is about 250 kilometres from Jagdalpur. Again road transport is a costly media in comparison to rail transport to exploit the produce.

The minor forest produce like flower, fruits etc.,
is consumed locally, generally by the aboriginals. The more civilized population does not want to use. The utility of medicinal plants and other produce in chemical preparations increase the demand, though the percentage is very low.

Fruit and flower gathering is a traditional practice in tribal areas. But, the gatherers do not get any handsome return from it. Due to lack of knowledge and very low financial requirements they usually sell their collected goods to the local businessmen, at a very nominal price. To meet this problem and to provide a handsome return to the tribal people, the Tribal Department of Madhya Pradesh Government has established Co-operative Societies in these areas, which collect the produce from the people. But the societies are running in loss.

Problems

With the increasing demand and utility, the Government of Madhya Pradesh has nationalised the important produce and decided to nationalise all the forest produce in due course. Prior to this, collection was done by the contractors through auction or on lease basis. This process returns very low revenue to the Government, and the maximum profit goes to the contractors. With the enforcement of nationalisation, exploitation is being done by the Departmental agencies. Now, the maximum profit goes to the Government. But, due to certain procedural difficulties the officers are unable to do their best to get a more profitable return.

Labour problem in the forest is also acute. Forest villages are established by the Forest Department to meet the labour problem and to exploit the forest in a scientific and rational
way. But, the labour available in these villages is still insufficient as the villagers get good wages from other sources. Consequently they vacate the village, although they give an undertaking to give preference to the Departmental work whenever the work is on. The Department is not able to check them in spite of providing many facilities to them.