Chapter - IV

AGRICULTURAL LANDUSE PATTERN

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4.4 SPATIAL ANALYSIS OF AGRICULTURAL LAND USE (2000 - 2001)

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AGRICULTURAL LAND USE PATTERN

4.1 INTRODUCTION

Agriculture in any region is dominantly controlled by physical and human environment. The physical factors like relief, soil, climate, water supply which sets a broad limit for the agriculture and human factors viz the economical condition of farmer, demand of crops in the market, price of crop in market, technological level of farmer, length of occupation etc. affects on agricultural pattern of area. These factors affect on farmers decision to take the particular crops in the agriculture.

In the present chapter the spatial distribution of overall cropping pattern and their temporal variation have been outlined and followed by the discussion of the area under different individual crops. The cropping pattern is the proportion of the area under various crops at the point of time. Agricultural land use and mainly the cropping pattern which reflects the development of the region, depend upon natural and social environment. The data regarding crops have been collected through Socio-economic and Statistical Abstract of Raigarh District and Agricultural Department for special organization, the data collected, converted into percentage to the gross cropped area. The crop percentage is arranged into class categories. Maps are prepared and finally displayed the spatial distribution.

The study of temporal variation for the crops in the study area has been computed for twenty years period (1980-81 to 2000-01). Temporal variation is the change in proportion of area under different crops at two different times. The change indicates the temporal variation at two different times. The amount of area involved in change for every areal unit is calculated for individual crop and the crops of leading increase and decrease are marked and mapped in every tahsil providing a comparative view of the direction of change.
Rice, Wari, Nachni, Pulses, Spices, Oil Seeds, Fruits and vegetables and Fodder crops are the major eight crops grown in the study area. Kharip season starts in the month of June or July and ends in September. Rice, wari and nachni are the major kharip crops in Raigarh district. Rabi season commences from September or October and ends in April month. Pulses, oilseeds, spices, vegetables and fodder crops are grown in rabi season.

4.2 TEMPORAL VARIATION IN AGRICULTURAL LAND USE (1980-80 to 2000-01)

In the overall cropping pattern of the study region, the total gross cropped area had 200222 hectares in 1980-81 which was 29.14 per cent of the total geographical area. It was increased by 4.81 per cent and reached upto 33.95 per cent and it covers 233243 hectares area in 2000-01. The net sown area was 184848 hectares which covers 26.91 per cent area in 1980-81. During 2000-01 increased by 2.62 per cent and reachecd up to 29.53 per cent covers 202841 hectares area.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Name of the Crop</th>
<th>Year 1980-81</th>
<th>Year 2000-01</th>
<th>Change in (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Area in Hectares</td>
<td>Area in %</td>
<td>Area in Hectares</td>
<td>Area in %</td>
</tr>
<tr>
<td>1</td>
<td>Rice</td>
<td>142198</td>
<td>71.02</td>
<td>134294</td>
</tr>
<tr>
<td>2</td>
<td>Nachni</td>
<td>16321</td>
<td>8.15</td>
<td>12101</td>
</tr>
<tr>
<td>3</td>
<td>Wari</td>
<td>7154</td>
<td>3.57</td>
<td>7843</td>
</tr>
<tr>
<td>4</td>
<td>Pulses</td>
<td>7221</td>
<td>3.61</td>
<td>13182</td>
</tr>
<tr>
<td>5</td>
<td>Spices</td>
<td>1073</td>
<td>0.54</td>
<td>417</td>
</tr>
<tr>
<td>6</td>
<td>Fruits &amp; Veg.</td>
<td>2923</td>
<td>1.46</td>
<td>20744</td>
</tr>
<tr>
<td>7</td>
<td>Oilseeds</td>
<td>1805</td>
<td>0.90</td>
<td>3971</td>
</tr>
<tr>
<td>8</td>
<td>Fodder crops</td>
<td>22818</td>
<td>11.40</td>
<td>42386</td>
</tr>
</tbody>
</table>

Source - Socio-Economic Review and Statistical Abstract of Raigarh District from 1981 to 2001
Chapter IV – Agricultural Land Use Pattern

The highest positive change has observed in fruits and vegetable crops where the area was 1.46 per cent in 1980-81, increased by 7.43 per cent and reached upto 8.89 per cent in 2000-01. The highest negative change has recorded in Rice crop where the area has decreased by 13.44 per cent in the study period. Table 4.1 shows the temporal change in the whole region. Fodder crops (6.77 per cent), pulses (2.04 per cent) and oil seeds (0.8 per cent) crops shows increasing trend while wari (0.21 per cent), nachni (2.96 per cent) and spices (0.36 per cent) shows declining trend between 1980-81 and 2000-01.

4.2.1 Rice

In general, the area under rice was 142198 hectares in 1980-81 (71.02 per cent) and it decreased by 13.44 per cent during the period of twenty years. It was recorded 134294 hectares which was 57.58 per cent to the total cropped area in 2000-01. Nine tahsils has observed the high change while six tahsils have observed lower change. The highest positive change is observed in Tala tahsil 58.86 per cent and the highest negative change is recorded is 39.31 per cent in Uran tahsil. Table- 4.2 and Fig.- 4.1 reveals the change in the rice cultivation in the region

Very high change has recorded in Tala and Roha tahsils. The high change ranging from 0 to 10 per cent observed in Panvel, Karjat, Khalapur, Pen, Mangaon and Shrivardhan tahsils.

Moderate change has recorded in only Alibaug tahsil (-12.12 per cent). Low change has observed in Murud, Sudhagad, Mhasla, Mahad and Poladpur tahsils ranging form -20 to -30 per cent lower than the district average due to increase in area under fruits and fodder crops.

The lowest negative change is 39.31 per cent found in Uran tahsil because of increasing the area under kharland and growing industrial activities in the tahsil.
### Table 4.2
Raigarh District
Temporal Variation in Rice Cultivation

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Tahsil</th>
<th>Year 1980-81</th>
<th>Year 2000-01</th>
<th>Change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Area in Hectares</td>
<td>Area in %</td>
<td>Area in Hectares</td>
<td>Area in %</td>
</tr>
<tr>
<td>1</td>
<td>Uran</td>
<td>7147</td>
<td>89.72</td>
<td>2827</td>
</tr>
<tr>
<td>2</td>
<td>Panvel</td>
<td>15700</td>
<td>71.20</td>
<td>11994</td>
</tr>
<tr>
<td>3</td>
<td>Karjat</td>
<td>13314</td>
<td>82.32</td>
<td>14186</td>
</tr>
<tr>
<td>4</td>
<td>Khalapur</td>
<td>7885</td>
<td>74.63</td>
<td>7091</td>
</tr>
<tr>
<td>5</td>
<td>Pen</td>
<td>13877</td>
<td>83.47</td>
<td>14822</td>
</tr>
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<td>6</td>
<td>Alibaug</td>
<td>17013</td>
<td>84.86</td>
<td>21183</td>
</tr>
<tr>
<td>7</td>
<td>Murud</td>
<td>4391</td>
<td>59.91</td>
<td>4259</td>
</tr>
<tr>
<td>8</td>
<td>Roha</td>
<td>13487</td>
<td>64.01</td>
<td>13385</td>
</tr>
<tr>
<td>9</td>
<td>Sudhagad</td>
<td>5702</td>
<td>78.55</td>
<td>5873</td>
</tr>
<tr>
<td>10</td>
<td>Mangaon</td>
<td>18883</td>
<td>70.25</td>
<td>14288</td>
</tr>
<tr>
<td>11</td>
<td>Tala</td>
<td>#</td>
<td>#</td>
<td>2721</td>
</tr>
<tr>
<td>12</td>
<td>Shrivardhan</td>
<td>3916</td>
<td>45.96</td>
<td>3667</td>
</tr>
<tr>
<td>13</td>
<td>Mhasla</td>
<td>3538</td>
<td>51.73</td>
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<tr>
<td>14</td>
<td>Mahad</td>
<td>12885</td>
<td>64.54</td>
<td>12779</td>
</tr>
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<td>15</td>
<td>Poladpur</td>
<td>3753</td>
<td>42.14</td>
<td>2914</td>
</tr>
<tr>
<td>District</td>
<td>142198</td>
<td>71.02</td>
<td>134294</td>
<td>57.58</td>
</tr>
</tbody>
</table>

Source - Socio-Economic Review and Statistical Abstract of Raigarh District from 1981 to 2001

# - The data of the Tala tahsil is included in Mangaon tahsil in 1981.

#### 4.2.2 Nachni

Nachni is the second food grain crop cultivated in the study region grown on slope of hills and Sahayadri mountain ranges. In general, the area under nachni has decreased by 2.96 per cent, during the study period. Eight tahsils had observed the high change, while six tahsils had low change. The highest change has seen in Tala tahsil (7.12 per cent) and lowest change is -13.28 per cent observed in Mhasala tahsil. Table- 4.3 and Fig.- 4.2 show the distribution of nachni crop in Raigarth district.
RAIGARH DISTRICT
TEMPORAL VARIATION IN RICE CULTIVATION
(1980-81 to 2000-01)

Legend
Area in %
Very High (Above 0)
High (0 to -10)
Moderate (-10 to -20)
Low (-20 to -30)
Very Low (Below -30)

Fig. 4.1
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Fig. 4.2

RAIGARH DISTRICT

TEMPORAL VARIATION IN NACHNI CULTIVATION
(1980-81 to 2000-01)

Legend
Area in %
Very High (Above 4)
High (00 to 04)
Moderate (00 to -04)
Low (-04 to -08)
Very Low (Below -08)
Table 4.3
Raigarh District
Temporal Variation Nachni Cultivation

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Tahsil</th>
<th>Year 1980-81</th>
<th>Year 2000 - 01</th>
<th>Change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Area in Hectares</td>
<td>Area in %</td>
<td>Area in Hectares</td>
</tr>
<tr>
<td>1</td>
<td>Uran</td>
<td>0</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>Panvel</td>
<td>130</td>
<td>0.59</td>
<td>46</td>
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<tr>
<td>3</td>
<td>Karjat</td>
<td>730</td>
<td>4.51</td>
<td>422</td>
</tr>
<tr>
<td>4</td>
<td>Khalapur</td>
<td>731</td>
<td>6.92</td>
<td>391</td>
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<tr>
<td>5</td>
<td>Pen</td>
<td>599</td>
<td>3.60</td>
<td>426</td>
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<td>Alibaug</td>
<td>13</td>
<td>0.06</td>
<td>12</td>
</tr>
<tr>
<td>7</td>
<td>Murud</td>
<td>226</td>
<td>3.08</td>
<td>0</td>
</tr>
<tr>
<td>8</td>
<td>Roha</td>
<td>1695</td>
<td>8.04</td>
<td>1348</td>
</tr>
<tr>
<td>9</td>
<td>Sudhagad</td>
<td>882</td>
<td>12.15</td>
<td>2587</td>
</tr>
<tr>
<td>10</td>
<td>Mangaon</td>
<td>4260</td>
<td>15.85</td>
<td>458</td>
</tr>
<tr>
<td>11</td>
<td>Tala</td>
<td>#</td>
<td>#</td>
<td>329</td>
</tr>
<tr>
<td>12</td>
<td>Shrivardhan</td>
<td>677</td>
<td>7.95</td>
<td>229</td>
</tr>
<tr>
<td>13</td>
<td>Mhasla</td>
<td>1509</td>
<td>22.06</td>
<td>832</td>
</tr>
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<td>14</td>
<td>Mahad</td>
<td>2316</td>
<td>11.60</td>
<td>2380</td>
</tr>
<tr>
<td>15</td>
<td>Poladpur</td>
<td>2443</td>
<td>24.43</td>
<td>2637</td>
</tr>
<tr>
<td>District</td>
<td>16321</td>
<td>8.15</td>
<td>12101</td>
<td>5.19</td>
</tr>
</tbody>
</table>

Source - Socio-Economic Review and Statistical Abstract of Raigarh District from 1981 to 2001

# - The data of the Tala tahsil is included in Mangaon tahsil in 1981.

The Very high change has recorded in Uran tahsil and it was 0.07 per cent. Moderate change had seen in eight tahsils namely Panvel, Karjat, Khalapur, Pen, Alibaug, Murud, Roha and Mangaon tahsil between 0 to - 4 per cent.

Low change, ranging between 4 to -8 per cent had observed in Shrivardhan and Mahad tahsils, while very low change, less than -8 per cent has recorded in Sudhagad, Mhasla and Poladpur tahsils due to low production of the crop.
4.2.3 Wari

Wari is a food grain crop grown on the sloppy land of the hilly region. The area under wari was 3.57 per cent in 1980-81 and 3.36 per cent in 2000-01 of the total cropped area. The area under wari had decreased by 0.21 per cent in the study region. Eleven tahsils in the district have recorded positive change in the percentage area, in the study region where as decline has observed in four tahsils in the district. The highest increase is 4.98 per cent found in Tala tahsil and the lowest change is found in Poladpur tahsil (- 5.49 per cent). Table 4.4 Fig. 4.3 shows the temporal change in the study region.

The Very high change had observed in Tala tahsil (4.98 per cent) while high change ranging form 0 to 2 per cent had seen in Uran, Sudhagad, Panvel, Karjat, Khalapur, Alibaug and Roha tahsil.

Moderate change had seen in Pen, Murud, and Mhasla tahsils ranging from 0 to -2 per cent. Low change had observed in Mangaon and Mahad tahsils while very low change (less than - 4 per cent) has recorded in Shrivardhan and Poladpur tahsils.
RAIGARH DISTRICT

TEMPORAL VARIATION IN WARI CULTIVATION
(1980-81 to 2000-01)

Legend
Area in %
Very High (Above 2)
High (00 to - 02)
Moderate (00 to -02)
Low (-02 to -04)
Very Low (Below -04)

Fig. 4.3
Chapter IV – Agricultural Land Use Pattern

RAIGARH DISTRICT

TEMPORAL VARIATION IN PULSES CULTIVATION
(1980-81 to 2000-01)

Legend
Area in %
Very High (Above 06)
High (03 to 06)
Moderate (00 to -03)
Low (00 to -03)
Very Low (Below -03)

Fig. 4.4
### Table 4.4
Raigarh District
Temporal Variation in Wari Cultivation

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Tahsil</th>
<th>Year 1980-81</th>
<th>Year 2000-01</th>
<th>Change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Area in Hectares</td>
<td>Area in %</td>
<td>Area in Hectares</td>
<td>Area in %</td>
</tr>
<tr>
<td>1</td>
<td>Uran</td>
<td>0</td>
<td>2</td>
<td>0.04</td>
</tr>
<tr>
<td>2</td>
<td>Panvel</td>
<td>51</td>
<td>276</td>
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<tr>
<td>3</td>
<td>Karjat</td>
<td>321</td>
<td>384</td>
<td>2.01</td>
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<tr>
<td>4</td>
<td>Khalapur</td>
<td>302</td>
<td>338</td>
<td>3.55</td>
</tr>
<tr>
<td>5</td>
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<tr>
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<td>Alibaug</td>
<td>5</td>
<td>8</td>
<td>0.03</td>
</tr>
<tr>
<td>7</td>
<td>Murud</td>
<td>91</td>
<td>0</td>
<td>0.0</td>
</tr>
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<td>8</td>
<td>Roha</td>
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<td>Sudhagad</td>
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<td>Shrivardhan</td>
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<td>155</td>
<td>1.54</td>
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<td>Mhasla</td>
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<td>14</td>
<td>Mahad</td>
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<td>2244</td>
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<td></td>
<td>District</td>
<td>7154</td>
<td>7843</td>
<td>3.36</td>
</tr>
</tbody>
</table>

Source: Socio-economic Review and Statistical Abstract of Raigarh District from 1981 and 2001

# - The data of the Tala tahsil is included in Mangaon tahsil in 1981.

#### 4.2.4 Pulses
Gram, Tur, Moong, (Black gram) wal, etc are the major pulses well grown in the central and eastern part of the district and near the foot hill of the mountain. The district stands first throughout the state in raising wal.
### Table 4.5

Raigarh District

Temporal Variation in Pulses Cultivation

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Tahsil</th>
<th>Year 1980-81</th>
<th>Year 2000-01</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Area in Hectares</td>
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<td>Area in Hectares</td>
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<tr>
<td>1</td>
<td>Uran</td>
<td>19</td>
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<td>Panvel</td>
<td>493</td>
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<td>Karjat</td>
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<td>1.96</td>
</tr>
<tr>
<td>4</td>
<td>Khalapur</td>
<td>299</td>
<td>2.83</td>
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<td>7</td>
<td>Murud</td>
<td>440</td>
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<td>Roha</td>
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<td>Mangaon</td>
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<td>2.17</td>
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<td>11</td>
<td>Tala</td>
<td>#</td>
<td>#</td>
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<td>Shrivardhan</td>
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<td>13</td>
<td>Mhasla</td>
<td>238</td>
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<td>Mahad</td>
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<td>13182</td>
</tr>
</tbody>
</table>

Source: Socio-economic Review and Statistical Abstract of Raigarh District from 1981 and 2001

# - The data of the Tala tahsil is included in Mangaon tahsil in 1981.

The total area under pulses was 3.61 per cent in 1980-81 and 5.65 per cent in 2000-01. It was increased by 2.05 per cent in twenty years. The increase has found in nine tahsils namely Uran, Khalapur, Pen, Roha, Sudhagad, Mangaon, Tala, Shrivardhan, and Mhasala tahsil and decrease has observed in six tahsils namely Panvel, Karjat, Alibaug, Murud, Mahad and Poladpur tahsils.
in the study region (Table 4.5 and Fig 4.4). Highest increase is recorded in Mhasla tahsil with 8.58 per cent and lowest increase with -6.58 per cent in Karjat tahsil.

Very high change had seen in Mhasla (8.58 per cent) and Tala (6.34 per cent) tahsils. High change ranging form 3 to 6 per cent had observed in Sudhagad, Mangaon and Shrivardhan tahsils. Moderate change had found in four tahsils, namely Uran, Khalapur, pen and Roha tahsil between 0 to 3 per cent.

Low change between 0 to -3 per cent was recorded in coastal and mountains tahsils like Panvel, Alibaug, Murud, Mahad and Poladpur due to saline soil in the coastal area while lowest change found in Karjat tahsil due to sloppy land in the tahsil and it was 6.58 per cent. The aerial strength of the cultivation of pulses is useful for increasing the fertility of the soil, specifically nitrogen content. It provides the amount of proteins to the local people.

### 4.2.5 Spices

Black pepper, cinnamon, nutmeg, are newly introduced spices crops in the study area. These are mostly the inter crops in the coconut and areca nut orchids. The area under spices in 1980-81 was 0.54 per cent and it was reduced by 0.36 per cent and reached up to 0.18 per cent in 2000-01. The highest increase had observed in Tala tahsil and it is 3.18 per cent and the lowest decrease was observed in Shrivardhan tahsil is 3.11 per cent. Nine tahsils has shown increase in the spices cultivation while six tahsils recorded decrease in the spice cultivation. Table 4.6 and Fig. 4.5 display the spices cultivation in the study region.

High change between 0 to 1 per cent had recorded in Uran, Pen, Panvel and Sudhagad tahsils. Moderate change between 0 to -1 per cent is observed in eight tahsils namely, Karjat, Khalapur, Alibaug Roha, Mangaon, Mhasla, Mahad and Poladpur tahsil.

Low change i.e. less than -1 per cent is found in Murud and Shrivardhan tahsil in the study region.
### Table 4.6
Temporal Variation in Spices Cultivation

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Tahsil</th>
<th>Year 1980-81</th>
<th>Year 2000-01</th>
<th>Change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Area in Hectares</td>
<td>Area in %</td>
<td>Area in Hectares</td>
</tr>
<tr>
<td>1</td>
<td>Uran</td>
<td>1</td>
<td>0.01</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>Panvel</td>
<td>170</td>
<td>0.77</td>
<td>140</td>
</tr>
<tr>
<td>3</td>
<td>Karjat</td>
<td>13</td>
<td>0.08</td>
<td>78</td>
</tr>
<tr>
<td>4</td>
<td>Khalapur</td>
<td>85</td>
<td>0.80</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>Pen</td>
<td>8</td>
<td>0.05</td>
<td>16</td>
</tr>
<tr>
<td>6</td>
<td>Alibaug</td>
<td>176</td>
<td>0.88</td>
<td>61</td>
</tr>
<tr>
<td>7</td>
<td>Murud</td>
<td>134</td>
<td>1.83</td>
<td>12</td>
</tr>
<tr>
<td>8</td>
<td>Roha</td>
<td>23</td>
<td>0.11</td>
<td>6</td>
</tr>
<tr>
<td>9</td>
<td>Sudhagad</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>10</td>
<td>Mangaon</td>
<td>15</td>
<td>0.06</td>
<td>13</td>
</tr>
<tr>
<td>11</td>
<td>Tala</td>
<td>#</td>
<td>#</td>
<td>147</td>
</tr>
<tr>
<td>12</td>
<td>Shrivardhan</td>
<td>287</td>
<td>3.37</td>
<td>26</td>
</tr>
<tr>
<td>13</td>
<td>Mhasla</td>
<td>59</td>
<td>0.86</td>
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<tr>
<td>14</td>
<td>Mahad</td>
<td>43</td>
<td>0.22</td>
<td>16</td>
</tr>
<tr>
<td>15</td>
<td>Poladpur</td>
<td>55</td>
<td>0.60</td>
<td>18</td>
</tr>
<tr>
<td>District</td>
<td></td>
<td>1069</td>
<td>0.54</td>
<td>417</td>
</tr>
</tbody>
</table>

Source: Socio-economic Review and Statistical Abstract of Raigarh District from 1981 and 2001

# - The data of the Tala tahsil is included in Mangaon tahsil in 1981.

#### 4.2.6 Fruits and Vegetables

Raigarh district is basically known for Rice cultivation but due to proximity of Mumbai metropolitan region, farmers are slowly moving towards horticulture. As a result of this, the region shows the increase in the cultivation of fruits and vegetables in last decade. The total area under cultivation has 1.46 per cent in 1980-81. It was increased by 7.43 per cent and reached up to 8. 89 per cent, in 2000-01. (Table 4.8 and Fig. 4.6)
Chapter IV – Agricultural Land Use Pattern

Fig. 4.5
Chapter IV – Agricultural Land Use Pattern

Fig. 4.6

RAIGARH DISTRICT
TEMPORAL VARIATION IN FRUITS AND VEGETABLES
CULTIVATION (1980-81 to 2000-01)

Legend
Area in %
Very High (Above 20)
High (10 to 20)
Moderate (00 to 10)
Low (Below 00)

Fig. 4.6
Mango, cashew nut, coconut, chiku, ratambi, water-melons, jack fruits, guavas, betel nut, papaya are the major fruits cultivated in the study region. Ladyfinger, bitter-guard, bottle-guard, sweet guard, cucumber, spinach, chilli, white onions are the major vegetables grown in the district.

Table 4.7
Raigarh District
Temporal Variation in Fruits and Vegetables Cultivation

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Tahsil</th>
<th>Year 1980-81</th>
<th>Year 2000-01</th>
<th>Change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Area in Hectares</td>
<td>Area in %</td>
<td>Area in Hectares</td>
</tr>
<tr>
<td>1</td>
<td>Uran</td>
<td>57</td>
<td>0.72</td>
<td>1113</td>
</tr>
<tr>
<td>2</td>
<td>Panvel</td>
<td>607</td>
<td>2.75</td>
<td>1724</td>
</tr>
<tr>
<td>3</td>
<td>Karjat</td>
<td>60</td>
<td>0.37</td>
<td>903</td>
</tr>
<tr>
<td>4</td>
<td>Khalapur</td>
<td>416</td>
<td>3.94</td>
<td>67</td>
</tr>
<tr>
<td>5</td>
<td>Pen</td>
<td>488</td>
<td>2.94</td>
<td>1962</td>
</tr>
<tr>
<td>6</td>
<td>Alibaug</td>
<td>449</td>
<td>2.24</td>
<td>2226</td>
</tr>
<tr>
<td>7</td>
<td>Murud</td>
<td>107</td>
<td>1.46</td>
<td>1656</td>
</tr>
<tr>
<td>8</td>
<td>Roha</td>
<td>41</td>
<td>0.19</td>
<td>1577</td>
</tr>
<tr>
<td>9</td>
<td>Sudhagad</td>
<td>0</td>
<td>0</td>
<td>86</td>
</tr>
<tr>
<td>10</td>
<td>Mangaon</td>
<td>57</td>
<td>0.21</td>
<td>2509</td>
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<tr>
<td>11</td>
<td>Tala</td>
<td>#</td>
<td>#</td>
<td>25</td>
</tr>
<tr>
<td>12</td>
<td>Shrivardhan</td>
<td>3206</td>
<td>5.20</td>
<td>3317</td>
</tr>
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<td>13</td>
<td>Mhasla</td>
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<td>2161</td>
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<td>14</td>
<td>Mahad</td>
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<td>0.05</td>
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<tr>
<td></td>
<td>District</td>
<td>2923</td>
<td>1.46</td>
<td>20744</td>
</tr>
</tbody>
</table>

Source- Socio-economic Review and Statistical Abstract of Raigarh District from 1981 and 2001

# - The data of the Tala tahsil is included in Mangaon tahsil in 1981

All tahsils except Khalapur tahsil, shows decrease in the cultivation of fruits and vegetables in the region. The highest increase had observed in
Shrivardhan tahsil and it was 27.76 per cent and the lowest change is -324 per cent recorded in Khalapur tahsil.

Very high change i.e. more than 20 per cent had found in Shrivardhan, Sudhagad and Mhasla tahsils and high change between 10 to 20 per cent had observed in Uran, Karjat Murud, Mangaon and Poladpur tahsils.

The high change is a result of systematic plantation done by Agricultural department of Raigarh district and its efforts to motivate the farmers for the plantation of fruit crops in the region. This department has alone done 67082 hectares plantation in last ten years.

Moderate change was found in Panvel, Pen, Alibaug, Roha Tala and Mahad tahsils which is between 0 to 10 per cent and the low change has observed in only one tahsil Khalapur and it was 3.42 per cent.

### 4.2.7 Oil Seeds

Ground nut, sesames and linseeds are grown as oil seeds in the study region. In 1980-81 the area under oil seeds is recorded 0.90 per cent of the cropped area and it occupied 1.90 per cent area. In 2000-01, it was increased by 0.80 per cent between 1980-81 and 2000-01. Six tahsils has recorded increase in the oil seed cultivation, while nine tahsils has recorded decrease in oil seed cultivation than the district average. The highest change has found in Mahad tahsil with 5.35 per cent and the lowest decline has recorded in Mhasla tahsil with 2.07 per cent. (Table 4.7 and Fig. 4.7)

High change (2 to 4 per cent) had observed in Alibaug and Shrivardhan tahsils. Moderate change in oil seed cultivation has been observed in seven tahsils Uran, Karjat, Panvel, Pen, Sudhagad, Mangaon and Tala tahsils between 0 to 2 per cent.

Low change between 0 to -2 per cent has recorded in Khalapur, Roha, Mahad, Poladpur and Mhasla tahsil
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RAIGARH DISTRICT

TEMPORAL VARIATION IN OIL SEEDS CULTIVATION
(1980-81 to 2000-01)

Legend
Area in %

Very High (Above 04)
High  (02 to 04)
Moderate (00 to 02)
Low   (Below 00)

Fig. 4.7
RAIGARH DISTRICT

TEMPORAL VARIATION IN FODDER CROPS CULTIVATION (1980-81 to 2000-01)

Legend
Area in %

Very High (Above 16)
High (08 to 16)
Moderate (00 to 08)
Low (00 to - 08)
Very Low (Below - 08)

Fig. 4.8
Table 4.8
Raigarh District
Temporal Variation in Oil Seeds Cultivation

| Sr. No. | Tahsil    | Year 1980-81 | Year 2000-01 | Change (%)
|---------|-----------|--------------|--------------|-------------
|         |           | Area in Hectares | Area in % | Area in Hectares | Area in % |          |
| 1       | Uran      | 4            | 0.05        | 86          | 1.52      | + 1.47   |
| 2       | Panvel    | 0            | 0           | 10          | 0.06      | + 0.06   |
| 3       | Karjat    | 15           | 0.09        | 271         | 1.42      | + 1.33   |
| 4       | Khalapur  | 173          | 1.64        | 62          | 0.65      | - 0.99   |
| 5       | Pen       | 76           | 0.46        | 105         | 0.57      | + 0.11   |
| 6       | Alibaug   | 528          | 2.63        | 1595        | 5.47      | + 2.84   |
| 7       | Murud     | 94           | 1.28        | 823         | 6.63      | + 5.35   |
| 8       | Roha      | 94           | 0.45        | 90          | 0.44      | - 0.01   |
| 9       | Sudhagad  | 20           | 0.28        | 103         | 0.39      | + 0.11   |
| 10      | Mangaon   | 250          | 0.93        | 44          | 0.51      | + 0.42   |
| 11      | Tala      | #            | #           | 43          | 0.93      | + 0.93   |
| 12      | Shrivardhan | 152         | 1.78        | 401         | 3.98      | + 2.20   |
| 13      | Mhasla    | 211          | 3.08        | 96          | 1.01      | - 2.07   |
| 14      | Mahad     | 75           | 0.38        | 90          | 0.29      | - 0.09   |
| 15      | Poladpur  | 113          | 1.27        | 152         | 1.11      | - 0.15   |
|         | District  | 1805         | 0.90        | 3971        | 1.70      | + 0.80   |


# - The data of the Tala tahsil is included in Mangaon tahsil in 1981.

4.2.8 Fodder Crops

Under this category non food crops like grass, maize etc. had considered as fodder corps. In 1980.81 areas under fodder crops was 11.40 per cent of the total cropped area of the region. It was increased by 6.78 per cent and reached up to 18.17 per cent in 2000-01. Table 4.9 and Fig. 4.8 show the
temporal variation in fodder crops cultivation. Nine tahsils show the increase, while six tahsils show decrease in the area under fodder crops in the region. The highest change is recorded in Mahad tahsil (27.16 per cent) and lowest change is found in Shrivardhan tahsil (11.05 per cent).

**Table 4.9**

**Raigarh District**

**Temporal Variation in Fodder Crops Cultivation**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Tahsil</th>
<th>Year 1980-81</th>
<th>Year 2000-01</th>
<th>Change (%)</th>
</tr>
</thead>
<tbody>
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<td></td>
<td>Area in Hectares</td>
<td>Area in %</td>
<td>Area in Hectares</td>
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<tr>
<td>1</td>
<td>Uran</td>
<td>742</td>
<td>9.31</td>
<td>1537</td>
</tr>
<tr>
<td>2</td>
<td>Panvel</td>
<td>4893</td>
<td>22.19</td>
<td>2613</td>
</tr>
<tr>
<td>3</td>
<td>Karjat</td>
<td>1419</td>
<td>8.77</td>
<td>1421</td>
</tr>
<tr>
<td>4</td>
<td>Khalapur</td>
<td>773</td>
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<td>1177</td>
</tr>
<tr>
<td>5</td>
<td>Pen</td>
<td>1112</td>
<td>6.69</td>
<td>730</td>
</tr>
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<td>Alibaug</td>
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<td>5.46</td>
<td>4227</td>
</tr>
<tr>
<td>7</td>
<td>Murud</td>
<td>1940</td>
<td>26.47</td>
<td>5233</td>
</tr>
<tr>
<td>8</td>
<td>Roha</td>
<td>3754</td>
<td>17.82</td>
<td>1411</td>
</tr>
<tr>
<td>9</td>
<td>Sudhagad</td>
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<td>1.20</td>
<td>833</td>
</tr>
<tr>
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<td>Mangaon</td>
<td>937</td>
<td>3.49</td>
<td>1082</td>
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<td>Tala</td>
<td>#</td>
<td>#</td>
<td>973</td>
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<td>Shrivardhan</td>
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<td>District</td>
<td></td>
<td>22818</td>
<td>11.40</td>
<td>42386</td>
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</table>

Source: Socio-economic Review and Statistical Abstract of Raigarh District from 1981 and 2001

# - The data of the Tala tahsil is included in Mangaon tahsil in 1981.
The very high change (more than 16 per cent) is seen in Uran, Tala, Mahad and Poladpur tahsils. High change has recorded in Murud Mhasla, Alibaug and Sudhagad tahsils which is between 8 to 16 per cent. The increase in fodder crop area is due to increase in the domestic animals and demand of milk in the region.

Moderate change has found in Panvel, Khalapur and Mangaon tahsil which is between 0 to 8 per cent. Low change than the district average (0 to -8 per cent) is recorded in Karjat and Pen tahsils while very low change has observed in Roha (-10.90 per cent) and Shrivardhan (-11.05 per cent) tahsil in the study region.

4.3 SPATIAL ANALYSIS OF AGRICULTURAL LAND USE

Agriculture is the predominant activity in Raigarh district. Rice, Wari, nachni, pulses, oil seeds, spices, fruits and vegetables and fodder crops are the major crops grown in the study region. The analysis of variations of each crop in Raigarh district is as follows –

4.3.1 Rice

Rice is the main food grain crop grown in the district in kharip as well as in rabbit season. Rice occupied 142198 hectares area which is 71.02 per cent of total cropped area of the study region. It was higher than the area of Maharashtra State. The environmental condition is suitable for the growth of rice in the study region caused for large cultivation of rice in the district. Table 4.2 and Fig. 4.9 show the pattern of distribution in the region. Rice occupied first rank in the region.

The highest area under rice had recorded in Uran tahsil covering 7147 hectares area which was 89.72 per cent of the total cropped area and the lowest area under rice had observed in Poladpur tahsil covers 3753 hectares area with 42.14 per cent.
Very high area under rice had recorded in four tahsils. Uran, Karjat, Pen and Alibaug tahsils cover more than 82 per cent area under rice. The high area under rice was recorded in six tahsils namely Panvel, Khalapur, Roha, Sudhagad, Mangaon and Mahad tahsil ranging from 60 to 80 per cent.

The moderate concentration of rice production has observed in Murud, Shrivardhan, Mhasla and Poladpur tahsils which is in between 40 to 60 per cent due to kharland and rough topography.

4.3.2 Nachni

Nachni is another important food grain crop cultivated in the district on the slopes of the mountain ranges. Nachni ranks third in the crops in the region. It covers 16321 hectares area occupied 8.15 per cent area of the total cropped area of the study region. The highest area under nachni had recorded in Poladpur tahsil with 2443 hectares area which occupied 27.45 per cent and lowest area is recorded in Alibaug tahsil which covers only 13 hectares area with 0.06 per cent to the total cropped area of the district. Table 4.3 and Fig. 4.10 exhibit the distributional pattern of nachni in the region.

The very high concentration of the nachni was found in Poladpur, Mhasla and Mangaon tahsils and it has above 15 per cent to the total cropped area of the study region. High area under nachni had found in Sudhagad and Mahad tahsils ranging from 10 to 15 per cent.

Moderate area under nachni has recorded in three tahsils namely Khalapur, Shrivardhan and Roha tahsils which is between 5 to 10 per cent of the total cropped area. Low concentration of nachni has recorded in Alibaug, Panvel, Karjat, Murud and Pen tahsils which are less than five per cent of the total cropped area. Nachni crop is not observed in Uran tahsil in the study period.
Chapter IV – Agricultural Land Use Pattern

Fig. 4.9

RAIGARH DISTRICT
CROPPING PATTERN OF RICE (1980-81)

Legend
Area in %

High (Above 80)
Moderate (60 to 80)
Low (Below 60)

Fig. 4.9
RAIGARH DISTRICT
CROPPING PATTERN OF NACHNI (1980-81)

Legend
Area in %
Very High  (Above 15)
High      (10 to 15)
Moderate  (05 to 10)
Low       (Below 05)
N.A.

Fig. 4.10
4.3.3 Wari

Wari is a staple food grain cultivated in study region. Wari occupied 7154 hectares area with 3.57 per cent of the total cropped area of the study region in 1980-81 and it was more than the percentage of Maharashtra State (2.31 per cent). Table 4.4 shows the area under wari and its per cent to the total cropped area. Wari occupied fifth position in the district. The highest percentage area under wari has recorded Mhasla tahsil. It covers 782 hectares area which occupied 11.43 per cent area and lowest area under wari has recorded in Alibaug tahsil covers only five hectares area which is 0.02 per cent of the total cropped area of the district. Figure 4.11 shows the distribution of wari in the region.

The very high percentage area under wari had found in Mhasla (11.43 per cent) and Poladpur tahsil (9.69 per cent). This area has uplifted relief and sloppy land so wari is mostly grown on the slopes of the hills.

High concentration of wari had seen in Khalapur, Mangaon and Shrivardhan tahsils ranging from 6 to 9 per cent of the total cropped area.

Moderate area under wari had observed in four tahsils namely Karjat, Roha, Sudhagad and Mahad tahsil which is between 3 to 6 per cent.

Low concentration of wari had recorded in Panvel, Pen, Alibaug and Murud tahsils which is below 3 per cent. Wari crop is not observed in Uran tahsil due to plain and khar land in the tahsil.

4.3.4 Pulses

Pulses grown in the study region are gram, mung, tur, wal, chavli and udid. Pulses are grown in rabbi season. Area under pulses in 1980-81 was 7221 hectares which occupied 3.61 per cent of the total cropped area. Pulses ranked fourth in the study region The highest area under pulses had recorded in Mahad tahsil which covers 1654 hectares area occupied 8.28 per cent and lowest area recorded in Uran tahsil with only 19 hectares which occupied 0.24 per cent of the district. (Table 4.5 and Fig. 4.12)
High concentration of pulses has found in Mahad tahsil covers 8.28 per cent area of the region. Moderate area under Pulses is recorded in seven tahsils of the study region. Murud, Shrivardhan, Roha, Sudhagad, Alibaug, Mhasla and Poladpur tahsils cover the area under pulses which is between 3 to 6 per cent of the total cropped area of the region.

Low concentration of pulses had seen in the five tahsils namely Panvel, Khalapur, Karjat, Pen and Uran tahsil occupied less than three per cent area of the total cropped area of the region.

4.3.5 Spices

Black pepper, cinnamon, nutmegs are the major spices cultivated as an intercrop in horticulture. Spices ranked eight in the district in the study period. The area under spices in 1980-81 was 1069 hectares which occupied 0.54 per cent of the total cropped area. The highest area under spices was recorded in Shrivardhan tahsils covers 287 hectares area occupied 3.37 per cent and lowest area had recorded in Uran tahsils covers only one hectares area which is 0.01 per cent to the total cropped area of the study region. Table- 4.6 and Fig.- 4.13 exhibits the distribution of spices in the study region. The high concentration of spices has found in six tahsils namely Shrivardhan, Murud, Panvel, Khalapur, Alibaug, Mhasla tahsils which occupied more than 0.6 per cent area of the total cropped area of the study region.

Moderate area ranging from 0.4 to 0.6 per cent had observed in only Poladpur tahsil with 0.60 per cent. Low concentration of spices had seen in Mahad tahsil (0.22 per cent) while very low concentration had observed in five tahsils namely Uran, Karjat, Pen, Roha and Mangaon tahsil.

4.3.6 Fruits and Vegetables

The cultivation of fruits and vegetables was not much developed in 1980-81. The area under fruits and vegetables was 2923 per cent which was
Chapter IV – Agricultural Land Use Pattern

RAIGARH DISTRICT
CROPPING PATTERN OF WARI (1980-81)

Legend
Area in %
- Very High (Above 09)
- High (06 to 09)
- Moderate (03 to 06)
- Low (Below 03)
- N.A.

Fig. 4.11
Chapter IV – Agricultural Land Use Pattern

RAIGARH DISTRICT
CROPPING PATTERN OF PULSES (1980-81)

Legend
Area in %
Very High (Above 09)
High (06 to 09)
Moderate (03 to 06)
Low (Below 03)

Fig. 4.12
Chapter IV – Agricultural Land Use Pattern

RAIGARH DISTRICT
CROPPING PATTERN OF FRUITS AND VEGETABLES
(1980-81)

Legend
Area in %

Very High
(Above 03)

High
(02 to 03)

Moderate
(01 to 02)

Low
(Below 01)

N.A

Fig. 4.14
1.46 per cent of the total cropped area of the district. Mango, Cashew, Chiku, Awala, Ratambi, Jackfruit, Coconut and water melon are the main fruit crops grown in the region. Fruits and vegetables ranked sixth in the district. Table 4.7 and Fig. 4.14 exhibit the area under fruits and vegetables in the study region. The highest area under fruits and vegetable has recorded in Shrivardhan tahsil. It covers 2306 hectares which was 5.20 per cent and the lowest area had recorded in Mahad tahsil which covers only 10 hectares area occupied only 0.05 per cent of the total cropped area.

Very high concentration of fruits and vegetable has found in Shrivardhan (5.20 per cent) and Khalapur (3.94 per cent) tahsils.

High area under fruits and vegetables has seen in four tahsils namely Panvel, Pen, Mhasla and Alibaug tahsils ranging from 2 to 3 per cent area of the total cropped area.

Moderate area has seen in only Murud tahsil with 1.46 per cent which was observed in seven tahsils. Uran, Roha, Karjat, Mangaon, Mahad and Poladpur tahsil have less than one per cent area under fruits and vegetables. Fruits crop is not observed in Sudhagad tahsil in the year 1980-81.

4.3.7 Oil Seeds

Ground nut, sesames and linseed are the oil seeds grown in the Raigarh District. Oil seeds ranked seventh in the district and it covers 1805 hectares area which is 0.9 per cent of the total cropped area. The highest area under oil seed had observed in Mhasla tahsil occupied 211 hectares (3.08 per cent) area and lowest area is seen in Uran tahsil covers only four hectares (0.05 per cent) area of the total cropped area of the region in 1980-81. Table 4.8 and Fig. 4.15 gives the idea about the distribution of oil seeds in the region.

Very high percentage area under oilseed had recorded in Mhasla with 3.08 per cent while high percentage area had observed in Alibaug tahsil (2.03 per cent).
Moderate area under oilseed ranging from 1 to 2 per cent is recorded in Khalapur, Murud, Shrivardhan and Poladpur tahsils. Low area less than one per cent was observed in seven tahsils namely Uran, Karjat, Pen, Roha, Sudhagad, Mangaon and Mahad tahsils. Oil Seed crop is not cultivated in Panvel tahl sil during the year 1980-81.

4.3.8 Fodder crops

Fodder crops are used as a food of the cattles to obtain the milk. Green grass, Kadwal and maize are the main fodder crops in the region. It ranked second in the area and covers 22818 hectares area which occupied 11.40 per cent to the total cropped area of the district in 1980-81. The highest area under fodder crops are observed in Murud tahsil which covers 1940 hectares (26.47 per cent) area and lowest area is found in Sudhagad tahsil. It occupied 87 hectares (1.20 per cent) area of the total cropped area of the district (Table 4.9 and Fig. 4.16).

High concentration of fodder crops are observed in Murud (26.47 per cent), Shrivardhan (24.00 per cent) and Panvel (22.19 per cent) tahsil.

Moderate area under fodder crop is recorded in Roha, Mahad and Poladpur tahsils ranging from 10 to 20 per cent of the total cropped area.

Low concentration of the fodder crops are observed in eight tahsils namely Uran, Karjat, Khalapur, Pen, Alibaug, Sudhagad, Mangaon and Mhasla tahsil which is less than 10 per cent area of the total cropped area.

4.4 SPATIAL ANALYSIS OF AGRICULTURAL LAND USE
(2000 - 2001)

4.4.1 Rice

Rice is a dominant food crop in the region, cultivated in kharip and Rabi season. Rice occupied 124294 hectares area which is 57.58 per cent of the total cropped area in year 2000-01. It covers 66.60 per cent area of the net
RAIGARH DISTRICT
CROPPING PATTERN OF OIL SEEDS (1980-81)

Legend
Area in %
Very High (Above 03)
High (02 to 03)
Moderate (01 to 02)
Low (Below 01)
N.A

Fig. 4.15
Chapter IV – Agricultural Land Use Pattern

RAIGARH DISTRICT
CROPPING PATTERN OF FODDER CROPS (1980-81)

Legend
Area in %
Very High (Above 30)
High (20 to 30)
Moderate (10 to 20)
Low (Below 10)

Fig. 4.16
Chapter IV – Agricultural Land Use Pattern

RAIGARH DISTRICT
CROPPING PATTERN OF RICE (2000-01)

Legend
Area in %
- High (Above 80)
- Moderate (60 to 80)
- Low (40 to 60)
- Very Low (Below 40)

Fig. 4.17
Chapter IV – Agricultural Land Use Pattern

Fig. 4.18

RAIGARH DISTRICT
CROPPING PATTERN OF NACHNI (2000-01)

Legend
Area in %

- Very High (Above 15)
- High (10 to 15)
- Moderate (05 to 10)
- Low (Below 05)
- N.A.
sown area. The per cent area under Rice was very high than Maharashtra state (37 per cent). The temperature, rainfall and soil is suitable for paddy cultivation, thus more than half of the area is under rice crop. Table 4.2 and Figure 4.17 show the area under rice and per cent in the Raigarh district. The highest area under rice is recorded in Pen tahsil covering 14822 hectares which was 80.05 per cent of the total cropped area and 93.58 per cent of the net sown area. It was more than the district average 57.58 per cent. Due to plain land and availability of irrigation, Rice occupied first position crop in the study region. The lowest area under rice has 21.35 per cent observed in Poladpur tahsils.

High area under rice has observed in Pen, Uran, Karjat and Khalapur tahsils. It covers more than 80 per cent area under rice.

The moderate concentration (60 to 80 per cent) of rice cultivation had confine to the Panvel, Karjat, Khalapur, Alibaug, Roha and Mangaon tahsil. The low concentration of rice production had observed in four tahsil namely Uran, Sudhagad, Tala and Mahad tahsil ranging from 40-60 per cent below the district average. Very low area under rice is found in Murud, Shrivardhan, Mhasla and Poladpur tahsils have less than 40 per cent rice due to coastal marshy land and hillocks in Poladpur tahsil.

4.4.2 Nachni

Nachni or Nagli is one of the main food grain crop grown in the district mostly on the slope of the mountains and hills. Nachni covers 12101 hectares accounting 5.19 per cent to total cropped area and 5.97 per cent to net sown area in the district. Nachni crop is taken in all other tahsils except Murud Tahsil. Table - 4.3 and Fig. 4.18 gives in-depth idea distribution of nachni in the study area. The highest percentage of Nachni is registered in Poladpur tahsil covering 19.32 per cent area. Poladpur and Mangaon tahsils are in the south of the district on the slope of Sahayadri mountain ranges having high proportion of Nachni cultivation.
The total cropped area under Nachni occupies fifth position after rice, food crops, fruits and vegetable and pulses in the study area. Mangaon tahsil has higher percentage area (12.69 per cent). Moderate area has observed in five tahsils namely Mhasla, Roha, Tala and Mahad ranging from 5 to 10 per cent area under nachni and it was more than the district average 5.19 per cent. The coastal plain tahsils namely, Uran, Panvel, Pen, Alibaug, Shrivardhan and central plateau tahsils Sudhagad, Khalapur and Karjat tahsil have low area in nachani cultivation less than the district average below 5.0 per cent.

4.4.3 Wari

Wari is another main food crop cultivated in the Raigarh district. Wari occupied 7843 hectares of total cropped area covers 3.36 per cent area. Wari occupied 7843 hectares net sown area and it covers 3.87 per cent more than Maharashtra state. Table 4.4 and Fig. 4.19 exhibit the wari distribution in the study region. Wari occupied sixth position in the study area.

The highest percentage area under wari had recorded in Mhasla tahsil (9.90 per cent) and the lowest area found in Alibaug tahsil and it was 0.03 per cent.

High area under wari is observed in only in Mahad tahsil with 7.11 per cent. Moderate wari cultivation has observed in six tahsils namely, Khalapur, Roha, Sudhagad, Mangaon, Tala and Poladpur tahsil ranging area between 3 to 6 per cent.

Low area under wari had seen in six tahsils namely Uran, Panvel, Karjat, Pen, Alibaug and Shrivardhan tahsil.

4.4.4 Pulses

Pulses consist of gram, moong, chawali, tur, wal, Udid (black gram) are the Rabi crops grown in the study region. Pulses crop has on fourth position in the study area. It had cultivated on 13182 hectares which was 5.65 per cent of total
Chapter IV – Agricultural Land Use Pattern

RAIGARH DISTRICT
CROPPING PATTERN OF PULSES (2000-01)

Legend
Area in %
Very High (Above 09)
High (06 to 09)
Moderate (03 to 06)
Low (Below 03)

Fig. 4.20
cropped area and 6.60 per cent of the net sown area. It was less than the Maharashtra state (17 per cent). The highest area under pulses is recorded in Mhasla tahsil was 12.6 per cent of the total cropped area under pulses. Table 4.5 and Figure 4.20 exhibit the distribution pattern of pulses in the district.

High percentage area under pulses has observed in Karjat, Tala, Roha, Shrivardhan, Sudhagad and Mangaon tahsils which is more than 6.00 per cent and it is above district average.

Moderate area had found in Khalapur, Mangaon and Mahad ranging from 4 to 6 per cent. Low cultivation area under pulses had observed in Pen, Panvel, Alibaug, Poladpur tahsil between 2 to 4 per cent.

4.4.5 Spices

Spices including black peppers, cinnamon, nutmeg etc are grown in the study region covering only 417 hectares area and 0.21 per cent to the net cropped area. It is less than the percentage (1.0 per cent) of the Maharashtra state. The highest area under spices is recorded in Tala tahsil covering 3.18 per cent of the total cropped area. Spices are at eighth rank in the production in the study area shows in Table- 4.6. The lowest area under pulses is 0.02 per cent found in Khalapur tahsil. Fig. 4.21 reveals that the hilly region of the district having high proportion of area under spices.

Very high percentage area has observed in Tala (3.18 per cent), Panvel (0.8 per cent) and Karjat (0.41 per cent) tahsils. High percentage area had observed Shrivardhan (0.26 per cent) and Alibaug (0.21 per cent) tahsils. Moderate area had seen in Murud, Poladpur, Sudhagad and Mhasla tahsils ranging from 0.1 to 0.2 per cent.

Five tahsils namely, Uran, Pen, Mahad, Roha and Khalapur has low area under spices less than one per cent. The agriculture department has cultivated spices on 433.27 hectares in the region.
4.4.6 Fruits and Vegetables

The distributional pattern of fruits and vegetables cultivation the study region is influenced by local market and road accessibility in the Raigarh, Thane and Mumbai districts. Vegetables are sold in the local tahsil or village market due to perishable product and the fruits produced are sent in the local market and Mumbai market. Mango, Cashew, Chiku, Awala, Coconut, Ratambi, Jack fruit, water melon, guava are the major fruit crops cultivated in the region. Horticulture is well developed in this decade. The soil in the study region is slightly saline in character, thus the vegetables which can tolerate salinity are grown in the district. The major vegetables grown are ladyfinger, bitter-guard, bottle-guard, sweet guard, cucumber, spinach, chili and white onions. Fruits and vegetables are on third rank in the region.

The total area under fruits and vegetable in 2000-01 is 20744 hectares which occupies 8.89 per cent of the total cropped area and 10.22 per cent of the net sown area. It is more than the Maharashtra State (2 per cent). Table 4.7 and Fig. 4.22 exhibit the pattern of distribution of fruits and vegetables in the study region. This crop ranked third in the district.

The highest area under fruits and vegetables has recorded in Shrivardhan tahsil (32.96 per cent) and lowest area under this is 0.16 per cent observed in Mahad tahsil.

High cultivation has observed in Uran, Sudhagad, Mhasla, Poladpur, Pen and Murud tahsil ranging from 10 to 19 per cent.

The moderate cultivation area (between 5 to 10 per cent) is recorded in Panvel, Alibaug and Roha Tahsils. Five tahsils such as in Karjat, Khalapur, Mangaon, Tala and Mahad tahsils had low area than 5 per cent.

4.4.7 Oil Seeds

Ground nut, sesamum and linseed are the considerable oil seeds crops cultivated in the study region in which ground nut has a large share. Oil seeds
Chapter IV – Agricultural Land Use Pattern

Fig. 4.21
Chapter IV – Agricultural Land Use Pattern

RAIGARH DISTRICT

CROPPING PATTERN OF FODDER CROPS (2000-01)

Legend
Area in %
Very High (Above 30)
High (20 to 30)
Moderate (10 to 20)
Low (Below 10)

Fig. 4.24
ranked seventh among all the crops in the region. The total area covered by oil seeds in the region is 3971 hectares which is 1.70 per cent of the total cropped area and 1.96 per cent of the net sown area. It is grown as a rabbit crop in all tahsils on a lower area compared to other crops. Table 4.8 and Fig. 4.23 exhibit the distribution pattern of pulses in the district.

The highest area under oil seeds has recorded in Murud tahsil (6.33 per cent) followed by Alibaug (5.47 per cent) and Shrivardhan (3.98 per cent) tahsils.

The moderate cultivation of oil seeds has found in four tahsil namely Uran, Karjat, Mhasla and Poladpur tahsils ranging from 1 to 2 per cent.

Low area, less that 0.1 per cent has observed in Panvel, Khalapur, Pen, Roha, Sudhagad, Mangaon, Tala and Mahad tahsil.

### 4.4.8 Fodder Crops

The fodder crops include green grass, kadval and maize grown in the region. Fodder crops had grown after paddy cultivation. The total share of the crop was 18.17 per cent and covers 42386 hectares area of the cropped area in the study region used for live stock. The concentration of the fodder crop was in southern part of the study region. The highest area under fodder crop was 42.16 per cent found in Murud tahsil followed by Mahad (38.97 per cent) and Poladpur (34.75 per cent) tahsil. Uran and Tala tahsils has in high percentage of fodder crops and it was between 20 to 30 per cent. Table 4.9 and Fig. 4.24 show the distribution of fodder crop in the region.

Moderate cultivation of fodder crop had observed in Panvel, Khalapur, Alibaug, Shrivardhan and Mhasla tahsil between 10 to 20 per cent.

Lower cultivation area less than 10 per cent had recorded in Karjat, Pen, Roha, Sudhagad and Mangaon tahsil in the region. Fodder crop ranks second in the total cropped area in the region.
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