Chapter-III
Research Methodology
III Research Methodology:

In this chapter programme and procedure adopted in different phases of this study, comprising collection, analyses and interpretation of data are presented. These include sampling procedure, techniques and tools used in data collection and also procedure of analysis applied for the observations and findings in the study. It also presents the data requirement of the study pertaining to the objectives of the study. In brief the chapter presents technological background of the method of data collection and analysis in accordance with the objectives of the study.

Sampling Procedure:

Ballia is an economically backward and densely populated district situated in the eastern region of Uttar Pradesh. Agriculture and livestock rearing are the main economic activities in the district. There are very few options as alternate sources of labour utilization except in Crop husbandry and Dairying including livestock rearing. In view of the abundance of agriculture labour force due to dense population and on account of Crop cultivations and Dairying as the most important avenues of labour deployment in different physiographic situations Ballia district is ideally suited for the study. Ballia district was purposively selected for the study so as to examine income and employment of agricultural laboures in KARAIL BANGAR and DOAB regions of the district multistage stratified random sampling procedure was adopted in the study to draw the sample.

The district comprises of three different physiographical soil based regions i.e. KARAIL, BANGAR and DOAB. In view of the
prevailing ecology and soil based physical setup, differences in cropping pattern and other economic activities one development block each representing KARAIL, BANGAR and DOAB region, were selected purposively. The thus selected blocks were Sohaon representing KARAIL, Nawanagar representing BANGAR and Bairiya representing DOAB physiographic regions.

Separate lists of inhabited villages of selected block were prepared and arranged in alphabetical order. Thereafter four villages from each development block were selected randomly. The selected villages for the study are presented in Table 3.1.

**Table: 3.1 List of selected blocks and Villages**

<table>
<thead>
<tr>
<th>Physiographic region</th>
<th>Development blocks</th>
<th>Selected Villages</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Bangar</td>
<td>Nawanagar</td>
<td>1. Jajauli</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Chandi</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Bharthaon</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Tendua</td>
</tr>
<tr>
<td>2. Doab</td>
<td>Bairiya</td>
<td>1. Adhisijuan</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Mangarh</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Shiwal</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Talibpur</td>
</tr>
<tr>
<td>3. Karail</td>
<td>Sohaon</td>
<td>1. Tutuwari</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Senduriya</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Sohaon</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Basant pur</td>
</tr>
</tbody>
</table>

In the second stage of sampling all agriculture labour households of the selected villages were enlisted and stratified in landless, <0.5 hectare, 0.5 to 1.0 hectare and >1.0 hectare holding groups. Thereafter in the stage of ultimate sampling 10 agricultural labour families from each village proportionately
representing four groups were randomly selected. The data used in the study was collected from the selected families. The household based data was recorded and analysed. The sample of the study thus comprised 120 agricultural labour households evenly representing 40 households each from three regions viz. BANGAR, DOAB and KARAIL. 10 households each from the four villages of the regions shall be randomly selected proportionately representing landless, <0.5 hectare, 0.5 to 1.0 hectare, >1.0 hectare holding households.

<table>
<thead>
<tr>
<th>Size Group (hectare)</th>
<th>Regions</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Bangar</td>
<td>Doab</td>
</tr>
<tr>
<td>Landless</td>
<td>16</td>
<td>14</td>
</tr>
<tr>
<td>&lt;0.5</td>
<td>13</td>
<td>11</td>
</tr>
<tr>
<td>0.5 to 1.0</td>
<td>9</td>
<td>12</td>
</tr>
<tr>
<td>&gt;1.0</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>40</td>
</tr>
</tbody>
</table>

(Figures under parents are owned area of land)

The sample of this study consists of 45 landless labourers of which 16 are from BANGAR, 14 from DOAB and 15 from KARAIL regions. 38 households are from <0.5 hectare size of which 13 are from KARIAL, 11 from DOAB and 14 from KARAIL regions. 29 households belong to 0.5 to 1.0 hectare size group of which 9 belong to BANGAR, 12 to DOAB and 8 to KARAIL regions. 8 households belong to >1.0 hectare size group of which 2 are from BANGAR and 3 each from DOAB and KARAIL regions.

Sources of Data and Procedure of Data Collection

In fulfillment of the objectives of the present study the following informations were collected from secondary and primary sources.
A. Secondary Sources:
i. Basic structure of the district and selected blocks under study i.e. physiographic and ecological features of BANGAR, DOAB and KARAIL regions.

ii. Statistics on land cropping pattern demographic features etc.

B. Primary Sources:
i. Operational area of the sample farms.

ii. Farm assets i.e. Implements, farm machinery, Irrigation and transport equipments, live-stock Diary appliances and equipments, etc.

iii. Demographic features of the sample households including educational status and occupational structure.

iv. Cropping pattern.

v. Crop Production expenses and returns.

vi. Human labour deployment in cultivation of crops.

vii. Income from in farm and Non-farm activities.

viii. Labour deployment in Dairy and other livestock rearing activities on sample farms.

ix. Expenditure and Returns from milk production.

x. Labour employment in farm and Non-farm activities.

Informations thus collected form basis of the analyses undertaken, under this study and inferences thereof.

Tools of Data Collection:

Primary data, pertaining to the data requirement of this study, were collected with the help of pretested schedules: (Appendix-I)

Reference Period:

Primary data from the sample households were collected for the year 2005-06.
Method of Data Collection:

For the purpose of collection of the primary data from the sample households direct personal investigations procedure was adopted. In the beginning of field data collection rapport with the sample households was established. Thereafter the required data were collected. Three to five visits to the sample villages were undertaken for the purpose of collection of field data from the sample households.

Method of Analysis:

The data thus collected from the sample households of the three regions, viz., BANGAR, DOAB and KARAIL were processed and tabulated. In view of the complexities of the studies of agricultural labour economics tabular and statistical analysis procedure has been employed. Incomes from different sources and Asset formation in the regions have been examined on the basis of tabular analysis.

The observations made and the inferences drawn in this study, form the basis for comparison, are based on the analysis of the data obtained from sample households belonging to the three soil tracts viz. BANGAR, DOAB and KARAIL.

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