CHAPTER - III

RESEARCH METHODOLOGY
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RESEARCH METHODOLOGY

The chapter describes the research methodology adopted for the present study entitled, "Role of farm women workers in agricultural economy in district Meerut (U.P.), with special reference to employment, wage structure and level of income". The methodology adopted for the study has been broadly presented under the following sub-heads:

1. Sampling technique,
2. Method of enquiry and collection of data,
3. Period of enquiry and
4. Analytical tools.

3.1 Sampling technique

A three stages stratified random sampling technique was adopted to select the blocks, villages and sample households from district Meerut of Western U.P. for the present study. District Meerut was selected purposively because the investigator has deep knowledge about the study area, peoples and their occupations since adulthood on one hand and close familiarity about the officials, non-officials and local dialect on the other. The investigator was believed that the purpose of the present study would be accomplished while selecting the district Meerut purposively.
3.1.1 Selection of the blocks

There are 12 development blocks in district Meerut. A list of all the development blocks was prepared along with the total population and families with the help of statistical bulletin, district Meerut, 2002.

3.1.2 Selection of villages

There were 49 and 82 villages existing in Rohta and Parikshitgarh blocks, respectively. A separate list of all the villages of both the selected blocks was prepared along with total population of the villages with the help of respective blocks head quarters. Out of this list, 12 villages (6 villages from each block) were selected randomly.

3.1.3 Selection of household

This was formed the third stage of sampling. A list of all the households of selected villages was prepared along with farm women workers families and their cultivated area with the help of village authorities (Gram Pradhan, Lekhapal and Village Panchayat Secretary) as well as progressive farm women workers. Then, a list of those households short listed whose women workers worked in agriculture more than half of days in a year or earned more than 50 per cent his income from agriculture. These households were further categorized into four categories i.e. landless, small (below 1 ha), medium (1-2 ha) and large (2 ha and above).

Thus, a random sample of 120 households was drawn from the universe of 12 villages selected from two development blocks. The
number of households under different categories and villages were kept in probability proportion to their number falling under different categories and villages. List of sample households according to their categories have been presented in Table III-1.

Table III-1: Size group wise number of sample households

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Block /villages</th>
<th>Categories</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Landless</td>
<td>Small</td>
</tr>
<tr>
<td>A.</td>
<td>Rohta block</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Kogpur</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2.</td>
<td>Palra</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>3.</td>
<td>Malaipur</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>4.</td>
<td>Pithanpur</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>5.</td>
<td>Bhupapur</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>6.</td>
<td></td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td><strong>Sub total</strong></td>
<td><strong>12</strong></td>
<td><strong>22</strong></td>
</tr>
<tr>
<td>B.</td>
<td>Parikshitgarh block</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Alleypur Khurd</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>8.</td>
<td>Malaipur</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>9.</td>
<td>Sultanpur</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>10.</td>
<td>Bakawali</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>11.</td>
<td>Narauri</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>12.</td>
<td></td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td><strong>Sub total</strong></td>
<td><strong>10</strong></td>
<td><strong>25</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Grand total</strong></td>
<td><strong>22</strong></td>
<td><strong>47</strong></td>
</tr>
</tbody>
</table>

A woman worker who worked more than half of the year in agricultural activities or earned more than 50 per cent of their income from agriculture was treated as farm women worker.

3.2 Method of enquiry

The primary data of the present study were collected by field survey through direct personnel interview method with the help of pre-prepared and well tested questionnaires and schedule. For this
purpose, respondents were personally interviewed by the researcher himself and their response was recorded in the questionnaire schedule. The convenience of the sample respondents was given due consideration. Every possible care was taken to ensure the accuracy and reliability of the data. The information furnished by the respondents was properly edited through cross checks.

The secondary data were collected from published material i.e. journals, books, reports, bulletins and the records of the blocks and district headquarter, district economic and statistical officer, district agricultural officer, tehsil head quarters, district information officer, lekhpals records etc.

3.3 Period of enquiry

The study is base on one agricultural year i.e. from July 01, 2003 to June 30, 2004.

3.4 Analytical tools

Following tools and techniques were applied to find the accurate finding and interpretation of field data of this study:

3.4.1 Simple statistical analysis

Simple statistical analysis was done to compare values of different variables of farm economy and other aspects of farm business on various size groups of selected farms.

3.4.2 Weighted average

The average value refers to the averages of the aggregate value.

$$\text{Weighted Average} = \frac{W_1X_1 + W_2X_2 + \ldots + W_nX_n}{W_1W_2 + \ldots + W_n}$$
\[ \frac{\sum_{i} W_i X_i}{\sum_{i} W_i} \]

Where,
\[ X_i = \text{Value of } i^{th} \text{ variable} \]
\[ W_i = \text{Weight of } i^{th} \text{ variable} \]

3.4.3 Cropping intensity

Cropping intensity is the ratio of total cropped area to net cropped area and is represented in percentage.

Cropping intensity = \[ \frac{\text{Total cropped area}}{\text{Net cultivated area}} \times 100 \]

3.5 Technical terms used

3.5.1 Landless household

A household which has no owned land and worked as labour on other's farm treated as landless households.

3.5.2 Small household

A household which has an operational holding of less than one hectare treated as small category household.

3.5.3 Medium household

A household which has an operational land holding between one to two hectares treated as medium category household.

3.5.4 Large farmers

A household who has an operational land holding of two hectares and above treated as large category household.

3.5.5 Total cropped area

It refers to the net area sown plus area sown more than once.
3.5.6 Farm family workers

All the family members working whole time on the farm are known as farm family workers.

3.5.7 Fixed capital

Fixed capital includes long lived assets. They gradually lose their like and decline in value (depreciate) due to use, and wear. They include livestock, building, trees, fencing, layout, implements and machinery etc.

3.5.8 Total cost

Total cost comprises of two components, i.e., fixed and variable costs.

3.5.9 Gross income

It includes:

a. Cash received on account of the sale of farm produce.

b. Value of the produce, main or by-product used for home consumption, and, for seed, cattle feed or given over as wages in kind.

3.5.10 Net Income

Gross income minus total cost of production called net income.