Chapter - III

Research Methodology
RESEARCH METHODOLOGY

The present chapter mainly deals with the research methodology used in the present study to cover the main objectives for which it was planned and thought to be carried out. Research methodology focuses the whole process of conducting researches. It is therefore, necessary to highlight the methodological framework, which have been used in this study to make it empirically sound and meaningful. Also it was done to know the facts of the problem which can be verified by the observations and the relationships that exists between the facts. The frameworks used in the research methodology were as follows:-

I. Method of Study

II. Sampling Design
   A. Selection of district
   B. Selection of development blocks
   C. Selection of villages
   D. Selection of samples.

III. Method of Investigation
   A. Collection of primary information
   B. Collection of Secondary information.

IV. Method of Analysis of data

V. Reference Period
I. Method of Study

This study was confined to Allahabad District of Eastern Uttar Pradesh having maximum milk production as well as number of buffaloes in the eastern region of U.P. The empirical data were collected from the chosen sample buffalo owners through the direct personal interviews with the help of specially prepared and pre-tested schedules and questionnaires. The secondary information were collected from the available records of the State, Region, District and Block level concerned offices and other sources. General discussions were also done with the officials concerned and various experienced milk producers other than chosen sample buffalo owners of the area under study. Personal observations were also done to identify the problems of milk marketing from the villages. The data were collected for the agricultural year 2002-2003. A simple mathematical and statistical analysis was done to derive the results of this study.

II. Sampling Design

The sampling technique used in this study was a multistage stratified mixed sampling. At the first stage district Allahabad having maximum number of buffaloes and milk production among all other districts of eastern region was selected purposively. Further out of 20 development blocks, two development blocks
namely Kaurihar from Gangapar region and Koraon from Yamunapur region were chosen randomly on the basis of maximum milk production at the second stage. From these blocks thus, selected 5 villages from each block were selected randomly on the basis of maximum number of buffalo owners and milk production, making a total of 10 villages at the third stage. From these 10 villages, thus, selected a list of buffalo owners along with their numbers of buffaloes raised and milk production was prepared. This list was categorized into 3 main size groups on the basis of herd i.e. (1) up to 5 buffaloes (2) 6-15 buffaloes and (3) Above 15 buffaloes. The ultimate samples of buffalo owners, who sell milk were chosen according to probability proportion to total numbers in each category at the fourth stage restricting the total number of samples to 100 in all for the in-depth study. The detailed sampling design is as follows:

A. Selection of the District

Out of the then 23 districts scattered in the Eastern Region of Uttar Pradesh one district having maximum number of buffaloes and milk production among all other districts of eastern region namely Allahabad District was selected purposively for this study at the first stage of sampling. Also the demand for milk in this district was higher due to the higher number of towns and city population in this district.
SELECTED BLOCK

- KAURIHAR
- KORAON
B. **Selection of the Development Blocks**

From the 20 development blocks falling in this district two development blocks namely Kaurihar from Gangapar region and Koraon from Jamunapar region having maximum number of buffaloes and milk production were selected randomly at the second stage of sampling. These development blocks represent the real situation of Allahabad district in the Eastern Region of Uttar Pradesh wherein Kaurihar is nearest to the city and Koraon is situated in the interior.

C. **Selection of the Villages**

At the third stage of sampling, 5 villages from each of the two selected blocks were selected randomly on the basis of the maximum number of buffalo owners and milk production. Thus, in all 10 villages were selected from these two blocks. Such villages were namely (1) Khizirpur, (2) Singhapur, (3) Lakharaiyan, (4) Mohammadpur and (5) Purayghasi from Kaurihar block and (1) Darshani, (2) Pasana, (3) Badaur, (4) Piparaon and (5) Sikaro from Koraon block.

D. **Selection of the Samples**

At the fourth stage of sampling the ultimate samples of buffalo owners were selected randomly on the same basis of the maximum number of buffalo owner from these 10 villages thus,
selected. From these villages a list of buffalo owners who sell milk was prepared. Thereafter, the list thus, prepared was categorized into 3 main size-groups of herds i.e. (1) up to 5 buffaloes, (2) 6-15 buffaloes and (3) Above 15 buffaloes. The ultimate samples of buffalo owners were chosen according to probability proportion to the total number of buffalo owners in each category restricting the total samples to 100 on an over all. The distribution of total samples thus, chosen is given in Table III-1.

III. METHOD OF INVESTIGATION

A. Collection of Primary Information

The collection of primary data was done by survey method through the direct personal interviews from the sample buffalo owners with the help of specially prepared and pre-tested schedules and questionnaires to cover the objectives of the study. The schedules and questionnaires particularly included all aspects such as general details, family composition, work force, educational status, hired labourers, land owned, cropping pattern, expenses in maintenance of buffaloes, milk production, assets possessed, disposal of milk, expenses in marketing of milk and problems and suggestions of sample buffalo owners. Personal observations were also done.
B. Collection of Secondary Information

The required secondary data were collected from the available records at the state, region, district and block level offices on all aspects of milk production and marketing. The other required secondary information pertaining to marketing of milk at national and other levels were also collected through the various Government publications to cover the objectives of the study.

IV. Method of Analysis of Data

A simple mathematical and statistical analysis was done in respects of family composition, work force, educational status, land owned, cropping pattern, maintenance expenses, milk production, assets possessed, disposal of milk, marketing expenses and problems and suggestions of sample buffalo owners and marketing efficiency in different channels. Only average and percentages of the available data were calculated which covered the objectives of the study.

V. Reference Period

The reference period of the present research study was agricultural year 2002-2003.
# TABLE III-1

Sampling Design

(No. of sample Buffalo owners)

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Selected Blocks &amp; Villages</th>
<th>Size Groups of Herds</th>
<th>Total Buffalo owners</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Upto 5 Buffaloes</td>
<td>6-15 Buffaloes</td>
</tr>
<tr>
<td>Kaurihar</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Khizirpur</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>2.</td>
<td>Singhapur</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>3.</td>
<td>Lakharaiyan</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>4.</td>
<td>Mohammadpur</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>5.</td>
<td>Purayghasi</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td><strong>Sub Total</strong></td>
<td></td>
<td><strong>12</strong></td>
<td><strong>25</strong></td>
</tr>
<tr>
<td>Koraon Block</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Darshani</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>2.</td>
<td>Pasana</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>3.</td>
<td>Badaur</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>4.</td>
<td>Piparaon</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>5.</td>
<td>Sikaro</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td><strong>Sub Total</strong></td>
<td></td>
<td><strong>15</strong></td>
<td><strong>32</strong></td>
</tr>
</tbody>
</table>

| Overall Total | 27 | 57 | 16 | 100 |