Chapter – III

BACKGROUND OF THE STUDY AREA

Section -III.1: INTRODUCTION

The review done on earlier studies related to our present work made it clear that some uncovered aspects still remain to be covered on “Consumption, Sales Behaviour and Marketed Surplus” of food crops of a particular area. The present chapter focuses attention to the selection of area and the selection of food crop on which the study will be conducted. Paddy the major crop and staple diet of the people of Barak Valley in Assam is selected for that purpose which is being widely cultivated in the valley from the time unknown. Higher production and better marketing of paddy (rice) can improve the economic condition of the majority of people living in the valley which in turn can eradicate poverty and unemployment problems to some extent.

The geographical and agricultural background of the select area will also be discussed in this chapter to have a situational idea about our study area. The chapter will also examine the conceptual and theoretical framework, terms and terminologies which will be extensively made use of in the work.

The theoretical framework of the study will be based on two broad schools of thought the first led by Dharm Narain maintains that marketed surplus follows the U-shaped pattern according to size class. The second school of thought led by Utsa Patnaik asserts that marketable(ed) surplus reveals a linear relationship for all size holdings. The important concepts like marketed surplus, marketable surplus, consumption, distress sales, repurchase and other terms will be defined apparently in this chapter.
We set five principal objectives in performing the ongoing research work. Keeping these objectives in view, four hypotheses have been formulated within the framework of which the present study will be conducted. Besides the objectives and the hypotheses of the study the current chapter also covers the complete methodology of the work including sampling design, data source, variables selected, and research tools and techniques adopted. Regression techniques will be employed to estimate the functional relationships between the dependent and independent variables taken into account in this work.

The chapter has been divided into five sections with section-I as introduction, followed by section-II describing the geographical and agricultural background of the Barak Valley of Assam. Section-III deals with theoretical and conceptual framework of the present work, while section-IV highlights the main objectives and hypotheses framed for the study. The methodology of the research work covering sampling design, data source etc. will be discussed under section-V of the current chapter.

Section -III.2: BACKGROUND OF THE STUDY AREA

The Northeastern Region of India consists of the States of Assam, Arunachal Pradesh, Meghalaya, Manipur, Mizoram, Nagaland and Tripura with the recent inclusion of Sikkim. The State of Assam bears a diverse nature of its economy coupled with diversity in its social, cultural, geographical and economic elements of growth. Its soil, topography, rainfall and climatic condition are suitable for paddy cultivation, covering about 70 percent of the gross cropped area and above 90 percent of the area under food crops. The major groups of soil in Assam are new alluvial, old alluvial, old mountain valley alluvial, laterised red soil and non-laterised red soil. The humidity of the State is noticed as high as 85.90 percent or more in the majority
of its districts with the temperature varying between a maximum of 30°C to 33°C and minimum of 6°C to 12°C in average of different parts of the State (ESA, 2003-04).

Physiographically the entire State of Assam can be divided into three broad regions, viz. the Brahmaputra Valley in the north, the Barak Valley in the South, and the Hills region that lies in between the two valleys. The Brahmaputra Valley which is surrounded by hills except in its western border is an alluvial plain area. It is named after the river Brahmaputra which flows from the eastern part of the Valley towards west through the middle of the State. The Hills region of Assam that lies in between Brahmaputra and Barak Valley consists of the Hills of Karbi Anglong and North Cachar.

The Barak Valley of Assam is named after its principal river the Barak which originates from Manipur in the east and enters the plain area of Bangladesh in the west with the creation of two branches – Surma and Kusiara. The valley situated in the south of the State is about 190 KMS long and 96 KMS wide (ESA, 2003-04). It is surrounded by the hills of the North Cachar Hill District of Assam in the north and the hills of Mizoram in the south. The valley in its nature mainly comprises of flat plain areas of the districts of Cachar, Karimganj and HailaKandi. The topography of the valley varies from small hillocks to plain areas with the existence of natural depressions (locally known as Haors, Bheels etc.) and extreme low lying areas. There are about 20 per cent of the valley’s geographical areas where no crop can be grown during the period from April to September due to water stagnation in the plot (Biswas, 2001).

As per the census report of 2001 the literacy rate of the Barak Valley is found as 63.56 per cent which is slightly higher than all Assam literacy rate of 63.25 per cent (Table -1), out of which 71.88 percent is male literacy while only 53.72 per cent females are literate. This
indicates that females in the valley are far behind in attainment of education than the males. Further the rural literacy rate in the valley is revealed as 60.98 per cent as against the literacy rate of urban population as 87.41 per cent. This implies that rural people are educationally more backward than the urban people. Since the valley’s economy is agro-based, maximum people live in village areas besides a small proportion of its total population living in urban areas. Such a rate of rural literacy is in leading position to describe the educational backwardness of the valley as a whole. There is an inter-district variation regarding the literacy rates which is reflected in table-1, in which Hailakandi district witnesses the lowest rate of rural literacy compared with Cachar and Karimganj districts. However, the two districts - Cachar and Karimganj acquire almost the similar position in respect of overall literacy as well as literacy rate of rural population.

Table - 1

DISTRICT WISE LITERACY RATES IN BARAK VALLEY, 2001 CENSUS

(In percentage)

<table>
<thead>
<tr>
<th>Districts</th>
<th>Person</th>
<th>Male</th>
<th>Female</th>
<th>Rural</th>
<th>Urban</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cachar</td>
<td>67.82</td>
<td>75.73</td>
<td>59.41</td>
<td>64.77</td>
<td>85.46</td>
</tr>
<tr>
<td>Karimganj</td>
<td>66.24</td>
<td>74.69</td>
<td>57.28</td>
<td>64.12</td>
<td>90.37</td>
</tr>
<tr>
<td>Hailakandi</td>
<td>59.64</td>
<td>68.24</td>
<td>50.46</td>
<td>57.05</td>
<td>86.50</td>
</tr>
<tr>
<td>Barak Valley</td>
<td>63.56</td>
<td>71.88</td>
<td>53.72</td>
<td>60.98</td>
<td>87.41</td>
</tr>
<tr>
<td>Assam</td>
<td>63.25</td>
<td>71.28</td>
<td>54.61</td>
<td>59.73</td>
<td>85.35</td>
</tr>
</tbody>
</table>

Notes : The percentage figures for Barak Valley are calculated
The total geographical area of the Barak Valley according to village papers (reported area) is 691097 hectare of which 377610 hectare belongs to Cachar district, 180900 hectare is under Karimganj district and 132587 hectare goes to Hailakandi district (Table-2). The area under forest cover of the valley is 261741 hectare constituting 37.87 per cent of its total geographical area. The area not available for cultivation in the valley consisting of the land put to non-agricultural uses as well as barren and un-cultivable land shows 19.45 per cent.

Table – 2.1
TOTAL AREA AND CLASSIFICATION OF AREA IN BARAK VALLEY, 1999-2000
(Area in hectare)

<table>
<thead>
<tr>
<th>District</th>
<th>Total Geographical area according to Professional Survey</th>
<th>Village papers (Reported Area)</th>
<th>Forest</th>
<th>Not available for cultivation</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Land put to non-agricultural uses</td>
<td>Barren and Un-cultivable land</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cachar</td>
<td>378600</td>
<td>377610</td>
<td>143576</td>
<td>41451</td>
<td>41701</td>
</tr>
<tr>
<td>Karimganj</td>
<td>180900</td>
<td>180900</td>
<td>54504</td>
<td>24487</td>
<td>14592</td>
</tr>
<tr>
<td>Hailakandi</td>
<td>132700</td>
<td>132587</td>
<td>63661</td>
<td>8733</td>
<td>3481</td>
</tr>
<tr>
<td>Barak Valley</td>
<td>692200</td>
<td>691097</td>
<td>261741</td>
<td>74671</td>
<td>59774</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(37.87)</td>
<td>(10.80)</td>
<td>(8.65)</td>
</tr>
<tr>
<td>Assam</td>
<td>7843800</td>
<td>7850005</td>
<td>1931631</td>
<td>1069891</td>
<td>1461034</td>
</tr>
</tbody>
</table>
### Table - 2.2
TOTAL AREA AND CLASSIFICATION OF AREA IN BARAK VALLEY, 1999-2000
(Area in hectare)

<table>
<thead>
<tr>
<th>District</th>
<th>Fallow Land other than current fallow</th>
<th>Current Fallow</th>
<th>Total</th>
<th>Net area Sown</th>
<th>Total Cropped area</th>
<th>Area sown more than once</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barak Valley</td>
<td>9081 (1.31)</td>
<td>8360 (1.21)</td>
<td>17441 (2.52)</td>
<td>233853 (33.84)</td>
<td>302272 (43.74)</td>
<td>68419 (9.90)</td>
</tr>
<tr>
<td>Assam</td>
<td>65219</td>
<td>110401</td>
<td>17560</td>
<td>2734461</td>
<td>4087341</td>
<td>1352880</td>
</tr>
<tr>
<td>Cachar</td>
<td>2600</td>
<td>17937</td>
<td>2037</td>
<td>22574</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Karimganj</td>
<td>2710</td>
<td>8400</td>
<td>2100</td>
<td>13210</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hailakandi</td>
<td>932</td>
<td>6626</td>
<td>275</td>
<td>7833</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barak Valley</td>
<td>6242 (0.90)</td>
<td>32963 (4.77)</td>
<td>4412 (0.64)</td>
<td>43617 (6.31)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assam</td>
<td>162968</td>
<td>234206</td>
<td>80194</td>
<td>477368</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Notes: 1. The figures in the parenthesis are percentage of particular Land area to the total geographical area (reported) of the Barak Valley  
2. The actual figures for the Barak Valley and the figures in percentage are calculated from the data available from statistical Handbook, Assam, 2005  
N.B: The notes and sources given above are both for Table-2.1 & Table-2.2.

The other uncultivated land of the valley is defined as permanent pastures and other grazing land, land under miscellaneous trees and groves not included in net area, as well as culturable waste land constitutes 6.31 per cent of the total area. The share of the fallow land including current fallow is found as 2.52 per cent showing 17441 hectare in actual figure. Out of the total geographical area in the valley the net area sown is 233853 hectare and the total cropped area is 302272 hectare accounting 33.84 per cent and 43.74 per cent respectively. This means that the area devoted for crop cultivation in the valley does not cover even 50 per cent of the total area and thus leaving the scope for extensive method of cultivation keeping other things normal. The area sowed more than once in the valley is revealed as 68419 hectare constituting only 9.90 per cent of the total reported area (Table-2).

According to 2001 census, Assam recorded its total number of population as 26655528 of which 2995769 people are living in Barak Valley. The population of Barak Valley constitutes 11.24 per cent of total population in Assam. Out of total population of the valley 51.45 per cent are male whereas 48.55 per cent are female population. The percentage of people living in rural areas of the valley is quite high showing 89.34 per cent as against a small percentage of its urban population as 10.66 per cent (Table-3). This indicates that the economy of the Barak Valley is principally a rural economy with a little rate of urbanization reflecting the absence of industrial culture in large scale.
Table – 3
PATTERN OF POPULATION IN BARAK VALLEY. 2001 CENSUS

<table>
<thead>
<tr>
<th>District</th>
<th>Person</th>
<th>Male</th>
<th>Female</th>
<th>Rural</th>
<th>Urban</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Cachar</td>
<td>1444921</td>
<td>743042</td>
<td>701879</td>
<td>1243534</td>
<td>201387</td>
</tr>
<tr>
<td>Karimganj</td>
<td>1007976</td>
<td>517680</td>
<td>490296</td>
<td>934126</td>
<td>73850</td>
</tr>
<tr>
<td>Hailiakandi</td>
<td>542872</td>
<td>280513</td>
<td>262359</td>
<td>498787</td>
<td>44085</td>
</tr>
<tr>
<td>Barak Valley</td>
<td>2995769</td>
<td>1541255</td>
<td>1454534</td>
<td>2676447</td>
<td>319322</td>
</tr>
<tr>
<td>(11.24)</td>
<td>(51.45)</td>
<td>(48.55)</td>
<td>(89.34)</td>
<td>(10.66)</td>
<td></td>
</tr>
<tr>
<td>Assam</td>
<td>2665528</td>
<td>13777037</td>
<td>12878491</td>
<td>23216288</td>
<td>3439240</td>
</tr>
</tbody>
</table>

Notes: 1. The figures given in the parenthesis (except col. 2) are the percentage of particular type of population to total population of the Barak Valley.
2. Column-2 shows the percentage of Barak Valley’s population to total population of Assam.
3. The percentage figures are calculated from the actual figures available from source 1 & 2.

2. Government of Assam, Statistical Handbook Assam, 2005

The valley’s economy is mainly based on agriculture and so majority of the people find their livelihood in rural sector preferring to live in villages rather than urban areas. A small percentage of people who live in urban sector are among the businessmen and jobholders in public or corporate or private sector, as well as the workers of the factories or small industries.

Thus the Barak Valley’s economy is an agro-based economy. As per the district-wise distribution of agricultural labourers in the State according to 2001 census, it is revealed that there are as many as
246012 numbers of cultivators and 134001 numbers of agricultural labourers including male and female in the valley (Table-4).

Table - 4
DISTRICT-WISE DISTRIBUTION OF AGRICULTURAL LABOURERS IN THE VALLEY, 2001 CENSUS

(In number)

<table>
<thead>
<tr>
<th>Districts</th>
<th>Agricultural Labourers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Person</td>
</tr>
<tr>
<td>Cachar</td>
<td>62576</td>
</tr>
<tr>
<td>Karimganj</td>
<td>45735</td>
</tr>
<tr>
<td>Hailakandi</td>
<td>25690</td>
</tr>
<tr>
<td>Barak Valley</td>
<td>134001</td>
</tr>
<tr>
<td>Assam</td>
<td>1263532</td>
</tr>
</tbody>
</table>

Note: The percentage of agricultural labourers to the total work force in the valley are not calculated due to non-availability of data about the total work force.

Source: Govt. of Assam, Directorate of Economics and Statistics, Guwahati, 2005

The valley’s agriculture is mainly dependent upon rainfall. It belongs to rainfall belt where rainfall varies from 50.6 mm to 2296.7 mm during different periods of the year (Table-5). The rainfall in the valley varies according to different seasons. During winter season (December, 03–February, 04) the actual rainfall was 50.6 mm against the normal measurement of 72.9 mm experiencing the rainfall much below than the normal situation. However during summer season (March, 04 – May, 04) the valley recorded its rainfall as 1278.8 mm which was above the normal expectation of 961.8 mm. In the monsoon season (June, 04–September, 04), the valley received the highest rainfall as 2296.7 mm, which was also higher than the monsoon normal rainfall of 2093.0 mm. Again, over the period of post monsoon season (October, 04–December, 04) the actual rainfall was
revealed as 174.2 mm, falling below the normal expectation of 238.0 mm. The valley as a whole registered an annual actual rainfall of 3767.1 mm during the period from Dec, 2003 to Dec, 2004, which was not only higher than the annual average normal rainfall of the valley but also much higher than the annual average actual rainfall of the State of Assam showing 2710.3 mm.

Table – 5
SEASON-WISE RAINFALL IN THE BARAK VALLEY, 2003-04

<table>
<thead>
<tr>
<th>District</th>
<th>Winter Season (Dec, 03 - Feb, 04)</th>
<th>Summer Season (Mar, 04 - May, 04)</th>
<th>Monsoon Season (June, 04 - Sept, 04)</th>
<th>Post-Monsoon Season (Oct, 04 – Dec, 04)</th>
<th>Annual</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Normal</td>
<td>Actual</td>
<td>Normal</td>
<td>Actual</td>
<td>Normal</td>
</tr>
<tr>
<td>Cachar</td>
<td>72.9</td>
<td>40.8</td>
<td>961.8</td>
<td>1257.6</td>
<td>2093 0</td>
</tr>
<tr>
<td>Karimganj</td>
<td>72.9</td>
<td>51.0</td>
<td>961.8</td>
<td>1477.1</td>
<td>2093 0</td>
</tr>
<tr>
<td>Hailakandi</td>
<td>72.9</td>
<td>60.0</td>
<td>961.8</td>
<td>1101.7</td>
<td>2093 0</td>
</tr>
<tr>
<td>Barak Valley</td>
<td>72.9</td>
<td>50.6</td>
<td>961.8</td>
<td>1278.8</td>
<td>2093 0</td>
</tr>
<tr>
<td>Assam</td>
<td>66.2</td>
<td>66.0</td>
<td>648.9</td>
<td>854.9</td>
<td>1702 0</td>
</tr>
</tbody>
</table>

Note: The figures for the Barak Valley are computed from the data available from Statistical Handbook Assam, 2005, and the Directorate of Economics and Statistics, Dispur, Guwahati.

Source: 1. Directorate of Economics and Statistics, Assam

Normally the annual rainfall of the Barak Valley was 3312.5 mm, which was above the annual rainfall of 2584.5 mm for the State as a whole. Thus, the average rainfall of the valley both in normal as well as in actual experience is much higher than the all Assam average (Table-5). Agriculture occupies a vital position in the Barak Valley's
economy engaging majority of its work force and contributing much in the total output. This sector has enough scope to make healthy contribution in the State Domestic Product. However, the valley has been experiencing unsatisfactory agricultural growth since independence. One of the principal reasons is that agriculture in the valley is exposed to erratic action of nature with cyclonic storms, frequent floods, occasional drought spell and epidemics causing heavy crop damages. The main river Barak with its tributaries, viz. Sonai, Katakhal, Madhura, Jiri, Chiri, Jatinga and others are flowing throughout the valley and so the agricultural fields are affected by severe nature of floods. Because of its geographical situation some area in the valley is chronically flood prone area where cultivation is very difficult.

The topography of the valley and its soil, rainfall and climatic condition are congenial for paddy cultivation which covers 73.99 per cent (calculated from the figures released in SHBA, 2005 and Directorate of Economics and Statistics, Cachar) of its gross cropped area. However, it is not favourable for some other crops, viz., sugarcane and wheat. In order to produce wheat it is noticeable that the temperature to the extent of 11°C is to be maintained during the post germination period. But observing the rainfall data of last ten years, it has been seen that there are minimum 2-5 rainy days from 15th to 20th February that cause the attack of wheat plants by some kinds of insects. Therefore, Barak Valley is principally a paddy producing area (Biswas, 2001). Besides paddy the other agricultural crops grown in the valley are wheat, sugarcane, jute, rape and mustard seeds, potato, sweet potato, pulses, groundnut, chilies, turmeric, coconut, linseeds, sunflower, kharif and rabi vegetables, fruits and other horticultural produces. A picture of some crop varieties (food and non-food) grown in the State of Assam including Barak Valley is given as under (Table-6).
Paddy is the major food crop of the people living in the Barak Valley which they have long been cultivating in the valley since time immemorial. The cultivation of this crop is carried out mostly for satisfying the consumption needs of the farmers, witnessing thereby a subsistence nature of cultivation. As in other parts of the State, the agricultural year of Barak Valley can be divided into two broad seasons – (i) Kharif Season and (ii) Rabi Season, based on its agro-climatic set up. The kharif season starts from the month of April and ends up by September covering half of the year. The rabi season also covers the period of six months from October to March. There are three main types of seasonal paddy grown in the valley. These are – (i) Autumn Paddy (ii) Winter Paddy, and (iii) Summer Paddy. Both autumn as well as winter paddy comes under kharif season, whereas the summer paddy is grown during rabi season.

### Table – 6
**SOME IMPORTANT CROPS GROWN IN ASSAM INCLUDING BARAK VALLEY**

<table>
<thead>
<tr>
<th>Kharif Foodgrains</th>
<th>Rabi Foodgrains</th>
<th>Kharif Oilseeds</th>
<th>Rabi Oilseeds</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(ii) Blackgram</td>
<td></td>
<td>5. Groundnut</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(iii) Greengram</td>
<td></td>
<td>6. Sunflower</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(iv) Peas</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(v) Lentil</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


The valley experiences a deficit quantum of paddy output almost in every year and it has to meet the excess demand of the local people for such principal food crop through its import from outside. This is reflected in the estimated requirement and deficit of paddy during the normal year of 1998-99 for the district of Cachar, which is the largest
district of the Barak Valley. The estimated requirement of paddy was 166 kg per year per head and the deficit was revealed as 14230 quintals (SPC, 1999-2000). It is also reflected in the reports collected from the Food Corporation of India (FCI), District Offices, Cachar, Karimganj and Hailakandi, the Cachar District Regulated Marketing Committee under Assam State Agricultural Marketing Board, the Silchar Foodgrains Merchant Association, as well as the Marketing Inspector, Office of the Joint Director of Agriculture, Silchar, that they keep the account of the selling amount of rice which came from outside under cess duty. For example, as per the report of the FCI, District Office, Silchar, the FCI purchase the rice of different grades from FCI, District Office, Bongaigaon which procures it from outside the northeast. The local FCI offices then distribute it among the people at subsidized rates under the controlled market system. Similarly, the Silchar Foodgrains Merchant Association and the District Regulated Marketing Committees release their price bulletin of common rice, fine rice and superfine rice which are not the local produces. Further, there is no official record of locally produced rice or paddy sold in the market according to the Marketing Inspector of the Office of the Joint Director of Agriculture, Silchar, and the Information Officer of the District Agriculture Office, Silchar. The locally grown paddy or rice is disposed off mostly in the private or unregulated markets without any accounted record by the proper authority. It is also noticed that there is no record of locally produced rice or paddy that is supplied outside the Barak Valley. All these indicate that Barak Valley is a rice deficient area and so it has to bring rice from outside the valley through various channels without keeping any record of the quantity sent outside the valley.

Table - 7
DISTRICT-WISE PRODUCTION OF PADDY IN BARAK VALLEY
(FROM 1995-95 TO 2004-05)
(In quintal)

*The table is given in the next page
<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>Cachar</th>
<th>Karimganj</th>
<th>Hailakandi</th>
<th>Barak Valley</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Summer</td>
<td>Paddy</td>
<td>Summer</td>
<td>Paddy</td>
<td>Summer</td>
</tr>
<tr>
<td></td>
<td>Paddy</td>
<td>Autumn</td>
<td>Paddy</td>
<td>Autumn</td>
<td>Paddy</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1995-96</td>
<td>1,046</td>
<td>1,397</td>
<td>1,160</td>
<td>1,082</td>
<td>1,410</td>
</tr>
<tr>
<td>1996-97</td>
<td>1,390</td>
<td>1,587</td>
<td>1,345</td>
<td>1,294</td>
<td>1,529</td>
</tr>
<tr>
<td>1997-98</td>
<td>1,393</td>
<td>1,423</td>
<td>1,607</td>
<td>1,330</td>
<td>1,539</td>
</tr>
<tr>
<td>1998-99</td>
<td>1,194</td>
<td>1,310</td>
<td>1,160</td>
<td>1,294</td>
<td>1,410</td>
</tr>
<tr>
<td>1999-2000</td>
<td>1,299</td>
<td>1,350</td>
<td>1,294</td>
<td>1,330</td>
<td>1,539</td>
</tr>
<tr>
<td>2000-2001</td>
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<td>1,310</td>
<td>1,294</td>
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<td>1,539</td>
</tr>
<tr>
<td>2001-2002</td>
<td>1,299</td>
<td>1,310</td>
<td>1,294</td>
<td>1,330</td>
<td>1,539</td>
</tr>
<tr>
<td>2002-2003</td>
<td>1,299</td>
<td>1,310</td>
<td>1,294</td>
<td>1,330</td>
<td>1,539</td>
</tr>
<tr>
<td>2003-2004</td>
<td>1,299</td>
<td>1,310</td>
<td>1,294</td>
<td>1,330</td>
<td>1,539</td>
</tr>
<tr>
<td>2004-2005</td>
<td>1,299</td>
<td>1,310</td>
<td>1,294</td>
<td>1,330</td>
<td>1,539</td>
</tr>
</tbody>
</table>
Notes: 1. 'The Production figure for the Barak Valley excluding the figures of Autumn Paddy for the districts of Karimganj and Hailakandi.
2. ** The production figures for the Barak Valley except the figures of summer Paddy for the districts of Cachar and Hailakandi.
3. NA implies not available.
   C indicates the production figure for Cachar district only.
   K indicates the production figure for Karimganj district only.
4. 1- the figure except summer paddy.
   2- the figure except autumn paddy.
   3- the figure except autumn paddy.
   4- the figure except summer paddy.


The local production of paddy is not sufficient to meet the gradual requirement of the growing number of local people. The district wise and season-wise production of paddy in Barak Valley is given in table-7 for the last ten years. From this it is observed that the total annual production of paddy in the Barak Valley witnesses a fluctuating trend. The valley recorded the highest level of annual production during the agricultural year 2002-03 (barring the production figures including non-availability of data in some cases). The total production of paddy during 1997-98 was revealed as the lowest. However, the production level in the valley marked an increasing trend from 2000-01 till 2002-03 and thereafter it declined to a considerable extent during the year 2004-05. This might be because of the severe and frequent floods which occurred in the valley during 2004.

The district-wise area, production and productivity of autumn paddy, winter paddy and summer paddy for the year 2004-05 are also shown in the table-8. It is revealed that Cachar district was far behind Hailakandi district regarding the productivity of autumn paddy during 2004-05. Though the position of Karimganj district was above the all Assam productivity of autumn paddy, it is the Hailakandi district which contributed much more in raising the productivity of Barak Valley above the State's average. The Barak Valley as a whole witnessed the production of 794 Kg. of autumn paddy per hectare against the State's record of 667 Kg per hectare. In case of the productivity of winter paddy the contribution of Cachar district was also found to be the lowest though it was higher than the all Assam average productivity. The contributions made by Karimganj and Hailakandi district were far better than the productivity of winter paddy for the State as a whole. The productivity for the entire Barak Valley was revealed as 1932 kg. per hectare which was also higher than the State's average of 1598 kg. per hectare.
### Table 8.1
AREA, PRODUCTION AND PRODUCTIVITY OF AUTUMN PADDY IN BARAK VALLEY, 2004-05

<table>
<thead>
<tr>
<th>District</th>
<th>Area (hectare)</th>
<th>Average Yield (Kg./hec.)</th>
<th>Production (tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cachar</td>
<td>10174</td>
<td>214</td>
<td>2140</td>
</tr>
<tr>
<td>Karimganj</td>
<td>6500</td>
<td>974</td>
<td>6230</td>
</tr>
<tr>
<td>Hailakandi</td>
<td>6000</td>
<td>1632</td>
<td>9635</td>
</tr>
<tr>
<td>Barak Valley</td>
<td>22674</td>
<td>940</td>
<td>18005</td>
</tr>
<tr>
<td>Assam</td>
<td>436244</td>
<td>667</td>
<td>286328</td>
</tr>
</tbody>
</table>

### Table 8.2
AREA, PRODUCTION AND PRODUCTIVITY OF WINTER PADDY IN BARAK VALLEY, 2004-05

<table>
<thead>
<tr>
<th>District</th>
<th>Area (hectare)</th>
<th>Average Yield (Kg./hec.)</th>
<th>Production (tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cachar</td>
<td>82968</td>
<td>1817</td>
<td>14867</td>
</tr>
<tr>
<td>Karimganj</td>
<td>61309</td>
<td>2004</td>
<td>121010</td>
</tr>
<tr>
<td>Hailakandi</td>
<td>38500</td>
<td>2206</td>
<td>83658</td>
</tr>
<tr>
<td>Barak Valley</td>
<td>182777</td>
<td>1932</td>
<td>353135</td>
</tr>
<tr>
<td>Assam</td>
<td>1636050</td>
<td>1598</td>
<td>2574284</td>
</tr>
</tbody>
</table>

### Table 8.3
AREA, PRODUCTION AND PRODUCTIVITY OF SUMMER PADDY IN BARAK VALLEY, 2004-05

<table>
<thead>
<tr>
<th>District</th>
<th>Area (hectare)</th>
<th>Average Yield (Kg./hec.)</th>
<th>Production (tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cachar</td>
<td>9990</td>
<td>1485</td>
<td>14835</td>
</tr>
<tr>
<td>Karimganj</td>
<td>6200</td>
<td>1511</td>
<td>9368</td>
</tr>
<tr>
<td>Hailakandi</td>
<td>2010</td>
<td>1959</td>
<td>3938</td>
</tr>
<tr>
<td>Barak Valley</td>
<td>18200</td>
<td>1546</td>
<td>28141</td>
</tr>
<tr>
<td>Assam</td>
<td>311437</td>
<td>1959</td>
<td>610156</td>
</tr>
</tbody>
</table>
Table 8.4

ANNUAL TOTAL AREA, PRODUCTION AND PRODUCTIVITY OF ALL TYPES OF PADDY IN BARAK VALLEY AND ASSAM

<table>
<thead>
<tr>
<th>District</th>
<th>Area (hectare)</th>
<th>Average Yield (Kg./hec.)</th>
<th>Production (tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barak Valley</td>
<td>223651</td>
<td>1785</td>
<td>399281</td>
</tr>
<tr>
<td>Assam</td>
<td>2383731</td>
<td>1450</td>
<td>3470748</td>
</tr>
</tbody>
</table>

Notes: 1. The figures for the Barak Valley in all the four tables are calculated from the figures available from the given sources.
2. All the tables are the parts of table – 8.


With regard to the productivity of summer paddy the contribution of Hailakandi was again better than the other two districts. However, both the districts of Cachar and Karimganj showed almost equal performance in this respect. It is only in case of the productivity of summer paddy that Barak Valley’s contribution has lagged behind the contribution made by the whole of Assam. The valley recorded the productivity of summer paddy of 1546 kg per hectare whereas the State as a whole achieved the productivity record of 1959 kg. per hectare. It is worth mentioning here that as per the figures released by the Directorate of Economics and Statistics, Assam, the Hailakandi district had shown its better performance regarding the productivities of all the three types of paddy in 2004-05 in comparison with the other two districts. Moreover, in respect of the annual aggregate productivity of paddy (including all the autumn, winter and summer paddy) it is revealed that the valley’s productivity was 1785 Kg. per hectare, while the productivity of the State as a whole was 1450 Kg. per hectare. Therefore, the position of Barak Valley regarding the annual productivity of paddy is appreciable compared to the all Assam scenario though it shows deficit in the total amount of production.
Section–III.3: THEORETICAL AND CONCEPTUAL UNDERPINNING OF THE STUDY

The present work is undertaken within the theoretical framework which can be divided into two broad groups. The first school of thought postulated by Dharm Narain and others, maintains that marketed surplus or the amount of food actually sold in the market follows 'U' pattern. The proportion is higher for very small land holdings and then displays a constant tendency. The very large sized land holdings once again reveal a rising proportion of marketed surplus. According to Narain's finding (Narain, 1961), marketed surplus as a proportion of the value of output declines as the size of holding increases up to the size class 10-15 acres and thereafter the proportion seems to increase steadily. Grouping the farmers into different classes as per the holding size of land in acreage, it is theorized that with the continuous increase in farm size, marketed surplus at first starts declining from the point of higher level, then remains constant, and thereafter it records a rising tendency. Farmers below the level of 10-15 acres of size-group and those above it display almost equal proportions of marketed surplus. The first half of marketed surplus includes what may be called a distress surplus by the smallest group due to their immediate cash needs, while the second half may be termed as commercial surplus by larger groups. This means that marketed surplus as a proportion of the value of output follows 'U-shaped' pattern. This is mostly due to negative response to a rise in price particularly with the small farmers who have fixed cash requirements. The reason behind such negative response to a rise in price by small farmers is more amount of food required for their consumption purposes. Farmers having smaller land must be having consumption gap which is true in case of small subsistence cultivators. P.N. Mathur and H. Eizekiel (Mathur-Eizekiel, 1961) asserts that subsistence and semi-subsistence farmers in India
produce mainly for their own consumption and sells only to satisfy a certain fixed cash requirements in order to purchase non-agricultural articles. Thus, a rise in agricultural prices results in a fall in the aggregate quantum of marketed surplus up to a certain level of size groups, and a fall in it might lead to stepping up the volume of marketed surplus.

The second school of thought led by Utsa Patnaik and others, maintains that marketable(ed) surplus as a proportion of output for most food crops reveals a linear relationship for all size holdings. Small farmers, who far exceed the large farmers in number, produce small quantity in comparison to big farmers who are economically much stronger. Even after possessing higher rate of yield they (small farmers) cannot generate higher proportion of marketable surplus due to lower degree of concentration of land holding by them. Contrary to this, large farmers who are minority in number can possibly make a substantial contribution to aggregate output and marketed surplus. This is mainly because of their relatively faster rate of investment capacity than small farmers due to the attainment of greater degrees of economic concentration as well as land holdings. Therefore, small-sized farmers who are numerically concentrated are lagging far behind from large sized holdings who are economically concentrated. Further, the number of farm population per acre falls with a steady increase in size class and thereby consumption at source relative to better amount of resources is much lower in quantity for large sized holdings compared to small sized holdings. Consequently, marketable surplus according to this school of thought is positively related with farm size, and therefore the total volume of output. In other words, the proportion of marketable surplus increases steadily with the increase of size class confirming the linear relationship function.

Any work on consumption, sales behaviour and marketed surplus of farmers will remain incomplete without the clarification of some basic
concepts. It requires a full fledged conceptual and theoretical framework within which the study will be conducted. Study relating to agricultural development is not merely that of enhancing production and productivity but generation of adequate surplus for the purpose of market sale of the produce. The generation of surplus and its sale in the market depends upon the extent of excess production over family consumption of the farmers and the amount kept for retentions. However the sale of agricultural produce without the basic idea about marketing would simply be meaningless. The act of production is not complete unless crops are marketed and the knowledge relating to marketed surplus is crucial to boost up agricultural development.

The pattern of marketed surplus particularly in areas where agricultural productivity is low is normally influenced by the consumption pattern of crops by the farmers which they produce. Consumption here by definition implies the derivation of utility from using the self produced crop by the farmers themselves over a specified period of time. Mathur and Ezekiel hypothesized that (Mathur-Ezekiel, 1961) the subsistence farmers will increase their consumption level with the rise in production since they consume far below the satisfactory level. Consumption in farm sector can be measured by farm population, dependency burden (population of the young/or old to the working population), birth rate among the farmers and consumption habits of the farmers.

In this study, sales refer to the quantity of the agricultural produce offered by farmers at a certain price in order to receive the proceeds, by meeting the existing demand of the consumer over a period of time. It is perhaps in recent years one of the most significant developments affecting selling and sales management has been the evolution of the marketing concept (Lancaster and Jobber, 1994). Market sales are therefore highly sensitive with respect to the prevalent market prices. Sale has the direct linkage with marketed surplus while farm
consumption has inverse relationship with it. The study defines sales
behaviour as the farmers' decision of whom to sell, when to sell and
where to sell depending upon the agri-business environment of a
particular location.

With a view to examine the magnitude of consumption and sales
patterns by the farmers the concepts of marketable surplus and
marketed surplus have been used in this study. Marketable Surplus
represents the residual product available with the farmers for disposal
after their genuine requirements of family consumption, payment of
wages in kind, rent in kind, seed, wastage and other contractual
obligations such as loan repayments in kind have been met. Marketed
Surplus, on the other hand, represents only that portion of the total
produce which is actually being sold in the market during a time
period. Marketable surplus can be higher or lower than the marketed
surplus during a period, depending upon the extent of hoarding from
the current production and de-hoarding the accumulating stock by
the producers.

The marketed surplus consists of marketable surplus plus distress
sales. It may be more or less equal to marketable surplus. This
depends upon the quantity sold as distress sales and the size of the
marketable surplus actually brought to market. It can be observed
that marketed surplus is of great operational significance than
marketable surplus of crop output. Distress sale is defined as the sale
made by the farmers with small holdings who sell their produce right
after the harvest to meet their immediate cash requirements, and
sometimes their sales may be greater than their marketable surplus
because they sell for immediate cash, but repurchase at a later stage
for their consumption at a higher price.

Some unavoidable circumstances induce the poor farmers to sell the
crops that had been kept for family consumption at lower prices and
latter on they purchase the same at higher prices called repurchases which leads to a negative marketed surplus. Two concepts of marketed surplus – gross and net will be extensively used in this study. Gross Marketed Surplus (GMS) refers to the actually marketed quantity of the produce, that is, actual amount of sales in the market. On the other hand, Net Marketed Surplus (NMS) implies the difference between Gross Marketed Surplus and Repurchases.

In other words, \[ NMS = GMS - R \]

Where, NMS is the net marketed surplus, GMS implies gross marketed surplus and R stands for the volume of repurchases.

Section –III.4: OBJECTIVES AND HYPOTHESES

OBJECTIVES:

The basic objectives set up for the present study are:

1. *Estimation of the farmer’s consumption level of paddy and its behavioural relationship with marketed surplus according to size class:*
   
The first objective is to examine the magnitude of paddy consumption at farm level itself during the period under study. It also aims at studying whether the pattern of paddy consumption at source varies directly or inversely with the level of marketed surplus in accordance of holding sizes.

2. *Identification of the relative weightage of the factors determining the consumption level:*
   
   Our second objective is to identify the factors responsible for the magnitude of farm level consumption of paddy according to different size holdings. It also aims at identifying the relative
strength of the factors while influencing the overall farm consumption level. In other words, the study intends to recognize the factors having relatively higher strength in determining the consumption level.

3. **Assessment of the magnitudes of marketed surplus and marketable surplus of paddy and their behavioural pattern:**

   We will next attempt to examine the extent of marketable surplus of paddy that is generated in the study area during the period under consideration, and quantity of surplus offered for sale in the market i.e. marketed surplus. We will also examine the behavioural pattern of both marketed surplus as well as marketable surplus according to size holdings.

4. **Identification of the factors and their relative weightage in determining the marketed surplus level of paddy by the farmers of different size holdings:**

   Attempts will also be made for identifying the factors that determine the volumes of marketed surplus in different size holdings. The factors having significant influence on marketed surplus will also be examined through statistical estimations. This will also be in order to identify the relative strength of the factors while determining marketed surplus.

**HYPOTHESES:**

Keeping the above objectives in view the present work makes the following hypotheses which will be examined through field testing analysis.
1. **The size of the family directly influences the consumption pattern of the farmers, while consumption level influences the marketed surplus negatively.**

   In other words, larger the family size higher the level of paddy consumption and thereby lower the volume of marketed surplus, indicating direct relationship between family size and consumption of paddy and inverse relationship between consumption and marketed surplus.

2. **The level of output is directly related to marketed surplus, this however need not always be true for small farmers.**

   Higher production may be absorbed in satisfying consumption requirements of small and marginal farmers whose marginal propensity to consume is also higher. Consequently, higher production may result in higher consumption and not in higher marketed surplus particularly with respect to small farmers. In contrast, for large and economically well off farmers whose consumption level may be already high, higher level of production may directly result in higher quantum of marketed surplus.

3. **Higher prices of paddy lead to higher level of marketed surplus especially among the large farmers.**

   This is because in case of small farmers cash requirement is the basic objective of such farmers. Since the amount of cash required by the farmers may be met by selling a smaller quantum when prices are high, higher prices may mean lower volume of marketed surplus and lower prices may mean higher volume of it. However in case of large farmers whose basic objective is not the cash requirement but profit, higher prices may result in higher market sales and vice-versa.
4. **The next adopted hypothesis is that farmer’s literacy has positive association with marketed surplus of paddy.**

A literate farmer is expected to be more aware of the various ways of raising farm output, and more informed about the market condition and the various ways of selling his produce on a commercial basis. He can also avail of bank credit more easily. Therefore he is less susceptible to be exploited by the middleman than an illiterate farmer. A higher percentage of profit may accrue directly to literate farmer rather than to the middleman since literate farmer is less liable to be cheated by middleman than an illiterate farmer, which may in turn encourage the farmers to offer more for market sales.

**Section –III.5: METHODOLOGY OF THE STUDY**

1. **Sampling Design:**

The study has been conducted with the sampling design of three stage stratified purposive sampling with the Development Blocks as the first stage, the Villages and the Farmers as the second and third stages respectively.

Information is obtained from the three districts of Barak Valley, namely Cachar, Karimganj and Hailakandi. Information about the consumption, sales behaviour and marketed surplus of the farmers has been gathered on the basis of land holdings during the agricultural year 2005-06. Four blocks from Cachar district and three blocks each from Karimganj and Hailakandi districts have been selected depending upon the distribution of population in each district. From each of these blocks three villages were chosen at random, and from each village ten farmers belonging to different size classes were interviewed. The holding sizes are classified into four
classes ranging from (i) 0 - 1 hectare (ii) 1.01 – 2.0 hectares (iii) 2.01 – 3.0 hectares and (iv) 3.01 hectares and above. A total of three hundred (300) farm families spread over thirty villages in three districts of the valley were selected for the purpose of our study.

The selection of four blocks from Cachar district constitute 30 per cent of the total blocks in the same district, whereas the selection of three blocks each from Karimganj and Hailakandi district constitute 30 per cent and 50 per cent of the total blocks spread over the two districts respectively. At the second stage the choice of three villages from each of the selected blocks constitute around 30 percent of the total villages under a block. Finally, the selection of ten farmers from each of the chosen villages in a block approximately accounts for another 30 per cent of the total farmers living in a village.

2. **Data Source:**

In order to achieve the objectives and to test the hypotheses the present study is mainly based on primary sources of information. For collecting primary data the personal interview of 300 farm families spread over 30 villages in 3 districts of the Barak Valley has been conducted through a well-devised questionnaire. For that purpose a pilot survey of 30 farm families is also undertaken to make necessary modifications in the questionnaire. Information collected through questionnaire has also been cross checked by holding second interview with different person of the same family (in some cases) to avoid any kind of misinformation. Due cautions are exercised during the collection of cross-sectional farm data supported by a pre-tested questionnaire.

It is due to the difficulty in obtaining time series data through primary sources and due to the non-availability of time-series data on marketed surplus of paddy from any kind of published and unpublished sources our study is mainly based on cross sectional
farm data. Besides, secondary data has also been obtained for lag year's growth rate of production and productivity of paddy, to make a view of comparative agricultural scenario of the valley between time and space. The secondary data for the same purpose has been gathered from various issues of ‘Statistical Handbook of Assam’ and ‘Economic Survey of Assam’, released by Directorate of Economics and Statistics, Guwahati, published in different years, as well as from District Agriculture Offices and various issues of “In-house Journal” of Assam State Agricultural Marketing Board, various publications of government and private agencies, reports, journals, magazines and from the related web sites.

3. Variables Selected:
Questionnaire has been so devised for the purpose of acquiring information about farm consumption, sales behaviour of the farmers, and marketed surplus as well as their determinants. The variables so covered in the questionnaire are household population, production and productivity of paddy, it's consumption by the farm sector, retentions of paddy, costs of production, marketing costs, agricultural practices, irrigation facilities, storage facilities, consumption of fertilizers and pesticides, amount sold in the market, amount purchased by the farmers, mode of transportation to the market, marketing channels, sales and purchase prices of paddy, its seasonal prices, and the education level of the selected respondents.

4. Research tools and Techniques:
The study on consumption, sales behaviour and marketed surplus at first will be done by tabular analysis and percentage variation in their related variables. Besides tabular analysis and their percentage variation the marketed surplus function of paddy with respect to various independent variables as well as the relative weight age of the determinants of marketed surplus will be assessed through
regression techniques. The following models are developed for that purpose.

In order to examine the nature of relationship between consumption and marketed surplus (referred to as net marketed surplus) of paddy by the farmers it is hypothesized that marketed surplus varies inversely with the level of consumption. The inverse relationship is a normal phenomenon in case of most farm households. Thus to estimate the functional relationship between marketed surplus and consumption we shall specify the normal assumption that as consumption rises sales decline and vice-versa. Similarly we specify the inverse association between retention and marketed surplus. However, since experience reveals that total production is the most crucial factor determining marketed surplus showing direct relationship, we also specify here that sales are the increasing function of output level.

With a view to test the statistical significance of the variation in marketed surplus with respect to the principal factors of production, consumption and retention of paddy by the farmers the following multi-variate regression model will be employed.

\[ \text{NMS} = a - bC + c\text{Prod} - d\text{Rt} \]

Where, 'C' represents the level of farm consumption

'Prod' represents the level of paddy production

'Rt' represents the level of total retention

a is the intercept, and

b, c & d are the regression coefficients

The relationship between marketed surplus of paddy and its total retention will also be estimated through the following bi-variate model to understand the overall impact of retention on marketed surplus. Because the total retention consists of retention for consumption,
seed requirement and sale purpose, out of which retention for sale purpose seems to be increasing with respect to the increase in size class with the normal assumption that larger size classes possess more disposal capacity and vice-versa. So it is because of higher retention power by larger size groups for sales motive the total retention may relate positively with marketed surplus, subject to the condition that marketed surplus varies directly with size class. However we specify here normally that as retention increases marketed surplus declines according to holding sizes.

\[ \text{NMS} = a - bR_t \]

Where, 'NMS' represents Net Marketed Surplus

'Rt' represents Total Retention

'a' is the intercept value when \( R_t=0 \)

'b' is the regression coefficient.

In an extended model we will estimate the relationship between marketed surplus and different components of retention for various purposes, using the following multiple regression equation with the objective of learning the nature of association held by a specific kind of retention. This is also in order to identify the relative weight age of various kinds retention while determining marketed surplus.

\[ \text{NMS} = a - bR_{sd} - cR_{sl} - dR_{fc} \]

Where, \( R_{sd} \) represents retention for seed requirement

\( R_{sl} \) represents retention for the purpose of sale

\( R_{fc} \) represents retention for the purpose of future consumption

'a' is the intercept, and

'b', 'c', & 'd' are the regression coefficients.
Apart from production, consumption and retention the ultimate factor that determines marketed surplus is the profitable marketability of the produce by the farmers, which depends upon the price at which the product is disposed off in the market. Remunerative prices encourage the farmers to produce more and offer a higher quantity for sale. In this context the entire agricultural year will be divided into - post harvest season, mid season, and lean season. The behavioural pattern of marketed surplus with regard to price change according to these three seasons will be examined with the assumption that sales are an increasing function of the price.

We shall then estimate the positive association between marketed surplus and price of paddy by using the following model.

\[ NMS = a + bPr \]

Where, \( 'Pr' \) represents the selling price of paddy (rice)
a is the intercept and \( b \) stands for price co-efficient.

Over and above, to examine the relative strength of such important variables in determining marketed surplus we shall incorporate all the aforementioned variables into a multiple regression equation as follows.

\[ NMS = a - bC + cProd - dRt + ePr \]

Where, \( 'Prod' \) represents production of paddy
\( 'C' \) represents farm consumption
\( 'Rt' \) represents total retention
\( 'Pr' \) denotes selling price of paddy (rice),

Finally, the estimation of the relationship between marketed surplus and profit margin will also be done with the application of two-variable model, with the normal presumption that marketed surplus increases with an increase in the rate of profit margin accrued to the farmers. We then specify that marketed surplus is an increasing function of profit margin.
NMS = a + bMrg

Where, 'Mrg' stands for profit margin accrued to the farmer-sellers, and 'b' for margin coefficient.

Various regression techniques will be applied to estimate the marketed surplus function with respect to price and non-price factors. The final conclusion will be drawn on the basis of the results obtained in the context of our objectives and hypotheses.

5. **Periodicity of the Study:**

Primary data for the cross sectional study has been collected for the period of 2005-06 through field survey. The agricultural year of 2005-06 appears to be a normal period as it does not record the occurrence of major flood or drought or any other calamities in the area. The information supplied by the respondents during the time of interview is based on their experiences of 2005-06 agricultural year. Again the time-series study based on secondary sources of information covers the period from 1996 to 2006 agricultural years, only for lag year's growth rate on acreage, production and productivity with the objective of making a comparative analysis between time and space. However, the study is mainly based on cross-sectional estimation of marketed surplus since time series data on marketed surplus of local paddy through secondary sources is not available. The entire study thus requires the periodicity from 1996 to 2006 besides cross sectional study for the year 2005-06 with a view to satisfy its principal objectives.
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