CHAPTER I

DESIGN OF THE STUDY

1.1 Introduction

Agriculture continues to be the key industry and also forms the basis for a way of life for perhaps two thirds of world’s households. Agriculture being the function of physical, socio-institutional, techno-economic factors which are dynamic in nature keeps on changing with the basic objective of increasing production and generation of food grain surplus. The traditional system of farming is in the process of transformation to modern agriculture which itself is undergoing rapid changes. It has added a new dimension to agriculture.

A vast country of sub continental size like India with marked regional diversities in agro climate environment, resource endowment and population density is likely to be characterized by uneven economic and agricultural development among various states and region. The regional differences in agricultural development arising out of varied physical endowments tend to get further accentuated because of varying levels of investment in rural infrastructure, credit and in technological innovations.

The improvement in the level of food security is one among the several achievements of India’s agricultural development strategy widely acknowledged world over. The growth of agricultural production accelerated
from 2.89 per cent per annum during the period 1974-75 to 1984-85, to 3.8 per cent during the period 1984-85 to 1994-95 despite a deceleration in the growth rate of cropped area from 0.51 per cent to 0.37 per cent per annum\(^1\). Though the country has been self sufficient in food grain production the planners and agricultural economists have expressed serious concern about the slow growth in the production of principal crops in the country in recent years. The average growth rate of total food grains production during 1994-95 to 2000-2001 was 0.8 per cent. Rice production during this period grew at 1.11 per cent, wheat production by 2.24 per cent, nutritious cereals by 0.2 per cent and pulses by (-1.55 per cent)\(^2\). Even the conservative projections of demand for food grains in the country suggest that the required level of production in the year 2000 A.D varies from 197 to 213 million tones as worked out by the World Bank, to 243 to 259 million tones by G.S. Balla\(^3\). Where as the actual production of food grains was 196.13 million tones short of the targeted 212 million tones for the year. Apart from food grains the growth of production of other agricultural commodities also need to be stepped up, as this is critical for balanced and accelerated growth in the economy. As the scope for extension of area is limited, the acceleration in the growth of agricultural production would depend upon the increases in the intensity of cropping and further acceleration in the growth of yield. This

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\(^3\) Balla G.S (1995) globalisation and Agricultural price policy in India Presidential Address. 54\(^{th}\) Annual conference of Indian society of Agricultural Economics. Indian journal of Agricultural Economics vol. 50. No. 1 January-March, p.44.
would interalia requires better utilization of resources and upgradation of technology which necessitate adequate investment and credit.

1.2 The Role of Agriculture in India’s Economic Development.

Indian agriculture is known for its multi-functionalities of providing employment, livelihood, food, nutritional and ecological securities. The role of agriculture in India’s economic development is based on the following major contributions.

a) Product contribution

b) Income contribution

c) Employment contribution

d) Factor contribution

e) Capital contribution

f) Trade contribution

g) Demand contribution

a) Product contribution

Agriculture produces food which is a basic and major wage good in India. Based on N.S.S. data (National Sample Survey) it was estimated in 1989-90 that the share of food crops in the consumer expenditure was 64.3 per cent in rural areas and 55.5 per cent in urban areas\(^4\) and projected to remain over 60 per cent in rural areas and 50 per cent in urban areas by the

end of the 20th century. The National Sample Survey showed that the household expenditure on food as a proportion of their total expenditure was 48.1 per cent in 1999-2000 in urban areas and 59.4 per cent in rural areas. With development and growth the product contribution of agriculture would continue to be very important. The production level of principal food crops for the last three years is given below in table 1.1

Table 1.1.

Production level of principal food crops All India (1998-99 to 2000-2001)

<table>
<thead>
<tr>
<th>Name of the crop</th>
<th>1998-99 (000 tons)</th>
<th>1999-2000 (000 tons)</th>
<th>2000-2001 (000 tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rice</td>
<td>86077</td>
<td>89475</td>
<td>86300</td>
</tr>
<tr>
<td>Wheat</td>
<td>71288</td>
<td>75574</td>
<td>68460</td>
</tr>
<tr>
<td>Maize</td>
<td>11148</td>
<td>11473</td>
<td>11840</td>
</tr>
<tr>
<td>Jowar</td>
<td>8415</td>
<td>8863</td>
<td>7410</td>
</tr>
<tr>
<td>Bajra</td>
<td>6956</td>
<td>5657</td>
<td>6390</td>
</tr>
<tr>
<td>Ragi</td>
<td>2608</td>
<td>2385</td>
<td>2470</td>
</tr>
<tr>
<td>Small millets</td>
<td>671</td>
<td>642</td>
<td>650</td>
</tr>
<tr>
<td>Other pulses</td>
<td>16445</td>
<td>14807</td>
<td>12550</td>
</tr>
<tr>
<td>Food grains</td>
<td>203608</td>
<td>208876</td>
<td>196070</td>
</tr>
</tbody>
</table>


b) Income Contribution

The agriculture sector has a large share in the Gross Domestic Product (GDP) in developing countries and this share though estimated to decline further is still 24.69 per cent in India in 98-99. As a result of this the performance of the agricultural sector has a large and direct impact on the GDP and the GDP growth performance of the economy as shown in table 1.2. One per cent increase in agricultural growth is correlated with an increase of

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0.7 per cent in national income\textsuperscript{6}. Further growth in agricultural income through various linkages stimulates growth in non-agricultural income.

**Table 1.2**

Trend growth rates of agriculture and gross domestic product at factor cost with the share of agriculture in the GDP.

<table>
<thead>
<tr>
<th>Period on an Agricultural</th>
<th>Agricultural growth rate as percentages</th>
<th>GDP at factor cost growth rate as percentages</th>
<th>Sectoral contribution of the agriculture sector to GDP and percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990-91</td>
<td>3.8</td>
<td>5.3</td>
<td>28.74</td>
</tr>
<tr>
<td>1991-92</td>
<td>(-2)</td>
<td>1.5</td>
<td>27.76</td>
</tr>
<tr>
<td>1992-93</td>
<td>4.2</td>
<td>4.5</td>
<td>28.12</td>
</tr>
<tr>
<td>1993-94</td>
<td>3.8</td>
<td>6</td>
<td>27.50</td>
</tr>
<tr>
<td>1994-95</td>
<td>5</td>
<td>7</td>
<td>26.86</td>
</tr>
<tr>
<td>1995-96</td>
<td>(-2.7)</td>
<td>7.3</td>
<td>24.21</td>
</tr>
<tr>
<td>1996-97</td>
<td>9.3</td>
<td>7.5</td>
<td>24.38</td>
</tr>
<tr>
<td>1997-98</td>
<td>(-6.1)</td>
<td>5</td>
<td>24.22***</td>
</tr>
<tr>
<td>1998-99</td>
<td>7.8</td>
<td>6.8</td>
<td>24.69*</td>
</tr>
<tr>
<td>1999-2000</td>
<td>0.7</td>
<td>6.4</td>
<td>25.20**</td>
</tr>
<tr>
<td>2000-2001</td>
<td>(-0.2)</td>
<td>4.0</td>
<td>-</td>
</tr>
<tr>
<td>2001-2002</td>
<td>5.7**</td>
<td>5.4 A</td>
<td>-</td>
</tr>
<tr>
<td>2002-2003</td>
<td>(-3.2)***</td>
<td>4.3***</td>
<td>-</td>
</tr>
<tr>
<td>Average of 1990-2000</td>
<td>2.24</td>
<td>5.73</td>
<td>26.17</td>
</tr>
</tbody>
</table>

* New series base (1993-94)
** Agriculture and allied activities.
(A) Advance estimates.

Sources: Compiled from:

c) Employment Contribution

It is well known that a large percentage of people in developing countries depend on agriculture for employment. In India as much as 69 per cent of the total workforce depends directly or indirectly on agriculture (2001-population census). Thus the performance and growth of the agriculture sector assumes significance from the employment point of view.

d) Factor Contribution

In the initial stages of development agriculture is proportionately a very large economic activity absorbing a huge quantum of resources other related sectors also need resources. Unless agriculture is able to release these resources without reducing its product and other contributions the other sectors cannot develop correspondingly.

e) Capital Contribution

Agriculture in the early stages of development can play a crucial role as a source of capital for industrial and economic development through transfers in the form of to taxes, output etc and through savings and investments. Table 1.3 presents the picture of capital contribution in the Indian economy.
Table 1.3

Gross capital formation by Industry

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross capital formation (Rs crores)</td>
<td>181133</td>
<td>229879</td>
<td>284557</td>
<td>252555</td>
<td>261541</td>
<td>240672</td>
<td>268527</td>
</tr>
<tr>
<td>Share of agriculture and allied activities</td>
<td>13523</td>
<td>14969</td>
<td>15690</td>
<td>16176</td>
<td>15953</td>
<td>16384</td>
<td>18656</td>
</tr>
<tr>
<td>(percentage)</td>
<td>6.75</td>
<td>6.81</td>
<td>6.10</td>
<td>6.40</td>
<td>5.51</td>
<td>6.51</td>
<td>7.47</td>
</tr>
<tr>
<td>Agriculture</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allied activities</td>
<td>1726</td>
<td>1816</td>
<td>1999</td>
<td>2150</td>
<td>2352</td>
<td>2580</td>
<td>2732</td>
</tr>
<tr>
<td>(percentage)</td>
<td>1.01</td>
<td>1.07</td>
<td>0.90</td>
<td>0.85</td>
<td>0.70</td>
<td>0.79</td>
<td>0.95</td>
</tr>
<tr>
<td>Industry</td>
<td>90735</td>
<td>117734</td>
<td>172568</td>
<td>148511</td>
<td>152099</td>
<td>139050</td>
<td>144476</td>
</tr>
<tr>
<td>Service</td>
<td>75149</td>
<td>95360</td>
<td>94300</td>
<td>85718</td>
<td>91137</td>
<td>82658</td>
<td>102663</td>
</tr>
<tr>
<td>Share of agriculture and allied activities in the gross capital formation in GDP (percentage)</td>
<td>1.79</td>
<td>1.71</td>
<td>1.64</td>
<td>1.76</td>
<td>1.55</td>
<td>1.61</td>
<td>1.56</td>
</tr>
<tr>
<td>Share of agriculture and allied activities in the aggregate net capital stock</td>
<td>15.29</td>
<td>14.61</td>
<td>13.72</td>
<td>13.71</td>
<td>13.81</td>
<td>13.64</td>
<td>13.53</td>
</tr>
</tbody>
</table>

Note: Figures in italics are percentage share of each sector in gross capital formation.

f) Trade Contribution

Agriculture can make a significant contribution to foreign exchange earnings by contribution to exports. This role has been relatively limited in the past but with liberalization and GATT/WTO this is changing and a significant role is emerging here. The share of India’s agricultural exports to total exports declined from 18.2 per cent in 1999 to 15.2 per cent in 1999-2000 and further to 13.5 per cent in 2000-2001 and to 12.3 per cent in 2003. (Economic survey 2001-2002).

Tables 1.4A and 1.4B present the contribution of the agricultural sector in the foreign trade front.

Table 1.4 A

Agricultural Exports of Developed and Developing countries and India in Billion USS

<table>
<thead>
<tr>
<th>Year</th>
<th>World/ Total</th>
<th>Developed countries</th>
<th>Developing countries</th>
<th>India</th>
<th>India’s share in world, agriculture market (percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>212</td>
<td>126</td>
<td>86</td>
<td>3.52</td>
<td>1.66</td>
</tr>
<tr>
<td>1991</td>
<td>211</td>
<td>124</td>
<td>87</td>
<td>3.2</td>
<td>1.51</td>
</tr>
<tr>
<td>1992</td>
<td>226</td>
<td>137</td>
<td>89</td>
<td>3.03</td>
<td>1.34</td>
</tr>
<tr>
<td>1993</td>
<td>224</td>
<td>135</td>
<td>89</td>
<td>4.15</td>
<td>1.85</td>
</tr>
<tr>
<td>1994</td>
<td>258</td>
<td>151</td>
<td>107</td>
<td>4.37</td>
<td>1.69</td>
</tr>
<tr>
<td>1995</td>
<td>297</td>
<td>175</td>
<td>122</td>
<td>6.32</td>
<td>2.13</td>
</tr>
<tr>
<td>1996</td>
<td>324</td>
<td>190</td>
<td>134</td>
<td>6.83</td>
<td>2.11</td>
</tr>
<tr>
<td>1997</td>
<td>331</td>
<td>192</td>
<td>139</td>
<td>6.84</td>
<td>2.07</td>
</tr>
<tr>
<td>1998</td>
<td>306</td>
<td>173</td>
<td>133</td>
<td>6.21</td>
<td>2.03</td>
</tr>
<tr>
<td>1999</td>
<td>289</td>
<td>164</td>
<td>125</td>
<td>5.67</td>
<td>1.96</td>
</tr>
</tbody>
</table>

Source: Agricultural trade performance by developing countries-1990-99.

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Table 1.4B
Export of major agricultural commodities

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Qty (Tonnes)</td>
<td>Value (Rs lakh)</td>
<td>Qty (Tonnes)</td>
<td>Value (Rs lakh)</td>
<td>Qty (Tonnes)</td>
<td>Value (Rs lakh)</td>
<td>Qty (Tonnes)</td>
</tr>
<tr>
<td>Basmati rice</td>
<td>442125</td>
<td>86532</td>
<td>373314</td>
<td>85067</td>
<td>523157</td>
<td>124764</td>
<td>593323</td>
</tr>
<tr>
<td>Non-Basmati rice</td>
<td>448495</td>
<td>34047</td>
<td>4540699</td>
<td>371741</td>
<td>1989040</td>
<td>192472</td>
<td>1795743</td>
</tr>
<tr>
<td>Wheat</td>
<td>86628</td>
<td>4234</td>
<td>632468</td>
<td>36676</td>
<td>1145898</td>
<td>69845</td>
<td>1517</td>
</tr>
<tr>
<td>Pulses</td>
<td>50507</td>
<td>9041</td>
<td>61355</td>
<td>13181</td>
<td>55216</td>
<td>13158</td>
<td>168052</td>
</tr>
<tr>
<td>Groundnuts</td>
<td>51123</td>
<td>10132</td>
<td>117933</td>
<td>22920</td>
<td>148780</td>
<td>32584</td>
<td>245401</td>
</tr>
<tr>
<td>Sesame and niger seeds</td>
<td>59567</td>
<td>14173</td>
<td>84142</td>
<td>25726</td>
<td>103800</td>
<td>27528</td>
<td>129324</td>
</tr>
<tr>
<td>Cotton raw including waste</td>
<td>70753</td>
<td>13976</td>
<td>33281</td>
<td>20354</td>
<td>269584</td>
<td>157451</td>
<td>157534</td>
</tr>
<tr>
<td>Cashew</td>
<td>76897</td>
<td>124465</td>
<td>70068</td>
<td>123570</td>
<td>68856</td>
<td>128548</td>
<td>76902</td>
</tr>
<tr>
<td>Spices</td>
<td>154954</td>
<td>61224</td>
<td>203729</td>
<td>79352</td>
<td>222086</td>
<td>120214</td>
<td>230531</td>
</tr>
</tbody>
</table>

Source: Agriculture Centre for Monitoring Indian Economy, November 2001, p.321.
g) Demand Contribution

Agriculture and rural sectors make a significant contribution to the demand for goods and services from the non-agricultural sector. For many consumer goods the rural market is not only much larger but is also the fastest growing. These and other factors indicate a relatively strong association between income in the non-agriculture sector and the agricultural sector. Thus agriculture appears to play and continues to play a substantial role in the economic development and growth in India through the multiplier effects.

Some of these contributions such as capital contribution and factor contribution may decline in importance overtime, others such as product, income, employment, trade and demand contributions are likely to continue to be of great importance in the economic growth in future. Thus agriculture has the potential for generating substantial trade revenues, export earnings, income, demand for goods etc. The competitiveness of these are likely to change with the GATT/ WTO time frame and liberalization.

The development of the rural economy has been accepted as an integral part of the strategy of planning in India. The Ninth Five-year plan also endorsed the same strategy. The case for the development of the rural economy is urgent and pressing as it constitutes the basis for social stability and economic growth with distributive justice. The concept of rural development is basically dependent on agricultural development within the country. Thus agriculture is the backbone of the Indian economy and despite industrialization in the last five decades agriculture occupies a place of pride. One of the earliest documents, the Report of the Rural Credit Survey
Committee appointed by RBI (AIRCS-1954) made the classic statement. “In India development means rural development and rural development means agricultural development”. Realizing the importance of agriculture and rural development in economic growth international financial institutions which were initially reluctant to support development projects in rural areas has changed its stance in later years and has started giving high priority to agriculture and rural development projects. The Tenth Five Year Plan year vision for agriculture should be to view agriculture as a means to larger goals, of employment led economic growth, poverty alleviation and self reliance through its multiplier and linkage effects of demand, savings, income, investment and foreign exchange rather than merely feeding growing mouths. Its mission must be broad based and decentralized agricultural development that would satisfy the demand for agricultural commodities. For this both structural and technical change is needed which are resource centered. The institutional agencies have to play a really meaningful role here to take the Indian economy to higher levels of development.

1.3 Meaning, Classification and Significance of Agricultural Finance

Agricultural finance is the economic study of the acquisition and use of capital in agriculture. It deals with the supply and demand for funds in the agricultural sector of the economy. The term credit in this study refers to agricultural credit. By agricultural credit we mean the amount borrowed for agricultural operations during the year. The credit can be obtained for different purposes from different sources under different terms and for different time periods.
Generally two types of agricultural credit such as direct agricultural credit and indirect agricultural credit exist. Direct agricultural credit is given to the cultivators farming operations and assets. Two broad types of such credits include crop loans for short periods and loans to purchase farm assets. These type of rural credit encourage demand for inputs of agricultural production i.e., credit for Agricultural Production Sub System (APS). Indirect agricultural credit is for developing agricultural infrastructure. It includes three different purposes

(a) It constitutes credit extended to the private, co-operative and public sector agencies undertaking distribution of farm products like seeds, fertilizers, pesticides, machineries, implements, electricity etc.

(b) It includes credit extended to the co-operatives undertaking agricultural marketing and processing.

(c) It includes credit extended to Primary Agricultural Co-operatives (PACS), Farmers Service Societies (FSS), societies adopted by commercial banks and State Development Corporations. Such credit is to onward it to the agricultural and rural households. For analytical purpose first may be termed as the Agricultural Input Sub System (AIS) second and third as Agricultural Marketing and Processing Sub-system (AMPS) and (APS) credit.

Institutional credit for APS, AIS, and AMPS performs a very useful function of promoting backward (BWL) and forward (FWL) linkages among these sub systems. These linkages are presented below.
These types of linkages are critical to achieve increase in agricultural productivity, production and value addition. They would facilitate not only a higher rate of agricultural growth but also its better distribution. The society at large would benefit from more production, income, savings and healthy financial institutions.

There are four principal ways of classifying agricultural credit as noticed in different parts of the All India Rural Credit Survey (AIRCS 1954) report viz period wise, purpose wise, security wise and creditor wise.

According to time, credit can be classified as short term (production credit or crop loans) medium term (intermediate credit) and long term (investment credit or development credit). Short term credit is for variable items of capital or seasonal inputs such as seeds, feed, fertilizers, fuel, pesticides, casual labour and so on. The period varies from a minimum of three months to a maximum of 18 months. Medium term credit is for working capital assets such as machinery, diesel engines, wells, irrigation structures, threshers, crushers, bullocks, dairy animals and so on. The period is normally from a minimum of one year to a maximum of five years. Long term credit is for permanent land improvements, soil conservation buying of land etc. The normal period is for a minimum of five years to a maximum of 10 years which can be extended up to 20 years.

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Purpose wise agricultural credit can be classified as crop loans, poultry loans, forestry loans etc. Security wise agricultural credit can be classified into secured and unsecured. Secured loans are those given on the basis of securities such as personal security of another person, mortgaging the property, hypothecation etc. Unsecured loans are those which are not based on security but given on personal security. On the basis of sources of borrowing agricultural credit is broadly classified into institutional and non-institutional. Institutional sources consist of all types of co-operatives, government (taccavi loans) commercial banks, Regional Rural Banks (RRB’s) etc. Non-institutional sources mainly consist of money lenders-both professional and agricultural moneylenders, commission agents, friends, relatives and other sources.

Types of Agricultural Advances

Agricultural Advances

- Direct
  - Short-term Crop loan or Production Credit
  - Medium-term Investment Credit
  - Long-term Development Credit

- Indirect
  - PACs
  - RRBs
  - Electricity Boards
  - Agro Industries Corporations
  - Trade & Distribution
  - Others
The criteria for a good system of agricultural credit have been laid down by various economists like Tardy M. Louis\textsuperscript{9}, Fredrick Nickolson\textsuperscript{10} besides the AIRCS 1954. Tardy M. Louis has set down the following criteria for a sound agricultural credit system.

a. It should be granted for sufficiently long periods commensurate with the length of the operations designed to be facilitated by the credit.

b. It should be granted at low rates of interest.

c. It should be adequately secured

d. It should be adopted to the average yield and capacity for repayment of the farms.

e. It should be placed in the hands of institutions, the directors of which have received special training and had actual banking experience

f. Optimum measure of supervision and assistance in the utilization of credit by farmers.

g. Must integrate credit with services so as to ensure the provision of inputs and services along with credit.

h. Loans for production and consumption purposes should be issued.


Reserve Bank of India in its guidelines issuing agricultural credit has suggested the following features for the system of credit for modern agriculture.

(a) It must integrate credit with services so as to ensure the provision of inputs and services along with credit.

(b) It should reach all the areas and all the farmers and more particularly the smaller ones i.e., the system should be capable of expanding horizontally and vertically.

(c) It should lay emphasis on loans for production and loans for consumption should be discouraged.

(d) It should ensure that the cost of handling credit and services is low.

(e) It should be in a position to mobilize adequate resources to finance the investments needed to modernize agriculture.

Thus from the viewpoints put forth by them it may be deduced that the availability of credit on adequate scale, on easy terms for sufficient length and time and repayability according to capacity constitute the important factors of a sound system of agricultural credit.

Credit is the most crucial ingredient in the agricultural production cycle. It has a command over all other inputs required for production. Infusion of short, medium, and long term capital for improving irrigation, development of land, acquiring equipments and machines, production of crops processing and marketing have gone a long way in improving production in agriculture.

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11 Reserve bank of India (1976) Loan policy and procedural Arrangement in relation to the Institutional Credit System in India. Agricultural Credit Department, RBI, Bombay.
Financing agricultural development through institutions aims at enabling the farmers and the agricultural sector to move on to a level of technology that would create the basis for a sustained increase in agricultural output, an increase in the number of man days of employment and enhance productivity of land, labour and capital resulting in the economic well being of the farmers in general and small and marginal farmers in particular.

Credit can contribute to the improvement of net farm income in several ways.

a. Create and maintain an adequate size (ie economic size). It can play an important role in acquiring the capital assets and operating inputs such as feed, seed and fertilizer.

b. Increase efficiency by substituting one resource for another, by improved utilization of existing resources and by increasing the intensity of agricultural production.

c. Adjusting to changing economic conditions like technological developments changing marketing conditions etc.

d. Meet seasonal fluctuations in income and expenses.

e. Protect the farmer from unfavourable economic conditions like price uncertainty, weather changes, diseases etc through the maintenance of a credit reserve and

f. provide continuity of farming operations from one inheritor to another ie for the intergenerational transfer.
1.4 Changing Perceptions of the Rural Financial Market and Significance of Credit

The use of agricultural credit as a developmental input, till the beginning of financial sector reforms seemed clear and straight forward. Most concerned people believed that increases in the volume of cheap credit were necessary to boost agricultural production and that the rural poor could be brought into the main stream of development through supervised or directed credit programmes. It seemed that certain ideal type of credit institutions and programmes offered the promise of meeting farmers credit needs and that experience in the industrialized countries with co-operatives and specialized agricultural finance institutions could be effectively transplanted to low income countries. These approaches have been applied in India also recently, geared to consumption rather than investment behaviour and incapable of expanding to provide an appropriate volume and range of financial services. Many people believe that moneylenders exploit rural households and that inexpensive formal credit enable farmers to escape their evil grip.

The financial institutions serving agriculture are part of the national and international financial markets and operate within legal constraints and regulations developed by various state and central government agencies. The national and international dimensions of the financial market suggest that agriculture and farmers are not immune to changes in economic and financial conditions in other sectors of the economy.

Mechanization, improved varieties of seeds, modern chemical fertilizers, pesticides, insecticides and new production methods have all
contributed to increase in production per acre /per animal /and per labour hour. This technological revolution has brought about several significant changes in the structure of agriculture. The substitution of physical capital for labour and the increased use of purchased inputs have created a need for substantial volume of funds of both in the aggregate and on a unit farm basis. Further profit margins in agriculture have been declining steadily, so farmers have become increasingly dependent on outside sources of funds. The opening up of the economy from the 1990’s onwards, subsequent WTO regulations and increased access to domestic market by foreign suppliers have resulted in a situation of wide commodity price fluctuations in the market. This necessitates the need for higher amount of credit by farmers. Further, the policy of reducing subsidies given to agricultural inputs like lower rates or free power to farmers, fertilizers (Rs.14170 crores in 2000-01, Economic Survey, Government of India 2001-02) including finance as part of the New Economic Policy initiated in the 1990s also necessitated for higher amounts of credit by the farmers. The financial requirements of the farmers continue to increase due to inflation and declining terms of trade.

A high and orderly growth in agriculture is an essential pre-requisite not only for the reasons of food security but also in terms of the strong backward and forward linkages that the agriculture sector has with the rest of the economy and also with the outside world. Maintaining productivity and growth is an enormous challenge and hence there is the paramount need for higher allocation and flow of funds to the agricultural sector. While discussing the flow of credit to agriculture one should not loose sight of a new element - a wide range of high-tech segments like floriculture, aquaculture,
tissue culture, bio-technology have recently emerged as growth centers and these need to be fully exploited. Industrial houses and even corporates are making heavy investments in this area as a commercial proposition. The concept of ‘green house method of farming’ with very high crop intensity is getting popularized which calls for the need for additional flow of institutional credit into these areas. Export orientation as envisaged in the liberalized economic environment requires lots of market infrastructure, quality improvement, agro-processing etc. All these are capital intensive in nature and hence the 20 per cent rate of growth in farm credit that has been stated in the common minimum economic programme of the present government may be still on the lower side. At the same time latest data shows that the logic of liberalization is to restrict the credit for agricultural sector as revealed from table 1.5.

Table 1.5
Credit flow to Agriculture by scheduled commercial banks.
(credit outstanding Rs. crores)

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Bank Credit</th>
<th>Credit to Agriculture</th>
<th>Percentage share of agricultural credit to total credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990-91</td>
<td>1,09,298</td>
<td>16,750</td>
<td>15.33</td>
</tr>
<tr>
<td>1991-92</td>
<td>1,17,443</td>
<td>18,157</td>
<td>15.46</td>
</tr>
<tr>
<td>1992-93</td>
<td>1,41,800</td>
<td>19,963</td>
<td>14.07</td>
</tr>
<tr>
<td>1993-94</td>
<td>1,52,501</td>
<td>21,208</td>
<td>13.91</td>
</tr>
<tr>
<td>1994-95</td>
<td>2,10,939.1</td>
<td>24,948</td>
<td>11.83</td>
</tr>
<tr>
<td>1995-96</td>
<td>2,54,692.1</td>
<td>28,809</td>
<td>11.31</td>
</tr>
<tr>
<td>1996-97</td>
<td>2,84,373.3</td>
<td>31,634.2</td>
<td>11.12</td>
</tr>
<tr>
<td>1997-98</td>
<td>3,29,944.4</td>
<td>35,262.5</td>
<td>10.69</td>
</tr>
<tr>
<td>1998-99</td>
<td>3,82,425.0</td>
<td>40,889.3</td>
<td>10.69</td>
</tr>
<tr>
<td>1999-2000</td>
<td>4,60,080.7</td>
<td>45,638.3</td>
<td>9.92</td>
</tr>
<tr>
<td>2000-2001</td>
<td>5,38,433.8</td>
<td>51,730.4</td>
<td>9.61</td>
</tr>
</tbody>
</table>

Realizing the importance of the agriculture sector in the Indian economy, its changing perception, sub sectoral shifts and the need for increasing the flow of institutional credit to this vital sector the Approach Paper on 9th plan not only recognizes the critical role of agriculture and other priority sectors in the future growth strategy but it also specifically stresses the imperative of enlarging the flow of credit to the agricultural sector. Of the nine objectives of the Ninth Five Year Plan, the following two are of direct relevance in this context

(1) Priority to agriculture and rural development with a view to generating adequate productive employment and eradication of poverty and

(2) Ensuring food and nutritional security for all including the vulnerable sections of the society\(^\text{12}\).

On the specific issue of credit the plan document is categorical “greater credit flow will be ensured to meet the investment requirement of the farming community, for stepping up the growth of production. Efforts will be made to ensure timely and adequate availability of credit. In every district the Rural Infrastructure Development Fund (RIDF) must be used to cover projects which encourage group of small farmers, artisans and landless labourers to organize for skill upgradation, processing and transport infrastructure, quality improvement centered on large agro-based projects or identified sources of regional, national and export demand\(^\text{13}\). Further extending adequate credit support to agriculture may facilitate broad based and decentralized growth in

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\(^{13}\) Ibid. p. 57.
the Indian agriculture and economy. Table 1.6 shows the tenth plan estimates of agricultural credit flow.

### Table 1.6

Tenth plan estimates of agricultural credit flow (Rs. Crores)

<table>
<thead>
<tr>
<th>Year</th>
<th>Production credit</th>
<th>Investment credit</th>
<th>Total</th>
<th>Growth rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002-2003</td>
<td>44929</td>
<td>37144</td>
<td>82073</td>
<td>22.9</td>
</tr>
<tr>
<td>2003-2004</td>
<td>55442</td>
<td>50516</td>
<td>105958</td>
<td>29.1</td>
</tr>
<tr>
<td>2004-2005</td>
<td>68582</td>
<td>68703</td>
<td>137285</td>
<td>29.6</td>
</tr>
<tr>
<td>2005-2006</td>
<td>85041</td>
<td>93435</td>
<td>178476</td>
<td>30.0</td>
</tr>
<tr>
<td>2006-2007</td>
<td>105707</td>
<td>127071</td>
<td>232778</td>
<td>30.4</td>
</tr>
<tr>
<td>Total</td>
<td>359701</td>
<td>376869</td>
<td>736570</td>
<td>30</td>
</tr>
</tbody>
</table>


### 1.5 The Statement of the Research Problem and the Rationale of the Study

The role of banks and financial institutions in the process of agriculture and economic development was felt long back. Schumpeter stressed the significance of finance for productive purposes and viewed the banker as the key agent in this process. To him “Banker is the ephor of the exchange economy”. Banks continue to dominate the financial systems in most of the developing and transition countries. “A sound banking system is important because of the key roles it play in the economy, intermediate, maturity

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transformation, asset transformation facilitating payment flows, credit allocation and maintaining financial discipline among borrowers.\(^{15}\)

There has been a phenomenal increase in financial assets in the last decades and the ratio of financial assets to the gross national product (GNP) has risen substantially in both developed and developing countries including India. This trend has forced the economists and analysts to focus more on the impact of the financial system on the functioning of the economy and in influencing real economic activity. The important indicators of financial development in India, the finance ratio, financial interrelations ratio, financial intermediation ratio etc have significantly increased over the years. This reflects the growing importance of financial institutions and instruments in the economy and the growth of financial flows in relation of economic activity.\(^{16}\)

In the wake of the structural adjustment programme (SAP) initiated in the early 90’s it is inevitable that the agriculture and the rural sector will experience the threats and opportunities. The severe effect of economic, financial and other policy changes, in the agricultural sector will be felt in the areas of agricultural finance, credit and capital investment in agricultural activities. The agricultural sector had already felt the impact of the economic reform process initiated and implemented in the country in the 1990’s.

Economists and researchers world over have undertaken serious efforts to study and analyse the implications of economic and financial sector reforms for agriculture on the basis of time series data, cross section data at


the institution level, regional level and at the beneficiaries level. Studies with macro and micro perspectives with reference to developed and developing countries are also available. A number of studies made for several countries of the world from sub-Saharan Africa, Latin America, Asia and for all developing countries observed (Marc Gurgand, Bennet Robert, Karla Hoff and Joseph Stiglitz, FAO, Manfred Zellar, United Nations) that the implications of overall economic reforms of deregulation opening up of the economy, exchange rate, financial sector liberalization for agriculture are far more important than the direct policy measures aimed at agriculture.

A number of studies were conducted at the national level, state level, district level and even at the village level to analyse the various aspects of agricultural credit, its impact, issues involved, interstate and inter district variations etc empirically. The results of these studies with emphasis on different aspects and issues did not help us to come to generalizations acceptable or applicable to the whole sections of the community. Some of the past studies (Mishra, Bhupat Dessai, Basant Mehta, Majumdar, Bhupat Dessai, Dessai, Sarkar, Gulati, Gadgil, Giri, Renagarajan, Namboothiri, Dessai, Dessai) conducted at the national level with emphasis either on the policy perspective or on the institutional and administrative framework or coverage or focus of credit also did not give us a comprehensive or specific conclusion.

Other type of studies conducted at the state level or district level with emphasis on the functional structure of the institutional agencies, or on the

* Details given at the end of this chapter.
utilization aspect of the credit by the beneficiaries, or on the impact aspect of the credit or on the repayment aspect of the credit etc (Antony 36, George37, Harikumar38, Philip Thomas39, Paramjyothi40, Santhakumar41, Shyamasundharan Nair42, Kannan43, Jinraj44, Mani45, Sreekumar46, Mani47, Chaudhary48, Balla49, Maharotra50, Srivastava51, Keval Kumar52, Sharma53, Gurudev Singh54, Katula55) with emphasis either on commercial banks, or co-operatives or Regional Rural Banks, or on production credit or investment credit or on all these aspects also found it difficult to reconcile the findings.

However a common thread found in the literature is that developing institutional finance is one of the important policies for agricultural development. With this growing accent on the role of institutional credit as a positive aid to intensified agricultural production, it is of vital interest to ascertain how far the increasing tempo of institutionalization of agricultural credit has actually helped the process of agricultural growth.

The present study combines some of the best approaches of the earlier studies. Several important conceptual and methodological modifications are made. Critical ones are discussed in the next section and others are covered in various chapters. Further the present study originates from serious concerns regarding the flow of institutional credit especially in the context of the financial sector reforms. Important among them are:

(1) The institutional net work for agricultural credit has grown substantially in quantitative terms but qualitatively not.
(2) Functional structure of rural financial institutions (RFIs) is not conducive to meet the financial services needs of the agriculture and rural sector i.e. they are mainly credit disbursing agencies.

(3) RFIs are non-viable and have high transaction costs and hence a natural tendency on the part of bankers to concentrate on small number of big farmers.

(4) RFIs do not seem to consider financing of agriculture as a commercial proposition.

(5) RFIs do not have a congenial recovery climate, hence inordinate delays in settlements of disputes, mounting over dues and higher proportion of non-performing assets (NPAs) on agriculture financing.

(6) Risks involved in rural lending is high.

(7) Intra and interregional variations exist in the flow of institutional credit.

(8) The share of commercial bank credit to agriculture in total bank credit is declining and is lower than the mandatory or stipulated target of 18 per cent of net bank credit.

(9) Interest rate structure of bank lending has been deregulated by the Reserve Bank of India.

Other than the above said issues there are certain other issues which are more relevant in Kerala. There exists a general tendency on the part of the borrowers of agriculture credit to divert the loan amount for consumption, and hence no substantial capital formation has taken place in the agriculture sector. Funds from the co-operative sector are diverted by the state...
government to meet its financial requirements. Further the credit-deposit ratio of the state is low (42 per cent in 2003) and is also showing a declining trend. The credit supply is of a skewed nature in the state. Finally the decentralized planning process initiated in the state provides scope for the integration and co-ordination between financial institutions and local administrative units in the rural areas for the expansion of rural credit.

The above mentioned issues in the area of agricultural credit has to be analysed and solutions have to be found especially since Kerala is a state which by itself is not able to ensure food security for the whole people of the state. Further with increased access given to foreign suppliers in a number of agricultural commodities as part of the WTO commitments in areas and crops where we had some advantage, farmers of Kerala have to face stiff challenges. To meet this situation and also to attain a high sustainable and stable level of agricultural growth an analysis of the above mentioned issues of serious concern are called for and solutions sought.

Thus realizing the significance of the analysis of the aggregate supply of agricultural finance at the state level by different agencies and a comparison of their performance at the institutional level as well as from the beneficially level in the emerging environment of financial liberalization this analysis has been made. In nutshell the rationale of the present study lies in identifying and analyzing some of the peculiar problems of agricultural credit in the state and suggest suitable policy measures.
1.6 Objectives of the Study

The specific objectives of the study are:

(a) To examine the trends and pattern of agricultural financing in Kerala.

(b) To estimate the demand for and supply of agricultural credit.

(c) To examine the intra and interregional variations in demand and supply of agricultural credit.

(d) To examine the impact of institutional flow of agricultural credit on production, employment, income etc.

(e) To identify the operational problems in relation to the flow of agricultural credit.

1.7. Hypotheses

1. The proportion of agricultural credit to total credit is steadily declining in recent years and is lower than the mandatory level.

2. There is uniformity in the scale of finance as recommended by various official agencies.

3. There is production credit gap in the financing of agriculture in Kerala.

4. There exists intra-regional and inter-regional disparities in agricultural credit distribution.

5. Institutional flow of credit promotes employment, output and income.

6. There is diversion in the utilisation of agricultural credit in Kerala.
7. There is complementarity between public, private and co-operative banks in financing agriculture.

8. The performance and efficiency of co-operatives are relatively better than public and private sector commercial banks.

1.8 Scope of the Study

The scope of the present study is primarily limited to the production credit, that too only three crops namely paddy, banana and coconut. Similarly the coverage of the primary survey was limited to three banks, one from public sector, one from private sector and only three PACs from the co-operative sector.

1.9 Methodology of the Study

This section discusses the methodological aspects of the study. It deals with the sources of data and the sample design, selection of the beneficiaries and institutions, method of data collection and the statistical framework for the analysis of the data collected.

Sources of Data and the Sample Design

The study made use of both primary and secondary data. Secondary data were collected from the various publications of Reserve Bank of India, Government of India, state governments. Lead Banks, National Bank for Agriculture and Rural Development, Center for Monitoring Indian Economy (CMIE), National Council of Applied Economic Research (NCEAR) Central statistical organization, Planning commission, Kerala state Planning Board, Departments of Agriculture, co-operatives, Revenue, Directorate of
Multi stage systematic random sampling technique was used to select the regions or zones, blocks, villages and institutions for the purpose of primary data collection. The state was delineated into 13 agro-climate zones on the basis of 4 principal parameters such as altitude, rainfall, soil type and topography by the Committee on Agro-climate Zones and Cropping pattern\(^5\). With this classification as the basis, two districts, Thrissur and Palakkad with reasonable to high levels of crop intensity for various crops are selected for the study. From these districts three blocks, Chalakudy (Region I), Chowannur (Region II) from Thrissur district and Palakkad (Region III) from Palakkad district were selected taking into consideration the agro-climate conditions and cropping pattern of the area. Taking into consideration the area of cultivation under different crops at the state level and in these districts and blocks three major crops (paddy, banana and coconut) were stratified for the study. In order to adopt the sampling frame of the borrowers of agricultural production credit, loanees of three branches each of three sets of institutions State Bank of India, The Federal bank Ltd and three service co-operative banks such as Meloor Service Co-Operative Bank of Chalakudy Block, The People’s Co-Operative Bank of Koonammoochi from Chowannur block and the Palakkad Service Co-Operative Bank from Palakkad block were selected. The branches of scheduled commercial banks selected were Chalakudy, Chowallurpadi and Palakkad of the Federal Bank Ltd and the Agricultural

Development Branches of State Bank of India at Chalakudy, Kunnamkulam and Palakkad. 35 loanees from each of these branches and co-operatives who availed agricultural crop loan for the period 2000-2001 were selected at random from all size groups of borrowers—the marginal, the small and large. The sample size was limited to 35, not based on any strict statistical sampling criterion, but subject to the availability of respondents. One of the peculiarities observed was that in Federal Bank the number of loanees were too small and there was no scope for sampling. At the same time large number of borrowers were available from State Bank of India and Co-operatives. The borrowers of co-operatives availed only nominal amounts also. This heterogeneity compelled the researcher to limit to 35 cultivators, which will be a small representation of a large sample size (30 respondents).

A field survey was conducted during the period from June 2002 to August 2002 based on personal interview by using a pre-tested schedule. Before and after the survey detailed discussions were done with the officials of these institutions for understanding the procedure followed in the assessments, availing and dispensation of credit. For ensuring the reliability of the data collected, documents relating to the receipt of credit, and the mode of repayment by the respondents as available with them and the financing institutions were referred for cross checking. The data so collected were tabulated and analysed by using the master chart and the computer facility.

**Schedule of Enquiry**

The schedule used for the survey was divided into 4 parts. Part I was related to the socio-economic profile of the borrowers. The second part of the
schedule was associated with the information on land details. In part III of the schedule data were collected on the different aspects of the crop loan such as utilization, benefits, repayment etc. part IV made an attempt to collect the information from the respondents regarding their attitude towards the different aspects of the loan, services offered by the institution, cost involved etc and their own evaluation of these institutions. The schedule is at appendix-I.

Tools of Analysis

The accuracy of the inferences depends on the sharpness of the tools and techniques used on well defined concepts and terminologies. Ill defined concepts may underestimate the relevance of the findings. Studies on agricultural credit conducted by the earlier researchers, scholars and commissions used certain frequent concepts like production credit, farmer, scale of finance, cost of cultivation etc. based on conventionally accepted definitions and thinking. In this study also similar concepts are used broadly but appropriate changes and cosmetic touches were made whenever necessary. The concepts used are defined or explained in appropriate context in the text.

The main technique of analysis was tabular analysis and multi-variate tables prepared. Percentage analysis supported the tabular analysis. In order to examine the inter-regional difference, inter-institutional differences and inter-crop differences F ratio (RBD type) and ‘t’ test (Bartlet’s) were used. The significance of deviations in credit gap was assessed computing mean deviation about median and coefficient of variation in order to assess the
attitudes of cultivators. Likert type five point summated scales were also used. Above all, rational thinking was adopted throughout the preparation of the report which will definitely help to derive reasonable inferences and valid conclusions.

1.10 Limitations of the Study

Taking into consideration the objectives of the study and its coverage in terms of the time and resources available at our disposal the study is prone to many limitations.

(1) ‘Credit’ in the field level study has been taken to refer only to production credit availed by cultivators for the cultivation of three crops such as paddy, banana and coconut.

(2) The study was confirmed to the behaviour of organized institutional credit agencies, specifically commercial banks and co-operatives. Regional Rural Banks (RRBs) as a separate agency was not examined for reasons: (a) Regional Rural Banks are sponsored by commercial banks and separate published data were not available in detail and is at times included in the figure of commercial banks (b) the coverage of these institutions in the state is limited to the northern districts alone. Only recently the coverage has been extended to the central districts of Kerala leaving the southern districts of the state out of its coverage and reach. Recommendation of the expert committees on financial sector reforms are for the merger of RRBs with the sponsoring institution.

(3) The study also did not cover the National Bank for Agriculture and Rural Development (NABARD), the apex institution of the institutional
framework of agricultural credit since they do not advance credit directly to the cultivators.

(4) The reference period of the study was 2000-2001. Most of the beneficiaries were not having the habits of keeping proper records regarding cost of cultivation, asset generation, expenditures, income and employment etc and hence there is the possibility of under estimation or under reporting or inaccurate information due to memory lapse.

(5) While preparing the details relating to income or value of output one of the debatable issue is the choice between current prices. Such conversion into constant prices will make the study more realistic and reliable. But one of the major constraints to make such conversion is the non-availability of an appropriate deflator. Because of this limitation in this study the measurements are made in current prices alone. Since the prices widely fluctuate in the market an average of all the prices in the season for the crop is taken as the current price.

(6) One of the methodological issues involved in the estimation of the demand for credit was the selection of an appropriate norm from among the various norms available since each norm has its own advantages and disadvantages which vary from crop to crop, region to region or person to person.

1.11 Organization of the Study

The present study has been divided into seven chapters. Chapter two provides the genesis and the organizational framework of the agricultural credit system. Third chapter presents a profile of the agricultural economy of
Kerala. The institutional framework of agriculture finance in Kerala with emphasis on the inter-district and intra district analysis of the flow of agricultural credit based on the performance under the district credit plan is presented in chapter four. The fifth chapter is based on the analysis of credit requirements, its supply, adequacy and direction. The main emphasis of the sixth chapter is on the pattern of utilization of the agricultural credit by the borrowers, its impact on the borrowers income, output, employment, saving, standard of living etc and its repayment pattern. This chapter also focuses on the problems faced by the lenders and borrowers besides a discussion on the evaluation and rating of the institutions by the beneficiaries. Chapter seven, provides summary, concluding observations and bring out the policy implications emerging from the findings of the study.

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