CHAPTER – II

A BIRDS’ EYE VIEW OF

AGRI-SECTOR IN INDIA
Agricultural production has two components food grains and non-food grains. The former contributes approximately two-thirds of total agricultural production and the latter one third. The weights assigned to food grains and non-food grains are 62.9% and 37.1% respectively. The most important component in the food grains category is rice (weight 29.7) followed by wheat (weight 14.5). In non-food grains category, oilseeds constitute the most important group (weight 12.6). Sugarcane carries a weight of 8.1 while cotton carries a weight of 2.4.

Trends in agricultural production and productivity are presented in Tables 2.1 and 2.2 respectively. As far as food grains output is concerned, the total production increased from 50.8 million tonnes in 1950-51 to 187.0 million tonnes in the Eighth plan (annual average). However, because of drought conditions in the first year of the Tenth plan 2002-03, the food grains output declined to 174.8 million tonnes but again rose to 213.2 million tonnes in 2003-04. The food grains output in the Tenth plan (annual average) was 202.2 million tonnes even less than the annual average recorded in the Ninth plan. However, the last year of the Tenth plan, 2006-07, registered an impressive food grains output of 217.3 million tonnes. This rose further to 233.9 million tonnes in 2008-09.

For the purpose of analysis the entire table was divided into two parts—(i) period up to the end of the Third plan, and (ii) period after the Third plan. The latter is often referred to as the period of the ‘Green Revolution’ and, as presented in Table 2.1, it is marked by rapid strides in wheat with Jowar, Bajra and Maize continuing to show erratic trends as in period (i) It can be observed that, rice had a steady upward trend excepting some setbacks in certain years.

In the non-food grains group, jute and cotton show slow and halting progress in both periods. However, the production of oilseeds rose considerably.
in the latter half of 1980s and in certain years of 1990s. For instance, oilseeds production increased from 12.7 million tonnes in 1987-88 to 18.6 million tonnes in 1990-91 and further to a record level of 24.7 million tonnes in 1998-99. However, it fell thereafter and stood at only 14.8 million tonnes in 2002-03 but rose subsequently to the high level of 29.7 million tonnes in 2007-08. In 2008-09, it stood at 28.2 million tonnes. Production of cotton rose from 8.4 million bales in the Seventh plan (annual average) to 18.5 million bales in the Tenth plan (annual average). Sugarcane registered a more or less steady growth during the entire period 1950-51 to 2002-03 but its production fell sharply in 2003-04 and 2004-05. In 2007-08, it touched the high level of 348.2 million tonnes but fell steeply to decline further to 249.5 million tonnes in 2009-10.

Table 2.2 gives increases in yield per hectare. This table shows that over the period 1950-51 to 2008-09, yield per hectare of all food grains increased by more than three times from 552 kgs per hectare in 1950-51 to 1,898 kg: per hectare in 2008-09. Wheat recorded very significant increase in yield from 655Kg per Hectare in 1950-51 to 2,891Kg per Hectare in 2008-09. While the productivity of maize increased significantly during recent years, the productivity of jowar and bajra increased relatively slowly. Moreover, there are wide yearly fluctuations. Most disappointing has been the performance of pulses. In fact, productivity of pulses in 2000-01 was at the same level as 1960-61 (i.e., even after four decades). However, the productivity rose to 655 kgs per hectare in 2008-09\textsuperscript{4}.

\textsuperscript{4} Rudderdatt and K.P.M.Sundaram, Indian Economy, 58 th Edition, New Delhi, S.chand and sons, 2009
Table 2.1

Trends in Agricultural Production 1950-51 to 2008-09

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</thead>
<tbody>
<tr>
<td>Rice</td>
<td>20.6</td>
<td>25.0</td>
<td>30.3</td>
<td>35.1</td>
<td>35.9</td>
<td>41.8</td>
<td>47.3</td>
<td>54.5</td>
<td>65.1</td>
<td>78.7</td>
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<td></td>
<td>Wheat</td>
<td>6.4</td>
<td>7.9</td>
<td>9.7</td>
<td>11.1</td>
<td>15.5</td>
<td>25.4</td>
<td>29.8</td>
<td>41.2</td>
<td>48.3</td>
<td>62.9</td>
<td>71.3</td>
<td>70.2</td>
<td>78.6</td>
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</tr>
<tr>
<td>Jowar</td>
<td>5.5</td>
<td>7.5</td>
<td>8.7</td>
<td>8.8</td>
<td>9.7</td>
<td>8.3</td>
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<td>7.9</td>
<td>7.2</td>
<td>7.9</td>
<td>7.3</td>
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<tr>
<td>Bajra</td>
<td>2.6</td>
<td>3.4</td>
<td>3.4</td>
<td>3.9</td>
<td>4.5</td>
<td>6.0</td>
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<td>5.2</td>
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<td>7.1</td>
<td>8.2</td>
<td>10.0</td>
<td>8.8</td>
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<tr>
<td>Maize</td>
<td>1.7</td>
<td>2.7</td>
<td>3.6</td>
<td>4.6</td>
<td>5.6</td>
<td>6.1</td>
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<td>7.3</td>
<td>7.6</td>
<td>9.8</td>
<td>11.6</td>
<td>14.0</td>
<td>19.0</td>
<td>19.3</td>
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<td>Other</td>
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<td>6.4</td>
<td>7.1</td>
<td>6.0</td>
<td>5.4</td>
<td>4.9</td>
<td>4.5</td>
<td>3.6</td>
<td>3.8</td>
<td>4.0</td>
</tr>
<tr>
<td>Cereals</td>
<td>8.4</td>
<td>10.1</td>
<td>11.7</td>
<td>11.1</td>
<td>10.3</td>
<td>10.9</td>
<td>11.7</td>
<td>11.8</td>
<td>12.5</td>
<td>13.3</td>
<td>13.1</td>
<td>13.3</td>
<td>14.8</td>
<td>14.7</td>
</tr>
<tr>
<td>Pulses</td>
<td>50.8</td>
<td>63.2</td>
<td>74.0</td>
<td>81.0</td>
<td>87.8</td>
<td>103.0</td>
<td>118.1</td>
<td>138.1</td>
<td>155.0</td>
<td>189.0</td>
<td>202.9</td>
<td>202.2</td>
<td>230.8</td>
<td>233.9</td>
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<tr>
<td>Total</td>
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<td></td>
</tr>
<tr>
<td>Oilseed</td>
<td>6.2</td>
<td>5.6</td>
<td>6.5</td>
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<td>7.2</td>
<td>9.2</td>
<td>10.0</td>
<td>11.4</td>
<td>13.9</td>
<td>21.9</td>
<td>21.2</td>
<td>23.2</td>
<td>29.7</td>
<td>28.2</td>
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</tr>
<tr>
<td>Sugarcane</td>
<td>57.1</td>
<td>55.3</td>
<td>80.3</td>
<td>109.2</td>
<td>104.3</td>
<td>128.1</td>
<td>153.3</td>
<td>174.9</td>
<td>196.4</td>
<td>258.4</td>
<td>292.4</td>
<td>277.0</td>
<td>348.2</td>
<td>273.9</td>
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<tr>
<td>Cotton</td>
<td>3.0</td>
<td>3.9</td>
<td>4.8</td>
<td>5.4</td>
<td>5.5</td>
<td>5.9</td>
<td>6.8</td>
<td>7.5</td>
<td>8.4</td>
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<td>10.8</td>
<td>16.0</td>
<td>25.9</td>
<td>23.2</td>
</tr>
<tr>
<td>Jute</td>
<td>3.3</td>
<td>3.9</td>
<td>4.4</td>
<td>5.7</td>
<td>4.9</td>
<td>5.5</td>
<td>5.2</td>
<td>6.4</td>
<td>8.9</td>
<td>8.1</td>
<td>9.6</td>
<td>10.1</td>
<td>10.2</td>
<td>9.6</td>
</tr>
</tbody>
</table>

**Note:** 1. Data in the table are in terms of million tonnes excepting for cotton and jute. For cotton, data are in terms of million bales where one bale=170 kilograms. For jute, data are in terms of million bales where one bale=180 kilograms.

2. Data for oilseeds include five major oilseeds, viz, Groundnut, Rapeseed and Mustard, Sesamum, Linseed, Castor seed for columns (2) to(8) and Nigerseed, Safflower, Sunflower and Soyabean also for columns (9) to(15).
LOW LEVELS OF PRODUCTIVITY

As it is clear from Table 2.2 for most of the crops there was increase in yield per hectare. However, as compared with other countries and as compared with the potential, the actual productivity levels in agriculture continue to be very low and it is crystal clear from the discussion below.

Table 2.2

Yield per Hectare of Major Crops (kgs per hectare)

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Rice</td>
<td>668</td>
<td>1,013</td>
<td>1,123</td>
<td>1,336</td>
<td>1,740</td>
<td>1,901</td>
<td>2,186</td>
</tr>
<tr>
<td>Wheat</td>
<td>655</td>
<td>851</td>
<td>1,307</td>
<td>1,630</td>
<td>2,281</td>
<td>2,708</td>
<td>2,891</td>
</tr>
<tr>
<td>Jowar</td>
<td>353</td>
<td>533</td>
<td>466</td>
<td>660</td>
<td>814</td>
<td>764</td>
<td>952</td>
</tr>
<tr>
<td>Bajra</td>
<td>288</td>
<td>286</td>
<td>622</td>
<td>458</td>
<td>658</td>
<td>688</td>
<td>1,011</td>
</tr>
<tr>
<td>Maize</td>
<td>547</td>
<td>926</td>
<td>1,279</td>
<td>1,159</td>
<td>1,518</td>
<td>1,822</td>
<td>2,355</td>
</tr>
<tr>
<td>Pulses</td>
<td>441</td>
<td>539</td>
<td>524</td>
<td>473</td>
<td>578</td>
<td>544</td>
<td>655</td>
</tr>
<tr>
<td>Total Foodgrains</td>
<td>552</td>
<td>710</td>
<td>872</td>
<td>1,023</td>
<td>1,380</td>
<td>1,626</td>
<td>1,898</td>
</tr>
</tbody>
</table>
Agricultural Productivity in Comparison with Other Countries

A comparison of productivity levels in Indian agriculture with the levels in other countries shows that the productivity of Indian agriculture is very low. Productivity of wheat in India is about 37 per cent of the productivity in U.K and 59 per cent of the productivity in China. Regarding rice, productivity in India is 51 per cent (i.e. just about half) of the productivity in China and 41 per cent of the productivity in The USA. The productivity of maize in India is 47 per cent of the productivity in China and about one-fourth as compared with The USA and France. With regard to sugarcane, productivity in India is 61 per cent of the productivity in Egypt.

Information on India’s global rank in major agricultural crops is still more revealing. India happens to be one of the largest growers and producers of most of the agricultural crops but ranks very low in terms of yield. For instance, it has the largest area under rice (paddy) and wheat in the world and is the second largest producer of these crops. However, in terms of productivity,
its rank is only 52th in the world in rice and 38th in wheat. It has the largest area under cultivation of pulses in the world and is also the world’s largest producer of pulses, but in terms of productivity its rank is a lowly 138th in the world.

CAUSES OF LOW PRODUCTIVITY

The causes of low productivity in Indian agriculture can be divided into the following three categories: (i) General, (ii) Institutional, and (iii) Technical.

GENERAL CAUSES

1. **Social Environment.** The social environment of villages is often stated to be an obstacle in agricultural development. It is said that the Indian farmer is illiterate, superstitious, conservative, and unresponsive to new agricultural techniques. On the face of it, this seems to be correct. However, the fact is that given the limitation of present production relations, the unassuming and ignorant looking farmer uses his resources efficiently. On the basis of a study of Senapur Village, W.David Hopper concludes that within his limitations the Indian farmer uses his resources efficiently.

2. **Pressure of Population on Land:** There is heavy pressure of population on land. In fact, since the non-agricultural sectors of the economy have not been able to expand at a sufficiently rapid pace over the period of last five and a half decades, this pressure has continuously increased. In 2001, about 228 million workers, or nearly three-quarters of the rural working population (which was 310.7 million) were employed in the agricultural sector. Increasing pressure of population on land is partly responsible for the subdivision and fragmentation of holdings. Productivity on small uneconomic holdings is low.

3. **Land Degradation.** Government of India has recently estimated that nearly half of the country’s 329 million hectares of soil is to be categorized as degraded. Almost 43 per cent of the land suffers from high degradation resulting in 33-67 per cent yield loss while 5 per cent is so damaged that it has become unusable. Another study was conducted in 1992 (by H.E.Dregne and
N.T. Chou) found that human-induced water erosion led to irreversible soil productivity losses of 20 per cent or more in some parts of India. A glance at Box 2.3 reveals that soil degradation is a major factor accounting for low agricultural productivity in many regions of the country.

Table 2.3 Region-Specific Factors Causing Low Productivity

<table>
<thead>
<tr>
<th>Agro-climatic Region</th>
<th>States/Parts of States</th>
<th>Region-Specific Constraints</th>
</tr>
</thead>
<tbody>
<tr>
<td>Western Himalayan Region-I</td>
<td>J&amp;K., HP, Uttarakhand</td>
<td>Severe soil erosion, degradation due to heavy rainfall/floods and deforestation, low seed replacement rates, poor roads, poor input delivery, inadequate communication infrastructure and marketing.</td>
</tr>
<tr>
<td>Eastern Himalayan Region-II</td>
<td>Assam, NE States, Sikkim</td>
<td>Aluminum toxicity and soil acidity, soil erosion and floods, shifting cultivation, low seed</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Region Description</th>
<th>Areas</th>
<th>Issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower and middle Gangetic plain regions-III and IV</td>
<td>West Bengal, Bihar, Eastern UP</td>
<td>Flood/water logging, improper drainage, salinity/alkalinity, arsenic contamination, low seed replacement rates, non-availability of electricity, high population growth, poor road and communication infrastructure.</td>
</tr>
<tr>
<td>Upper and trans/ Gangetic plains regions-V and VI</td>
<td>Western UP, Punjab, Haryana</td>
<td>Groundwater depletion, decreasing total factor productivity, micronutrient deficiency, non-availability of electricity and high</td>
</tr>
</tbody>
</table>

replacements, non-availability of electricity, poor roads, poor input delivery system and communication infrastructure.
population density.

| Eastern Plateau and hill region-VII | Orissa, Jharkhand, Chattisgarh | Moisture stress, drought, and soil acidity, iron toxicity, low seed replacement rates, non-availability of electricity. High population growth, poor roads, poor input delivery and communication infrastructure. |

**Source:** Government of India, planning Commission, Eleventh Five Year plan 2007-12 (New Delhi, 2008), volume I I I, Table 1.6 p. 9.

**INSTITUTIONAL CAUSES**

1. **Land tenure system.** Perhaps the most important reason of low agricultural productivity might have been due to the zamindari System. Highly exploitative in character, this system drained out the very capacity, willingness and enthusiasm of the cultivators to increase production and productivity. Legislations passed for abolition of intermediaries in the post-Independence period did not break the stranglehold of the zamindars on the rural economy. They only changed their garb and became large landowners, exploitative practices continued. Regulation of rent, security of tenure, ownership rights for tenants, etc., did not make the position of tenants better. Tenancy of most of the tenants continues to be insecure and they had to pay exorbitant rates of rent. In
this land tenure system, it is difficult to increase productivity only through technological means. In fact, land reforms should precede technological changes. If investment in agriculture has to be increased it is necessary to eliminate the rentier class and usurious class of moneylenders.

2. **Lack of credit and marketing facilities.** It is often assumed that the decisions of Indian farmers are not affected or modified in response to price incentives. In other words, the Indian farmer continues to produce the same agricultural output even on more attractive prices. However, the facts are different. The studies of Raj Krishna, Hopper and Stern clearly point out that the Indian farmer reacts rationally to his economic environment. Frequently on account of lack of marketing facilities or non-availability of loan on fair rate of interest, the cultivators are not able to invest the requisite resources in agriculture. This keeps the level of productivity low with regard to land and the cultivator. If the government can revitalize the credit co-operative societies and the regional rural banks to grant more credit to the small farmers, the level of productivity can undoubtedly increase.

3. **Uneconomic holdings.** According to the National Sample Survey, 52 per cent holdings in 1961-62 had a size of less than 2 hectares. In 2000-01, 81 per cent of total holdings fell under this category. Most of these holdings are not only extremely small they are also fragmented into a number of tiny plots so that cultivation on them can be carried out only by labour intensive techniques. This results in low productivity. Until the excessive labour employed on agriculture is transferred to alternative jobs and the holdings are consolidated (or cooperative farming initiated) modern techniques of agriculture cannot be adopted and the possibilities of increasing agricultural productivity will remain limited.

**TECHNICAL CAUSES**

1. **Outmoded agricultural techniques.** Most of the Indian farmers continue to use outmoded agricultural techniques. Wooden ploughs and bullocks are still
used by a majority of farmers. Use of fertilizers and new high yielding varieties of seeds has also been extremely limited. To be brief, Indian agriculture is still traditional. Therefore productivity is low.

2. Inadequate irrigation facilities. Gross cropped area in India in 2006-07 was 193.72 million hectare of which 85.78 million hectares i.e.44.3% of gross cropped area had irrigation facilities. Even now 56 per cent of the gross cropped area continues to depend on rains. Rainfall is often insufficient, uncertain and irregular. Accordingly, productivity is bound to be low in all those areas which lack irrigation facilities. Even in areas having irrigation facilities, potential is not wholly utilized because of defective management. The costs of irrigation are also increasing continuously and the small farmer is, therefore, unable to make use of available irrigation facilities.

MEASURES TO INCREASE PRODUCTION AND PRODUCTIVITY

The causes cited above also suggest the measures to increase productivity. Such measures should be in such a way that they have to face the problem from technical, institutional, social and economic angles. In particular, attempts have to be made in the following directions.

1. Implementation of land reforms: Though land reforms were introduced in India in the post-Independence period with a view to eliminating the intermediary interests in land (especially zamindari), providing security of tenure and ownership rights to tenants, and re-organizing agriculture through land ceiling legislation, cooperative movement and consolidation of holdings, the progress registered is too unsatisfactory. Therefore, special attempts have to be made by the State governments to implement the land reforms legislation forcefully so that the slogan ‘land to the tiller’ is translated into practice. Then only, the tiller can go ahead to invest on land and adopt new agriculture techniques. Therefore, land reforms are the first and foremost necessity.
2. Integrated management of land and water resources: As stated earlier, almost half of the country's 329 million hectares of soil is degraded. There is huge loss due to water logging, Stalinization, human-induced water erosion, etc. This proves the urgency of an integrated and efficient management of our land and water resources. Keeping this goal in view, the Committee on 25 Years Perspective plan for the Development of Rain fed Areas constituted by the planning Commission for the Tenth plan suggested steps to treat/develop 75 million hectare arable land and non-arable land by the end of the Thirteenth plan with a total cost of Rs.20,850 crore. The Working Group on watershed Development, Rain fed Farming and Natural Resources Management for the Tenth plan suggested measures for treating 88.5 million hectares of rain fed/degraded land by the end of the Thirteenth plan with a total Rs.72,750 crore budget.

3 Improved seeds: Improved seeds are very much essential in increasing productivity. This has been amply proved by the experience of many countries and by the demonstration of high-yielding varieties of wheat in the states of Punjab, Haryana and Uttar Pradesh. Therefore more and more farmers in more and more areas should be encouraged to use improved seeds. After examining the soil conditions and availability of irrigation facilities in different areas, farmers should be properly guided as regards which seeds are suitable in their respective areas. They should also be educated in the methods of sowing, manuring and irrigating the new high-yielding varieties of seeds.

4. Fertilizers: Improved varieties of seeds require heavy doses of fertilizers. It has been estimated by scientists that Indian farmers use only one-tenth the amount of manure that is necessary to maintain the productivity of soil. There are wide inter-State differences in the use of fertilizers. While it was as high as 209 kg. per hectare in Punjab in 2006-07, it was just 43.7 kg. per hectare in Rajasthan. Similarly, fertilizer use was only 62.7 kg. per hectare in Madhya Pradesh and 46.7 kg. in Orissa. As noted by Ramesh Chand, S.S. Raju and
I.M. Pandey, increasing fertilizer use is a significant option for raising agricultural output in most of the States.

4. **Irrigation:** The coverage in various States varies from 14 to 97 per cent. There is a large gap between the current level and the ultimate irrigation potential except in the case of Punjab, Haryana and Rajasthan which have already exceeded the potential irrigation level. According to Ramesh Chand, S.S. Raju L.M. Pandey, “Bihar has water resources to extend irrigation to entire gross cropped area, with a further scope to provide irrigation to expansion in gross cropped area through an increased cropping intensity. Similarly, Uttar Pradesh has the potential to raise the level of irrigation to 95 per cent from the present level of 68.4 per cent. In Orissa and Assam irrigation can be extended to more than two third of cropped area, whereas at present this facility is available to less than 27 per cent area.”

5. **Consumption of power:** Consumption of electric power per hectare was just 9 kwh in Assam, 30 kwh in Orissa and only 34 kwh in Himachal Pradesh during 2001-02 and 2003-04. Electric power used in agriculture varied between 80 and 300 kwh in Kerala, Jammu and Kashmir, Bihar, Madhya Pradesh, West Bengal, Uttar Pradesh and Rajasthan, whereas it exceeded 1000 kwh in Andhra Pradesh, Gujarat, Haryana, Punjab and Tamil Nadu. As noted by Ramesh Chand, S.S. Raju and L.M. Pandey, increase in electric supply to agriculture is important for promoting irrigation and thus raising output.

6. **Cropping intensity:** Although irrigation facilities have expanded in recent decades, the level of crop intensity continues to be very low in most of the States. In Andhra Pradesh, Karnataka, Tamil Nadu, Madhya Pradesh, Maharashtra, Gujarat and Rajasthan more than one crop is taken on less than 30 per cent of area under cultivation. It means there is considerable scope to raise output through an expansion of area under double cropping.

7. **Technology:** Improved technology is most important for the growth of agricultural output. Available evidence shows that there is a big gap between
the level of yield with improved farm practices on farmers’ fields and the yield with present practices followed by the farmers. Therefore, there is a need to extend improved technology to farmers. For this purpose, extension services need to be strengthened.

8. Plant protection: Around 10-30 per cent of the farm production in India is lost every year due to pests, weeds and diseases. The Crop Care Foundation of India (CCFI) has placed the loss in agricultural production due to damage from weeds and plant diseases at almost Rs. 1.5 lakh crore each year. Most of the farmers in the countryside are unaware of the pesticides and insecticides developed in recent years to face this challenge posed by diseases and insects. Some farmers use them to some extent but their efforts cannot be successful unless and until their neighboring farmers also adopt them. Therefore, it is necessary to manage this programme at the government level. The government should maintain its own technical staff to carry out the spraying of pesticides and insecticides at nominal rates.

9. Provision of credit and marketing facilities: Use of improved varieties of seeds, fertilizers, pesticides, insecticides, agricultural machinery and irrigation facilities all require substantial money resources which small farmers do not usually possess. Therefore, it is necessary to strengthen the credit cooperative sector and free in from the clutches of large landowners so that it can meet the credit requirements of small farmers. The commercial banks should be encouraged to lend without Redtapism to small farmers. Regional rural banks can play a special role in this regard. The marketing structure also needs a reorientation to serve the small and marginal farmers in a better way. Cooperative marketing societies should be promoted to ensure better prices to small farmers.

10. Incentives to the Producer: Incentives to the agriculturists can go a long way in encouraging them to increase productivity. Incentives can be in the following forms: (a) implementing land reforms rigorously and vigorously, (b)
ensuring timely availability of agricultural inputs, (c) guaranteeing remunerative prices of produce to the farmer, (d) implementing crop-insurance scheme to cover the risk of damage to crops and other risks in agriculture, and (e) social recognition and conferring of awards, merit certificates, etc.

11. **Better Management**: Just as industry needs skilled management for increased productivity, agriculture also requires better management for raising the level of productivity. For this purpose farmers have to be educated in more efficient use of their resources particularly land, irrigation facilities and agricultural implements. This can be accomplished only if there is a vast network of managerial staff engaged in disseminating information about new agricultural techniques and methods of production. Other tasks of this particular staff could be to test the suitability of soil and climatic conditions for different warehousing and marketing facilities, arranging for timely supply of agricultural inputs, and advising farmers on day-to-day problems confronted by them in carrying out agricultural activities.

12 **Agricultural researches**: Agricultural research is presently being conducted by the Indian Council of Agricultural Research, various Agricultural Universities and other institutions for evolving high-yielding varieties of seeds for different crops. Considerable success has been achieved in the case of wheat. However, intensive efforts are required to achieve similar success in other crops. Research should also be conducted on a substantial scale at different regional centers in the areas testing the quality of soil, suggesting measures for soil conservation and reclamation, examining the diseases affecting different crops, improving the quality of agricultural implements, avoiding wastage in agriculture especially damage to crops resulting from pests, insects, rodents and the like.
AGRICULTURAL FINANCE IN INDIA

Basically agriculture is an unorganized profession. Its success and failure depends, to a large extent, on climatic conditions. Further, it is not always possible to distinguish between productive and unproductive loans of the farmers. Because of these factors, banks did not show much interest in advancing loans to agriculture and allied activities for a long time and farmers were forced to depend on moneylenders.

NEED FOR AGRICULTURAL FINANCE

Credit needs of the farmers can be examined from two different angles – (I) on the basis of time, and (ii) on the basis of purpose.

On the basis of time. Agricultural credit needs of the farmers can be classified into three categories on the basis of time – (i) short-term, (ii) medium term, and (iii) long-term. Short-term loans are required for the purchase of seeds, fertilizers, pesticides, feeds and fodder of livestock, marketing of agricultural produce, payment of wages of hired labour, litigation, and a variety of consumption and unproductive purposes. The period of such loans is less than 15 months. Main agencies for granting of short-term loans are the moneylenders and cooperative societies. Medium-term loans are generally obtained for the purchase of cattle, small agricultural implements, repair and construction of wells, etc. the period of such loans extends from 15 months to 5 years. These loans are generally provided by moneylenders, relatives of farmers, cooperative societies and commercial banks. Long-term loans are required for effecting permanent improvements on land, digging tube wells, purchases of larger agricultural implements and machinery like tractors, harvesters, etc. and repayment of old debts.

4 Idib
The period of such loans extends beyond 5 years. Such loans are normally taken from Primary Co-operative Agricultural and Rural Development Banks (PCARDBS).

**On the basis of purpose:** Agricultural credit needs of the farmers can be classified on the basis of purpose into the following categories – (i) productive, (ii) consumption needs, and (iii) unproductive. All credit requirements which directly affect agricultural productivity come under productive needs. Farmers need loans for the purchase of seeds, fertilizers, manures, agricultural implements, livestock digging and repair of wells and tube wells, payment of wages, effecting permanent improvements on land, marketing of agricultural produce, etc. repayment of these loans is generally not difficult because the very process of production generally creates the wherewithal’s for repayment. Farmers often require loans for consumption as well. Between the moment of marketing of agricultural produce and harvesting of the next crop there is a long interval of time and most of the farmers do not have sufficient income to sustain them through this period. Therefore, they have to take loans to meet their consumption needs. In adverse calamities like droughts or floods, the crop is considerably damaged and hence farmers, who otherwise avoid taking loans for consumption, are compelled to go for such loans. Institutional credit agencies do not provide loans for consumption purposes. Accordingly, farmers are forced to fall back upon moneylenders to meet such requirements. In addition to consumption, farmers also require loans for a multiplicity of other unproductive purpose such as litigation, performance of marriages, social ceremonies on the birth or death of a family member, religious functions, festivals, etc. since institutional agencies do not grant credit for such unproductive purposes, farmers have to seek assistance from moneylenders. It is often very difficult to repay such loans because they do not contribute to the productivity of farmer.
SOURCES OF AGRICULTURAL FINANCE AND THEIR RELATIVE IMPORTANCE

Sources of agricultural finance can be divided into two categories: (1) non-institutional sources, and (2) institutional sources. The non-institutional sources are: (i) moneylenders, (ii) relatives, (iii) traders, (iv) commission agents, and (v) landlords. The institutional sources comprise the Co-operatives, Scheduled Commercial Banks and Regional Rural Banks (RRBs). Among cooperatives, the Primary Agricultural Credit Societies (PACSs) provide short and medium-term loans and PCARDBs provide long-term loans to farmers. The commercial banks, including RRBs, provide both short and medium-term loans for the persons in agriculture and allied activities. The National Bank for Agriculture and Rural Development (NABARD) is the apex institution at the national level for agricultural credit and provides refinance assistance to the agencies mentioned above. The Reserve Bank of India as the central bank of the country plays a crucial role in this sphere by giving overall direction to rural credit and financial support to NABARD for its operations.

At the time of independence, the most important source of agricultural credit was the moneylenders. In 1951 (the year when planning was initiated in the country) moneylenders accounted for as much as 71.6 per cent of rural credit. The predominant position of the moneylenders was due to the reason that there was no other source worth the name and the farmers were forced to borrow from them. This almost total dependence of the farmers on the moneylenders enabled the latter to dictate terms and exploit the former in a number of ways. For instance, moneylenders charged exorbitant rates of interest ranging from 18 per cent to 50 per cent. They often manipulated accounts to their advantage by not entering the money returned and interest paid into the account. They also forced farmers to sell the agricultural produce to them at low price. Long-term loans were often advanced against the security of land and moneylenders often manipulated things in such a way as to seize the land. The government therefore, took various steps to regulate the activities
of the moneylenders. For this purpose, various legislations were enacted. The basic objectives of these legislations were mainly aimed at bringing about an improvement in the terms on which private credit was made available to the agriculturists and place legal restrictions on the unreasonable exactions of the moneylenders, and enabling the civil courts to do greater justice to both the lenders and the borrowers than was possible, under the ordinary code of civil procedure. The system of money lending was corrected by taking certain steps viz (a) licensing and / or registration of moneylenders, (b) fixation of maximum, rates of interest and (C) maintenance of accounts by moneylenders, grant of regular receipts, etc. The second one i.e. the aspect of legal matters was modified by (a) empowering the court to 'reopen' the closed transactions and go behind the written contract, (b) protection of certain forms of assets from attachment in execution of decrees, and (c) empowering the court to direct payment of decretal amount by installments.

As regards institutional sources the Co-Operative Credit Society was first established and also promoted. The co-operative movement in this country was started in 1904. However, its development was very slow. Even in 1951, cooperatives provided only 3.1 per cent of total rural credit. Hence, the dominance of moneylenders in agricultural credit continued up to the nationalization of 14 major banks in 1969 (followed by nationalization of 6 more banks in 1980). Then only the grip of moneylenders on agricultural credit was reduced. In 1975, the government set up the third institution – the institution of RRBs (Regional rural banks). Thus, by the end of 1976, there emerged three separate institutions for providing rural credit, which is often described as the multi-agency approach. In 1982 NABARD was set up. India now has a wide network of Rural Finance Institutions (RFIs). There are more than 30,000 commercial bank branches, 14,000 regional rural banks, and about 1, 00,000 rural credit co-operatives, thus each RFI outlet is able to extend financial services on average to a group of 4700.
As a result of the efforts undertaken by the government to develop the institutional sources of credit, the role of non-institutional sources like moneylenders in agricultural credit declined considerably. The share of non-institutional sources in rural credit which was as high as 92.7 per cent in 1951 fell consistently to 68.3 per cent in 1971 and further to 30.6 per cent in 1991 to merely 17.5 per cent in 1991 (though it rose to 26.8 per cent in 2002). The share of institutional sources in rural credit rose correspondingly from only 7.3 per cent in 1951 to 31.7 per cent in 1971 and further to 66.3 per cent in 1991 (in 2002, it fell to 61.1 per cent).

**Expansion of institutional credit to agriculture**

There has been massive expansion of institutional credit to agriculture over the years. This would be clear from the fact that institutional credit to agriculture rose from RS. 744 crore in 1970-71 to RS. 9,830 crore during 1990-91 and RS. 62,045 crore in 2001-02 (the last year of the ninth plan). The tenth plan (2002-07) projected the total credit flow to agriculture and allied activities at RS. 7,36,570 crore. However, in the first two years of the plan, 2002-03 and 2003-04, the credit flow to agriculture from all formal sources was only RS. 1,56,541 crore (RS. 69,560 crore in 2002-03 and RS. 86,981 crore in 2003-04). Therefore to fulfill the tenth plan target, major initiatives were required to increase agricultural credit. To suggest measures to increase agricultural credit, the Reserve Bank constituted an “advisory committee on flow of credit to agriculture and related activities from the banking system” under the chairmanship of V.S. Vyas. This committee submitted its final report in 2004. Some of the important recommendations given by the committee were: (1) a review of mandatory lending to agriculture by commercial banks to enlarge direct lending to agriculture by commercial banks to enlarge direct lending programs; (2) public and private sector banks to increase their direct agricultural lending to 12 per cent of net bank credit in the next two years and to 13.5 per cent two years thereafter, within the overall limit of 18 per cent of total agricultural lending; (3) banks to increase their disbursements to small and
marginal farmers under Special Agricultural Credit Plan (SACP) by the end of the tenth plan period (i.e., by end-march 2007) to 40 per cent; (4) reduction in cost of agricultural loans; (5) credit flow to small borrowers, easy repayment facility, procedural simplification, involvement of Panchayat Raj Institutions and Micro-Finance etc.

In June 2004, the government announced a credit package for the agricultural sector, which envisaged doubling of agricultural credit over a period of three years. The target for growth of agricultural credit for the years 2004-05 was kept at 30 per cent. This target was exceeded as the actual growth in overall credit by all agencies was as high as 44 per cent (from RS. 86,981 crore in 2003-04 to RS. 1,25,309 crore in 2004-05). Based on this encouraging performance, the target for flow of institutional credit for agriculture and allied activities for 2005-06 was raised to RS. 1, 41,00 crore which was again surpassed by the actual achievement of RS. 1,80,486 crore. In the budget for 2006-07, the finance minister laid down the target for agricultural credit for that year at RS. 1,75,000 crore. In a bid to provide more and cheap credit to farmers, the government also reduced the interest rate on short-term credit to farmers from 9 per cent to 7 per cent on loans of less than RS. 3lakh. Banks were also asked to add 50 lakh more farmers to their portfolio. The target laid down for the year 2006-07 was also exceeded as the agricultural credit during that year was RS. 2, 29, 401 crore. In the union budget for 2007-08, the finance minister proposed a target of RS. 2, 25,000 crore, for agricultural credit during the year 2007-08. The actual achievement was RS.2, 54,658 crore (again higher than the target). The banks were asked to add 50 lakh new farmers to their portfolio. Target for agricultural credit for the year 2008-09 was kept at RS. 2,80,000 crore while achievement was RS. 2,92,437 crore. Target for 2009-10 was kept at RS. 3,25,000 crore which was revised further to RS. 3,75,000 crore. In the 2006-07 budgets the finance Minister proposed two per cent interest subvention for short-term loans. This was raised to three per cent in 2009-10 which was raised by one more per cent in 2010-11. Thus, interest subvention
for the year 2010-11 stands at 4 per cent which means that the effective rate of interest for farmers who repay their short-term crop loans on time is only 5% per annum.

Table 2.4

Institutional Credit to Agriculture: Relative Share of Different Institutions
(Percent)

<table>
<thead>
<tr>
<th>Year</th>
<th>Co-operatives</th>
<th>Scheduled Commercial Banks</th>
<th>Regional Rural Banks</th>
<th>Total Credit to Agriculture</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970-71</td>
<td>100.0</td>
<td>-</td>
<td>-</td>
<td>744</td>
</tr>
<tr>
<td>1980-81</td>
<td>61.6</td>
<td>38.4</td>
<td>-</td>
<td>3,292</td>
</tr>
<tr>
<td>1990-91</td>
<td>49.0</td>
<td>47.6</td>
<td>3.4</td>
<td>9,830</td>
</tr>
<tr>
<td>2000-01</td>
<td>39.4</td>
<td>52.6</td>
<td>8.0</td>
<td>52,827</td>
</tr>
<tr>
<td>2001-02</td>
<td>38.0</td>
<td>54.1</td>
<td>7.9</td>
<td>62,045</td>
</tr>
<tr>
<td>2002-03</td>
<td>34.1</td>
<td>57.2</td>
<td>8.7</td>
<td>69,560</td>
</tr>
<tr>
<td>2003-04</td>
<td>31.0</td>
<td>60.3</td>
<td>8.7</td>
<td>86,981</td>
</tr>
<tr>
<td>2004-05</td>
<td>25.0</td>
<td>65.0</td>
<td>10.0</td>
<td>1,25,309</td>
</tr>
<tr>
<td>2005-06</td>
<td>22.0</td>
<td>69.5</td>
<td>8.4</td>
<td>1,80,486</td>
</tr>
<tr>
<td>2006-07</td>
<td>18.5</td>
<td>72.6</td>
<td>8.9</td>
<td>2,29,401</td>
</tr>
<tr>
<td>2007-08</td>
<td>18.9</td>
<td>71.1</td>
<td>10.0</td>
<td>2,54,658</td>
</tr>
<tr>
<td>2008-09</td>
<td>12.6</td>
<td>78.3</td>
<td>9.1</td>
<td>2,92,437</td>
</tr>
</tbody>
</table>

Source: (1) Rakesh Mohan, "Agriculture Credit in India", Economic and political weekly, March 18, 2006, Table 1, p. 1016; and (2) Government of India, Economic Survey 2009-10 (Delhi, 2010), 5.7 p. 98.
CHANGE IN RELATIVE SHARES OF INSTITUTIONS

After the nationalization of 14 major commercial banks in 1969, the commercial banks consistently increased their share in institutional credit to agriculture from 38.4 per cent in 1980-81 to more than 780 per cent in 2008-09. As a result, the relative share of co-operative societies declined from 61.6 per cent in 1980-81 to about 13.0 per cent in 2008-09. RRBs contributed about 8 to 10 per cent of agricultural credit over the years (see Table 4.4).

INSTITUTIONAL SOURCES OF FINANCE

There are three types of institutional sources of finance. They are Co-operatives, Scheduled Commercial Banks and Regional Rural Banks (RRBs).

(a) Co-OPERATIVE CREDIT SOCIETIES

History of co-operative credit is very old in India. In fact, the co-operative movement was initiated in 1904 through the establishment of co-operative credit societies. These societies were organized to relieve the indebtedness of rural people and promote thrift.

ORGANIZATION OF CO-OPERATIVES

The rural cooperative credit institutions in India have been organised into short-term and long-term structures. The short-term cooperative credit structure is based on a three-tier structure, except the States in the north-east region. At the lowest tier are the Primary Agricultural Credit Societies (PACSs). These are organised at the village level. At the second tier are the District Central Co-operative Banks (DCCBs) organized at the district level. At the third and uppermost tier are the State Co-operative Banks (StCBs) organized at the State level. The village level PACSs can be formed by ten or more than ten persons. These societies generally advance loans only for productive purposes. The repaying capacity of the individual is taken into account while advancing such loans. The DCCBs are of two types-Co-
Operative Banking Union and Mixed Central Co-Operative Banks. Membership of the former is open only to co-operative societies, while membership of the latter is open to both. Central Co-Operative Banks is to advance loans to the PACSs in times of need so that they can fulfill the requirements of farmers. The StCB, in turn, advances loans to the DCCBs in order to augment their capacity to provide loans to the village level PACSs. It also co-ordinates and regulates the working of DCCBs. It also provides the link between the Reserve Bank of India and the money market on the one hand and lowers level of co-operative structure on the other.

Besides their short-term credit requirements, farmers also require long-term credit for (i) effecting permanent improvements in land (for example, making wasteland fit for cultivation, digging of wells or tube wells etc.); (ii) purchasing agricultural implements, and for this purpose long-term credit co-operatives have been set up. These are organised at two levels. These differ from State to State and may be categorized into four types as (i) the unitary structure in which State Co-operative Agricultural and Rural Development Banks (SCARDBs) operate at the State level through their branches and have direct membership of individuals: (ii) the federal structure in which Primary Co-operative Agricultural and Rural Development Banks (PCARDBs) operate as independent units at the primary level and federate themselves into SCARDBs at the State level: (iii) the mixed structure wherein both the unitary and federal types operate in one form or another: and (iv) the integrated structure wherein no separate Agricultural and Rural Development Banks exist and the long term credit business is undertaken by the long-term section of the StCBs concerned. The rural credit co-operative structure in India is a huge institutional structure comprising 31 StCBs, 371 DCCBs and 94,942 PACSs at the grass root level in the short-term credit structure and 20 SCARDBs and 697 PCARDBs in the long-term credit structure as at end-March 2009.

However, the density of network of rural co-operative credit institutions shows regional variations. In the short-term co-operative credit
structure, the number of villages per PACS varies from one in Kerala to twenty nine in Assam, with all—India average being seven. With regard to long-term co-operative credit structure, the number of villages per branch ranges from twenty five in Kerala to two thousand one hundred and twenty two in Assam. At the all-India level, there are four hundred and ten villages per branch.

**CO-OPERATIVES AND RURAL CREDIT**

In fact the co-operative movement was initiated in India in 1904, but the role of co-operative credit societies in providing credit was almost negligible in the pre-Independence period. Even after half a century of operations, co-operatives provided only 3.1 per cent of total rural credit in 1951-52. However, progress after Independence has been quite rapid. For instance, the co-operatives provided 15.5 per cent and 22.7 per cent of total rural credit in 1961-62 and 1970-71 respectively. The amount of short-term and medium-term credit advanced by these societies increased from Rs. 23 Crore in 1951-52 to Rs. 1,425 crore in 1979-80. It means over a period of nineteen years (1960-61 to 1979-80) the short and medium term loans increased by more than seven times. There was an impressive expansion in rural credit provided through co-operatives in the Sixth and Seventh plans. By the time the Eighth plan started (in 1992-93), the rural credit provided through co-operatives had touched the level of Rs. 6,484 crore (which was 53.4 per cent of the total direct institutional credit made available to agriculture). However, thereafter, while absolute amount of rural credit provided by co-operatives increased, their percentage share in total institutional credit declined. In 2008-09, co-operatives provided Rs. 36,762 crore of rural credit. This was 12.6 per cent of total Rs. 2, 92,437 crore institutional credit to agriculture provided on the whole.

**(b). COMMERCIAL BANKS AND RURAL CREDIT**

For a long span, the share of commercial banks in rural credit was meager. For instance, it was only 0.9 per cent in 1951-52 and 0.7 per cent in 1961-62. The insignificant participation of commercial banks in rural credit in
India was due to the subsistence nature of agriculture and its unorganized, individualistic functioning. Moreover, the heavy dependence on monsoons made it an uncertain and risky venture. Contrary to it the industrial sector was relatively more organized and less dependent on natural factors. Consequently, the commercial banks tended to concentrate on the industrial sector and even diverted the funds mobilized from rural areas to meet the demand for credit of the industrial sector.

In order to pave a good way 14 major commercial banks were nationalized in 1969. This was followed by the nationalization of 6 more banks in 1980. After nationalization the banks opened a number of branches in rural areas and have increased their advances in these areas considerably. In June 1969, out of the total of 8,262 branches of commercial banks in India, 1,832 (i.e. 22.2 per cent) were in rural areas. By June 2009 the number of total branches shot up to 80,514. of this, 31,829 (i.e., 39.5 per cent) were in rural areas. Miraculously, total number of rural branches increased by almost seventeen times. The advances from public sector banks to agriculture had also grown by leaps and bounds. For instance, advances to agriculture (amount outstanding) aggregated only RS.162 crore in June 1969. At end-march 2009, this rose to RS. 2,98,211 crore accounting for 17.6 per cent of total credit. During 2008-09 commercial banks provided rural credit of RS. 2,28,951 crore. This was 78.3 per cent of total RS. 2,92,437 crore institutional credit to agriculture provided in 2009.

This statistical information clarifies the fact that with nationalization, the commercial banks played an important role in providing rural credit, which enabled farmers to purchase agricultural inputs and adopt new agricultural technology on an increasing scale, expand activities in the non-farm sector in rural areas, and also accelerate the pace of private agricultural investment. As stated in the Indian Economy, the rapid bank expansion in India increased fertilizer demand by about 23 per cent, investment level in tractors by 13 per cent, investment in pumps by 41 per cent, milk animals by 46 per cent and in
draft animals by about 38 per cent. The study further indicates 10 per cent increase in the number of commercial bank branches accelerated investment on animals and pump sets by between 4 to 8 per cent. The effect on tractors was 1.4 per cent. And so bank expansion played a pivotal role in India’s agricultural growth and modernization in addition to relieving large number of rural people from the clutches of the moneylenders. According to the Reserve Bank’s service area approach individual bank branches are expected to serve the credit needs of 15 to 25 villages each and this has been continued since 1989. After carrying out surveys and preparing village-wise economic profiles, bank branches have been preparing credit plans for the villages in their service areas. Block level bankers’ committees have been constituted for co-ordination among credit institutions and developmental agencies. They have to monitor the implementation of the credit plans. Each bank has also to prepare special agricultural credit plan (SACP), segregated into quarterly targets, which is monitored by the Reserve Bank of India.

(c). REGIONAL RURAL BANKS

In 1975, the working group on rural banks recommended the establishment of regional rural banks (RRBs) to supplement the efforts of the commercial banks and the co-operative in extending credit to weaker sections of the rural community—small and marginal farmers, landless labourers, artisans and other rural residents of small means. The intention behind the process new banks was that there should, be an institutional device to combine the local feel and familiarity with the rural problems which the co-operatives possessed in order to reach the rural poor more extensively. The working group rightly sensed that what the rural poor needed was a low cost, low profile credit institution into which they could walk in without trepidation. The staff of RRBs was to be recruited from the neighboring area and as such would have a better understanding of the local problems and the local people, their needs and their constraints.
Consequent upon the recommendations of the working group, 5 RRBs were initially set up in 1975. Their number later rose to 196 in 2008-09, these RRBs provided Rs. 26,724 crore as credit to the agricultural sector. This was 8.9 per cent of total institutional credit to agriculture in that year.

APEX BODY - NATIONAL BANK FOR AGRICULTURE AND RURAL DEVELOPMENT (NABARD)

The significant landmark in the rural credit structure is the setting up of the National Bank for Agriculture and Rural Development (NABARD) and that was in July 1982. It took over from Reserve Bank of India all the field of rural credit. Designed specifically as an ‘organizational device for providing undivided attention, forceful direction and pointed focus, to the credit problems of the rural sector,’ NABARD is now the apex bank for rural credit.

FUNCTIONS OF NABARD

NABARD was established as a development bank to perform the following functions:

1. To serve as an apex financing agency for the institutions providing investment and production credit for promoting various developmental activities in rural areas;

2. To take measures towards institution building for improving absorptive capacity of the credit delivery system, including monitoring, formulation of rehabilitation schemes, restructuring of credit institution and training of personnel;

3. To co-ordinate the rural financing activities of all institutions engaged in development work at the field level and liaison with the Government of India, the state Governments, the Reserve Bank and other national level institutions concerned with policy formulation; and

4. To undertake monitoring and evaluation of projects refinanced by it.
NABARD’s refinance is available not only to State Co-Operative Agriculture and Rural Development Banks (SCARDBs), State Co-Operative Banks (StCBs), but also to Regional Rural Banks (RRBs), Commercial Banks and other Financial Institutions approved by the Reserve Bank. The ultimate beneficiaries of investment credit can be individuals, partnership concerns, companies state-owned corporations or co-operative societies. Production credit is generally extended to individuals.

**NABARD AND RURAL CREDIT**

NABARD’s assistance in rural areas is eight – fold and they are amplified here under:

1. **NABARD** provides short-term credit facilities to StCBs for financing Seasonal Agricultural Operations (SAO); marketing of crops; pisciculture activities; production/procurement and marketing activities of co-operative weavers’ societies; purchase and sale of yarn by apex/regional societies; production and marketing activities of industrial co-operatives; financing of individual rural artisans through Public Agricultural Credit Societies (PACS); distribution of fertilizers; and marketing activities. Medium-term facilities are provided to StCBs and RRBs for converting short-term loans to medium-term loans and for approved agricultural purposes. Long-term loans are provided to the State Government for contributing to share capital of co-operative credit institutions. During 2008-09, NABARD sanctioned total credit limits aggregating Rs. 24,962 crore as against Rs. 18,689 crore during 2007-08 for various short and medium-term purposes to StCBs and long-term loans to the State Governments.

NABARD’s refinance policy on lays emphasis on augmentation of the ground-level credit flow by adopting region-specific strategies and rationalization of lending policies and procedures and this is with regard to short-term seasonal operations.
2. **Rural Infrastructure Development Fund** (RIDF-1) was established in 1995-96 with a corpus of Rs. 2,000 crore with the major objective of providing funds to State governments and State owned corporations to enable them to complete various types of rural infrastructure projects. RIDF has been in force on annual basis. The total corpus of RIDF (RIDF-I to RIDF-XV) amounted to Rs. 1,00,000 crore. Cumulative sanctions and disbursements under various tranches of RIDF stood at Rs. 99,654 crore and Rs. 62,824 crore respectively up to end December 2009. The proportion of disbursements in relation to sanctions had been 63 percent.

Various factors have been attributed to explain the situation of low disbursement of RIDF funds compared to the sanctioned amounts. They include high interest cost of funds allocated through RIDF, lack of matching funds with State governments and other procedural hardships.

Loans under RIDF are given for various purposes like irrigation projects, watershed management, construction of rural roads and bridges. In the initial tranches of the scheme the accent was on sanctioning loans for various irrigation projects, but in the later stage, on construction of rural roads and bridges. The projects, however, showed considerable time overruns. According to NABARD, the reasons for this were: (i) mismatch between physical and financial disbursements; (ii) the implementing departments (of governments) were not adequately funded by the State governments; (iii) the projects faced problems of land acquisition, forest and environmental clearance; (iv) inadequate monitoring and supervision by government officers; and (v) lack of transparency among the key functionaries.

3. The access to credit for the poor from conventional banking is often constrained by lack of collaterals, information asymmetry and high transaction costs associated with small borrowed accounts. Microfinance has emerged as a viable alternative to reach the hitherto unreached for their social and economic empowerment through social and financial intermediation. It involves
provision of thrift, credit and other financial services and products of very small amounts to the poor for enabling them to raise their income levels and thereby improve living standards. In operational terms, micro credit involves small loans, up to Rs. 25,000, extended to the poor without any collateral for undertaking self-employment projects. Such loans are provided through micro finance institution (MFIs). One of the most popular models of MFI has been the Grameen Bank model. Non-Government Organizations (NGOs) form and develop self-help groups (SHGs) and provide credit to them.

Micro finance schemes in India have emerged as major avenues for bringing the poor within the purview of the organized financial sector. In this context, NABARD has played a key role in the development and promotion of SHGs and other micro finance institutions and in providing refinance at special rates. SHG-bank linkage program has now emerged as a major micro-finance initiative. Under this program, by March 31, 2009, 61,21,147 SHGs held savings bank accounts with total saving of Rs.5,545.62 crore. More than 8.06 crore poor households are associated with banking agencies under the SHG-Bank linkage program. As on March 31, 2009, 42,24,338 SHGs had outstanding (cumulative) bank loans of Rs.22,680 crore. Commercial banks have the maximum share of around 70 per cent of outstanding bank loan to SHGs while RRBs have a share of 23 per cent and the cooperative banks the remaining 7 percent.

4. The Kisan Credit Card (KCC) scheme was introduced in 1998-99 to facilitate short-term credit to farmers. Commercial banks, cooperative banks and RRBs implement this scheme. Each farmer is provided with a Kisan Credit Card and a pass book for providing revolving cash credit facilities. NABARD accelerated the pace of issue of KCCs. Cumulatively up to November 30, 2009, about 878.30 lakh cards were issued. However, the progress of the scheme was not uniform across States, and was dismal in the north-east. This is attributed to low level of loans issued to farmer availing of crop loans from banks; poor financial position of the cooperatives and RRB in
the region; and lack of infrastructure facilities which are a hurdle in the way of augmenting credit facilities.

5. With a view to providing co-operative banks with more freedom and discretion to operate in an increasingly liberalized and competitive banking environment, NABARD, in consultation with the Reserve Bank, decided to replace the Credit Authorization Scheme (CAS) with the Credit Monitoring Arrangement (CMA) with effect from the year 2000-01. The banks, however, have to follow prudence and exposure norm and have to satisfy themselves about the technical feasibility and financial viability of the proposals, credit-worthiness of borrowers, risk management, margin, security requirement etc.

6. NABARD has issued operational instructions to RRBs and co-operative banks with regard to implementation of Swarnajayanti Gram Swarojgar Yojana (SGSY) on similar lines as was issued by the Reserve Bank for commercial banks. Policy guidelines for refinance support under SGSY were also issued to all financing banks. Banks have been, inter alia, advised to evolve suitable norms for grading of SGSY groups at different stage of financing on the illustrative parameters indicated by NABARD.

7. NABARD set up the Co-operative Development Fund (CDF) in 1993 with the objective of strengthening the co-operative credit institutions in the areas of organizational structure, human resource development, resource mobilization, recovery position, etc. The assistance is provided to StCBs/SCARDBs/CCBs/PCARDBs by way of grant or loan or both.

8. NABARD is the supervisory authority for StCBs, CCBs and certain other State level co-operative institutions such as SCARDBs. Accordingly, NABARD undertakes periodic on-site inspection of these organizations and since 1998-99 this has been supplemented by a system of off-site surveillance.

The three main functions of NABARD are refinancing, institutional development and inspection of client banks. As noted by the ACRC, an
evaluation of these functions shows that the refinance function has attracted relatively more attention and resources over the years. Moreover, a major chunk of the personnel of NABARD is stationed at the head office, regional offices and sub-offices. As pointed out by V. Krishnadevan, “it is somewhat strange that an agency dealing with agricultural finance and which is Supposed to be in touch with ground root realities, houses a significant number of its employees in cities. “A major problem today is the lack of healthy credit delivery motivation at the field level for sustaining rural credit on a continuous basis. Despite its efforts, NABARD has not been able to strengthen co-operatives as the management control vests in the State Government. Thus State Governments which in turn are unable to supervise properly.

DEBT WAIVER AND DEBT RELIEF

Committing suicide by small and marginal farmers over the past few years in different regions of the country is terrible and distressing. The basic cause lies in indebtedness. Small and marginal farmers are unable to make repayment for loans due to loss of crops as a result of natural calamities and other reasons. However, if farmers continue to be defaulters, they are unable to avail of fresh loans. Such circumstances have forced many to approach moneylenders to get credit for which they are charged exorbitantly high interest rates. Though the share of non-institutional sources of credit for farmers declined from 92.7 per cent in 1951 to 30.6 per cent in 1991, it increased to 38.9 per cent in 2002 mainly due to increase in moneylenders’ share.

In view of the reasons cited above, the Finance Minister in the Union Budget 2008-09 announced a debt waiver and debt relief scheme. The total value of overdue loans to be waived was estimated at Rs.50,000 crore and the OTS (one time settlement) relief on the overdue loans was estimated at Rs.10,000 crore (thus the total sum of money involved was Rs.60,000 crore). The details of the scheme are presented here:
1. All agricultural loans disbursed by scheduled commercial banks, regional rural banks and co-operative credit institutions up to March 31, 2007 and overdue as on December 31, 2007 were covered under the scheme.

2. For marginal farmers (i.e., holding up to 1 hectare) and small farmers (1-2 hectares), there was to be a complete waiver of all loans that were overdue on December 31, 2007 and which remained unpaid until February 29, 2008. In respect of other farmers, there was to be a onetime settlement (OTS) scheme for all loans that were overdue on December 31, 2007 and which remained unpaid February 29, 2008. Under the OTS, a rebate of 25 per cent was given against payment of the balance of 75 per cent.

3. Agricultural loans were restructured and rescheduled by banks in 2004 and 2006 through special packages. These rescheduled loans, and other loans rescheduled in the normal course as per RBI guidelines, were also to be eligible either for a waiver or an OTS on the same pattern.

4. The target date for fully implementing the debt waiver and debt, relief scheme was kept as June 30, 2008. Upon being granted debt waiver or signing an agreement for debt relief under the OTS, the farmer would be entitled to fresh agricultural loans from the banks in accordance with normal rules.
AGRICULTURAL MARKETING IN INDIA

For a long period of time Indian agriculture was mostly in the nature of 'subsistence farming.' The farmer had to sell only a small part of his produce to pay off rents, debts and meet his other requirements. Such sale was usually done immediately after harvesting of crops since there were no storing facilities. A considerable part of the total produce was sold by the farmers to the village traders and moneylenders often at price considerably lower than the market prices. The farmers who took their produce to the mandies (wholesale markets) also faced a number of problems as they were confronted with powerful and organized traders. In mandies, business was carried out by agents or middlemen. As a result the share of farmers in the price of agricultural produce was reduced substantially. The study by D.S. Sidhu revealed that farmers obtained only about 53 per cent of the price of rice, 31 per cent being the share of middlemen (the remaining 16 per cent being the marketing cost). In the case of vegetable and fruits, the share of farmers was even less – 39 percent in the former case and 34 per cent in the latter. Another malpractice in the mandies was related to the use of wrong weights and measures.

GOVERNMENT MEASURES TO IMPROVE THE SYSTEM OF AGRICULTURAL MARKETING

After Independence, the Government of India adopted a number of measures to improve the system of agricultural marketing, the important ones being establishment of regulated markets, construction of warehouses, provision for grading and standardization of produce, standardization of weights and measures, daily broadcasting of market prices of agricultural crops over electronic media improvement of transport facilities etc.

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ORGANISATION OF REGULATED MARKET

Regulated markets have been organized with a view to protecting the farmers from the malpractices of sellers and brokers. The management of such markets is done by a Market Committee which has nominees of the State Government, local bodies, arhatiyas, brokers and farmers. Thus all interests are represented on the committee. These committees are appointed by the government for a specified period of time. Important functions performed by the committees are: (i) fixation of charge for weighing, brokerage etc.; (ii) prevention of unauthorized deductions, underhand dealings and wrong practices by the middlemen; (iii) enforcing the use of standardized weights; (iv) providing up to date and reliable market information to the farmers; and (v) settling of disputes among the parties arising out of market operations.

Obviously, regulated markets remove most of the defects of the unregulated marketing system. In such markets, licences are issued to the arhatiyas and brokers for carrying on their operations. In the event of any unfair practices adopted by them, their licences are cancelled. Thus, these intermediaries are not able to indulge in malpractices like using wrong weights and measures, making unauthorized deductions, etc. Thus, the farmers are expected to obtain fair prices for their produce.

The advantages of regulated markets enabled the government to promote the setting up of such markets. Most of the State and Union Territory governments enacted legislations (Eg: Agriculture Produce Marketing Committee (APMC) Act) to regulate agricultural produce markets. There were 7,139 regulated markets in the country by March 31, 2009. There are 20,868 rural periodical markets, about 15 per cent of which function under the ambit of regulation. Kerala, Manipur, Andaman and Nicobar Islands, Dadra & Nagar Haveli, Daman and Diu and Lakshadweep do not implement APMC Act. Bihar repealed the APMC Act with effect from September 1, 2006. Moreover, Rural
Periodic Markets in general and Tribal Markets in particular have remained outside the developmental ambit of the APMC Act.

GRADING AND STANDARDIZATION

Improvements in agricultural marketing system cannot be expected unless specific attempts at grading and standardization of the agricultural produce are made. The government recognized this fact quite early and the Agricultural Produce (Grading and Marketing) Act was passed in 1937. To facilitate grading, standards for 182 agricultural commodities have so far been laid down. The government set up a Central Quality Control Laboratory at Nagpur and a number of regional subsidiary quality control laboratories. Samples of important products are obtained from the market and their physical and chemical properties are analyzed in these laboratories. On these bases, grades are drawn up and authorized packers are issued AGMARK seals (AGMARK is simply an abbreviation for Agricultural Marketing). Important commodities that are graded under AGMARK for internal consumption include cotton, vegetable oils, ghee, cream, butter, eggs, rice, wheat, atta, jaggery, pulses, honey and ground spices.

USE OF STANDARD WEIGHTS

One of the main defects of unregulated markets was that non-standard and arbitrary weights were used by the middlemen to cheat the farmers. To stop this practice, the government undertook a number of steps the main being the Standard Weights Act in 1939. This Act passed by the Central government served as a model for the State governments to pass their own legislations. The Central government adopted the Metric System of Measures in 1958 when an Act to this effect was passed by the Parliament. The metric system replaced all old systems of weights and measures.
GO DOWN AND STORAGE FACILITIES

It is necessary to provide a network of godown facilities all over the country so that the farmers are not compelled to sell their produce immediately after the harvesting of crops. This can enhance the bargaining power of farmers and save them from distress sales, except when the produce gets damaged or rotten. If the produce is stored in the godowns, the farmers can also obtain credit from Commercial Banks and Co-Operative Credit Societies which enable them to wait till they get fair prices.

And hence the Rural Credit Survey Committee (1954) recommended a three-tier storage system at (i) the National level, (ii) State and district level and (iii) Village and rural level. This was followed by establishment of State Warehousing Corporations in a number of States in 1957. Food Corporation of India was also set up at the national level. At the village and rural level, a centrally sponsored scheme for rural godowns was initiated in the Sixth Plan to prevent distress sales by the farmers, particularly the small and marginal farmers. Since March 2001, the government has been implementing a Central sector scheme for the construction of rural godowns. By June 30, 2009, 20,689 storage projects with the capacity of 240.87 lakh tonnes and with a subsidy release of Rs.553.80 crore came into action.

DISSEMINATION OF MARKET INFORMATION

To inform the farmers about the prices prevailing in different markets, the government initiated a number of steps. For example, prices in important markets are broadcast and telecast daily. Furthermore, trends on market prices are reviewed weekly in special programs and talks organized by Electronic media. Market intelligence reports are displayed in a number of markets all over the country. These intelligence reports collect vital information on stocks, market arrivals, sales, prices, etc. and are published periodically. The newspapers also publish agricultural prices either daily or weekly accompanied by a short review of trends. For speedy collection and dissemination of price
and market related information to farmers, electronic connectivity is being provided to all important agricultural markets in the country under a Central scheme, Market Research and Information Network. 2,408 market nodes and 92 State Marketing Boards and Directorate of Marketing and Inspection offices have been networked on a single portal, wherein daily prices of more than 300 commodities and about 2000 varieties are being reported through Market Research and Information Network Scheme (2008).

DIRECTORATE OF MARKETING AND INSPECTION

This Directorate was set up by the government of India to coordinate the agricultural marketing activities of various agencies and to advise the Central and State governments on the problems of agricultural marketing. Activities of this Directorate include (i) promotion of grading and standardization of agricultural and allied commodities; (ii) statutory regulation of markets and market practices; (iii) training the personnel; (iv) market extension; (v) market research, survey, and planning; and (vi) administration of Meat Food Products Order, 1973. The Directorate implemented the Essential Commodities Act in 1955 which was applicable in the entire country excepting the States of Bihar, Haryana, Punjab, Uttar Pradesh and West Bengal. Later in 1980 the Cold Storage Order emerged. It aimed at developing cold storage industry in a planned manner, ensuring hygienic and proper refrigeration conditions in cold stores, rendering technical guidance for scientific preservation of foodstuffs and protecting the farmer's interest. With a view to attracting more private investment in cold storage industry, this order was repealed by the government on May 27, 1997.

The Directorate has so far notified grade standards for 200 agricultural and allied commodities. It enforces compulsory quality control before export on many agricultural commodities. It is extending financial assistance to selected regulated markets for providing grading facilities for important commodities like tobacco, jute, cotton, groundnut and cashew nut at the
producer's level. It is also implementing a scheme for providing Central assistance for the development of infrastructural facilities in selected regulated markets.

GOVERNMENT PURCHASES AND FIXATION OF SUPPORT PRICES

In order to ensure fair returns to the farmers, the government announces minimum support prices and procurement prices for various agricultural commodities from time. These prices are fixed in accordance with the recommendations of the Commission for Agricultural Costs and Prices (CACP). Government agencies, like the Food Corporation of India, purchase agricultural commodities from the farmers at these fairly remunerative prices and these purchases, in turn, are sold off by the government at reasonable prices through the public distribution system. Public distribution, therefore, serves two purposes — (i) purchasing commodities at prices which ensure a reasonable profit to the producers, thus shielding them from the danger of selling their output at depressed prices; and (ii) supplying these commodities at low price to the ultimate consumers.

NATIONAL INSTITUTE OF AGRICULTURAL MARKETING

The National Institute of Agricultural Marketing (NIAM) earlier known as the Centre for Agricultural Marketing (CAM) was established in 1988. The main aims and objectives of the Institute are (i) to augment the agricultural marketing infrastructure of the country through programs of teaching, research and consultancy services; (ii) to design and conduct training courses appropriate to the specific identified needs of the personnel and enterprises and institutions that they serve; (iii) to undertake research to demonstrate and replicate better management technique in the field of agricultural marketing; (iv) to provide consultancy services for formulating investment projects and for problem solving advice; and also (v) to offer educational programs in agricultural marketing for supplementing the existing facilities.
At present, only one-fourth of the markets have common drying yards; trader modules, viz., shop, go down and platforms in front of shop exist in only 63 per cent of the markets at present and grading facilities exist in less than one-third of the markets. The basic facilities, viz., internal roads, boundary walls, electric lights, loading and unloading facilities, and weighing equipment are available in more than 80 per cent of the markets. Farmers' rest houses exist in more than half of the regulated markets. Covered or open-auction platforms exist in only two-thirds of regulated markets. It is evident from the above that there is considerable gap in the facilities available in the market yards. Also, the farmers have to deal with non-transparent methods of price discovery and there is often lack of auction of graded items. Some modern markets with electronic auctioning have been introduced, but they are the exception. And hence that major modernization of market infrastructure is required.

Eleventh Five Year Plan proposed to address the following issues related to agricultural marketing – marketing system improvement and conducive policy environment; strengthening of marketing infrastructure and investment needs; improving market information system with the use of Information and Communication Technology (ICT); human resource development for agricultural marketing; and promoting exports/external trade.