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STATE AND AGRICULTURAL SECTOR

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BLOCK INTRODUCTION

The role of state in promoting agriculture is crucial from many angles. It is particularly important because of the large number of small and marginal farmers whose ability to manage on their own is limited. Further, the public investment that the state makes in areas like power, roads, irrigation, R & D, etc. will determine the extent of private investment that would be made. Evidently, large investments on infrastructure development has to come forth only from the government. Such a role by the government will also encompass the establishment of necessary credit and marketing infrastructure. Against this background, the present block deals with four important themes as outlined below.

Unit 15 deals with the theme of Capital Formation in Indian Agriculture. Beginning with a distinction between capital and capital formation, other concepts like types of capital and capital formation, sources of capital formation, etc. are introduced. The unit then discusses other related issues like: system of accounting for capital formation, role of capital formation, trends in capital formation, determinants of capital formation, etc. The impact of access to institutional credit on capital formation in agriculture is also briefly discussed in the unit.

Unit 16 focuses on Agricultural Marketing. One of the areas in which the government must make investment to facilitate the farmers in selling their produce is in establishing the market infrastructure. It is important to focus on establishing well functioning market structures in order to have a well motivated agricultural workforce. The unit explains the various concepts of marketing like: marketing channels, marketing cost, marketed versus marketable surplus, etc. The inadequacies of present agricultural marketing system, reforms in marketing legislations for improved institutional development, etc. are then discussed. The importance of 'market integration' for establishing an efficient agricultural marketing system is finally explained in the unit.

Unit 17 deals with Cooperative Movements in the context of agricultural development. The history of cooperatives in India is more than a hundred years old. Beginning with an overview of the evolution of agricultural cooperatives, the unit gives an account of the different types of cooperatives established to cater to the needs of the agricultural sector. It then evaluates the performance of 'agricultural cooperatives' and identifies the various factors which influence their performance. The unit then outlines the changes required in the legislative framework for cooperatives in order that their functioning can be suitably revamped.

Unit 18 deals with 'Institutional Finance, Contract Farming and Food Supply Chain'. The agricultural sector for long has suffered from inadequate institutional finance by which is mainly meant the availability of credit at regulated rates of interest. Financing the agricultural sector has some specific type of problems which are basically due to its uncertain nature and the inability of the poor farmers to furnish the required collateral for credits advanced. Discussing the issues and developments on the front of institutional credit first, the unit subsequently discusses the concept of 'contract farming' identifying the conditions necessary for its successful functioning. The importance of 'cold chains' to enhance the value of agricultural products, particularly those of a perishable nature, and its linkage in establishing a healthy 'food supply chain' is also discussed in the unit.

UNIT 15 CAPITAL FORMATION IN INDIAN AGRICULTURE

Structure

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15.0 OBJECTIVES

After going through this unit, you will be able to:

- distinguish between the concepts of capital and capital formation;
- define the different types of capital and capital formation;
- indicate the sources of capital formation in agriculture;
- explain the role of capital formation in agriculture;
- analyse the trend in private and public capital formation in agriculture;
- discuss the complementarity between private and public capital formation in agriculture;
- outline the reasons for decline in public investment in Indian agriculture; and
- state the determinants of private capital formation in agriculture.

15.1 INTRODUCTION

Growth of any economy or sector primarily depends on three factors, namely, change in the demographic composition (expansion of workforce), capital accumulation (both physical and human) and innovation. Capital is thus one of the most crucial factors

in the growth/production process. It is a fact that during the green and post-green revolution periods, both public and private capital formation in agriculture made significant contribution to the farm sector's growth. Initially, agricultural development was mainly driven by public investment in: (i) agricultural infrastructure (like power, roads, irrigation and R&D), (ii) extension services, (iii) development of markets and storage facilities, etc. Subsequently, encouraged by their increased returns owing to improvements in infrastructure by such investments, farmers were induced to make private investment in land development, groundwater irrigation, farm mechanization, HYV seeds, chemical fertilizers, etc. More recently, private corporate sector also entered into the agricultural R&D, extension, marketing, contract farming and other agricultural related services. These investments have substantially supplemented the public investment in agriculture.

The above outline suggests that although agriculture is relatively a labour intensive activity, it also requires huge amount of fixed as well as working capital to perform various agricultural operations efficiently. In particular, timely investment is crucial as it is linked to seasonal factors like rain and weather change. While big and rich farmers usually have better access to capital inputs and enjoy the benefits of economies of scale, the poor farmers belonging to the 'small and marginal farmers' segment especially in the underdeveloped agricultural regions, face critical scarcity of capital. Further, as in most other cases, they do not have the ability to make investment in fixed assets. In view of this, any investment made by them cannot be economically viable in view of their small size of operational holdings and low investment capacity. In the face of this ground reality, how to make capital affordable to about 80 percent of small farmers is one of the key issues that need policy attention. Against this background, the present unit aims at discussing the various aspects related to capital formation in Indian Agriculture. Apart from an outline of the concepts, processes and measurement issues of capital formation, we will study about the role of capital formation, determinants of private capital formation, trends in capital formation, flow of institutional credit to agriculture, etc.

15.2 CONCEPTUAL OUTLINE

There is a distinction between the term capital and capital formation. There are also associated concepts like: fixed/working capital, public/private capital, investment, gross/net fixed capital formation, consumption of fixed capital, etc. Generation of data on capital and capital formation, and its usage, requires a clear idea about these concepts.

15.2.1 Capital

The term capital connotes those 'assets' which are used as inputs in the process of production to generate further goods and services. It is thus not the same as money but refers to assets for the generation of which 'investment' of both money and human efforts are required. A second characteristic of capital is, thus, that the asset must have been created by 'human efforts' and not available in a natural form. Thus, although land is the most important basic resource in agriculture, land itself is not considered capital. But any investment made on land development would be termed as capital as it satisfies the criteria of 'human efforts' and an 'asset' useful in the agricultural production process. Further, capital can be tangible or intangible. Tangible capital in agriculture refers to productive physical assets like tractor, irrigation pump-sets, farmhouse buildings, warehouses, inventories of inputs, etc. Intangible capital in agriculture refers to investment made in health, education and training of farm workers.

Indeed, expenditures on such aspects increases the 'human capital' base of agriculture which help the farmers to raise their productivity by adopting new technologies and farm management practices.

15.2.2 Capital Formation

Capital formation, on the other hand, is a process of building up the stock of capital. It is achieved by saving a part of current income of the economy and investing it in the making of capital goods like machines, tools, plants and equipments, transportation, storage and communication facilities, etc. An increase in the capital stock depends on the amount of new investment made in a particular asset. It is important to note that the capital assets used in production are consumed with time which depreciates its value. This is called as 'depreciation'. Hence, if the rate of capital consumption (depreciation) is lower than the rate of additional investment made in the capital, then the stock of that capital will be increasing over time. Such investments could be for the maintenance of capital assets (which increases the life span and quality of working of the assets) and/or for the purchase of new assets. Capital formation, thus, directly depends on the amount of investment made in the capital assets during a financial year. There is a conceptual difference between capital and investment. Investment is a flow concept measured over a period of time, usually during a financial year. On the other hand, capital is a stock concept measured at a point of time, usually at the end of a financial year. Note that capital formation contributes significantly to the process of economic development by: (i) helping to build the physical infrastructure; (ii) facilitating the adoption of modern production techniques and methods; (iii) improving the productive capability of workers; (iv) enabling the efficient use of natural resources; and (v) facilitating the adoption of technological changes raising as a result the farm production, productivity and income.

15.2.3 Types of Capital and Capital Formation

Capital used in agriculture can broadly be classified into two categories: (i) fixed capital and (ii) working capital. Fixed capital is that capital which lasts for more than one year. It includes the investment in farm machines such as tractor, pump-sets, and other assets like tube-wells, land development, farm building, etc. Working capital is that capital which lasts for less than one year such as expenses on seeds, fertilizers, wages to the workers, etc. Thus, capital formation in agriculture comprise of additions to the fixed capital less disposals and change in inventories. Inventories include materials and supplies meant for intermediate inputs in production and finished goods for sale (e.g. packaging). Fixed capital formation consists of net addition to fixed assets (i.e. total addition minus depreciation) in the current year. For the stock of capital to be maintained, additional investment equal to the amount of capital consumed (i.e. depreciation) should be made in that year. Fixed Capital Formation can further be classified into Gross Fixed Capital Formation (GFCF) and Net Fixed Capital Formation (NFCF). The GFCF consists of sum of all additions to the existing stock of fixed capital in the current year while NFCF refers to GFCF net of depreciation in the current year. Depreciation [i.e. consumption of fixed capital (CFC)] is calculated only for all fixed assets (tangible and intangible). In particular, CFC is not calculated for: (i) valuables that are acquired (as their value, in real terms, is not expected to decline over time); (ii) livestock; (iii) non-produced assets, such as, land, mineral or other deposits; (iv) work in progress; and (v) value of fixed assets destroyed by acts of war or major natural disasters.

Capital, on the basis of ownership, is categorised as private and public. Capital owned by local, state and central governments, such as, municipal sewage lines,

dams, power projects, roads, canals, warehouses, market-sheds etc. are public capital. Any capital owned by private individuals/companies, such as farm machinery and equipment is termed as private capital. Both public and private capital is necessary for the development of agricultural sector.

15.2.4 Sources of Capital Formation

There are two sources of capital formation: domestic and external. Domestic sources comprise of: (i) voluntary and involuntary savings, (ii) public borrowings, (iii) activation of idle resources, and (iv) deficit financing. There are two major sources of voluntary savings viz. household sector and corporate sector; the two together contributes to about 90 percent of our total savings with the 'public sector' occupying the third position accounting for the remaining 10 percent of total savings. Of these three constituents, the household sector's saving accounts for the highest (around 60 percent). As we know, the household sector's savings depends upon distribution of income and wealth in the economy, per capita income, propensity to save, availability of banking infrastructure, rate of interest, etc. It also depends on non-economic factors like savings for children's education and marriage, health and old-age security, etc. The corporate sector refers to the non-governmental private companies. Involuntary savings are mobilized by the government through instruments like taxation and compulsory savings (e.g. provident fund). Public or government borrowing refers to mobilisation of savings through issuing of bonds (e.g. infrastructure development bond). Activation of idle resources refer to engaging surplus agricultural workforce in works of productive asset creation like construction of roads, tube-wells, canals, school buildings, etc. Recall that the Lewis theory of unlimited supply of labour is based on this idea. Finally, the government can also raise capital through deficit financing which could be used to generate productive assets in the public sector.

External sources of capital formation include: (i) foreign direct investment (FDI), (ii) external government borrowings (EGBs), (iii) External Commercial Borrowings (ECBs) and (iv) development assistance from international institutions like World Bank, NRI deposits, etc. FDI inflows can be an important source of capital formation in developing countries. These inflows not only help to reduce the capital scarcity but also bring technology, management practices and trained human resource. They can also have a positive impact on the performance of domestic companies. This is particularly true when the domestic companies enter into collaboration with the foreign companies. EGBs refer to financial resources raised by the central and state governments from foreign institutions like the World Bank for the development of infrastructure like water and sanitation projects, road, health and power projects, etc. ECBs are private sector borrowings from abroad which could be used for investment purposes. All these help to increase the capital-base of the economy.

Check Your Progress 1 [answer in about 50 words using the space given]

- 1) Distinguish between the concepts of tangible and intangible forms of capital.

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2) Differentiate between capital and investment. In what way 'investment' is linked with 'capital formation'?

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3) State five different ways in which 'capital formation' aids economic development.

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4) Distinguish between fixed capital and working capital.

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5) Why is 'depreciation' calculated only for fixed assets? Give some examples of assets for which depreciation is not calculated.

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6) What are the two key sources of capital formation in agriculture? Which one of them can contribute to the improvement in the performance of domestic companies? How?

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15.3 SYSTEM OF ACCOUNTING FOR CAPITAL FORMATION

In India, the annual publication National Accounts Statistics (NAS) published by the Central Statistical Organization (CSO) presents data on capital formation in the Indian economy for all industrial sectors including agriculture. The CSO largely follows guidelines of the United Nations System of National Accounts (UN-SNA) which revises and improves the SNA periodically. Recently, the UN has recommended the

SNA-2008. In the CSO's current estimates, which are based on new base year 2004-05, the recommendations of SNA-2008 are incorporated to the extent of availability of data. These relate to treating R&D expenditures in public sector as capital expenditures, adopting the declining balance (of life of assets) method for estimating the consumption of fixed capital and capital stock, etc.

For the purpose of estimation of national accounts in the NAS, the economy is divided into 9 sub-sectors viz.: (i) agriculture, forestry & fishing; (ii) mining and quarrying; (iii) manufacturing; (iv) electricity, gas & water supply; (v) construction; (vi) trade, hotels & restaurants; (vii) transport, storage & communication; (viii) financing, insurance, real estate & business services; and (ix) community, social and personal services. The capital assets of these sub-sectors are valued at market prices (both at current and constant prices). In particular, the estimates of gross fixed capital formation (GFCF) are prepared separately for each of the three institutional sectors, namely, public sector, private corporate sector and household sector. The GFCF in the household sector is estimated from the data collected through various NSSO surveys. This is then inter/extrapolated with the observed growth in gross value of output or value added. Estimates of public sector GFCF are based on the annual budget documents, while data on private corporate sector GFCF are provided by the RBI.

The public sector GFCF in agriculture is mainly due to major irrigation projects undertaken by the departmental commercial undertakings. The contribution of small scale works like minor irrigation, horticulture, livestock and development of government farms is accounted for by the non-departmental commercial undertakings. For accounting purposes, expenditure made by the ministry of agriculture, rural development, etc. [on crop husbandry, soil and water conservation, preservation of wildlife and other agricultural programmes (leading to tangible or intangible assets)], is accounted for as capital formation in public administration (and not agriculture). Capital formation in the private corporate sector due to plantation activities is estimated by collecting the data from the tea, coffee and rubber boards.

In the household sector, capital formation is due to construction activities such as digging of wells/tube-wells, construction of bunds and farmhouses, etc. These are estimated by using the results of All India Debt and Investment Survey (AIDIS) conducted once in ten years. For the post-survey years, the estimates are made by projecting the base year results using the indices of rural construction and agricultural production specially computed for the purpose. Acquisition of agricultural machinery and transport equipments are estimated by extrapolating the AIDIS results by using the results of Annual Survey of Industries. Increment in livestock is estimated by extrapolating the results of livestock censuses conducted once in five years. As most of the forests are owned by the government, the estimates of capital formation for forestry is compiled from the budget documents. For fishing activities, the GFCF is estimated as net addition to capital stock comprising of the mechanised and non-mechanised fishing boats, etc. by using the results of Indian Livestock Census (ILC). Once again, for the pre/post-census years, the results are extrapolated.

15.3.1 Capital Formation in Agriculture and for Agriculture

A distinction has recently been made between capital formation *in* agriculture and *for* agriculture. This is due to an opinion among experts that capital formation in some industries/activities also benefits the farm sector and therefore a part of such capital formation should be accounted for in agriculture. In view of this, the government constituted a committee headed by Prof. B. B. Bhattacharya. The committee, in its

Table 15.1 Sector-wise Proportions of GFCF for Agriculture

Sector	Agriculture, etc.	Agricultural Machinery	Fertilizers & Pesticides	Electricity, Gas & Water Supply	Construction	Trade	Railways	Storage	Communication	Banking & Insurance
Proportion of GFCF	1.00	1.0	0.9616	0.0855	0.088	0.245	0.066	0.693	0.091	0.0525

Source: Government of India, Report of the Committee on Capital Formation in Agriculture, Ministry of Agriculture, New Delhi, 2003.

report (2004), broadened the scope of agricultural capital formation by including all those activities which indirectly helped the agricultural sector to raise its production/productivity. Classifying the agricultural capital formation into two categories viz. capital formation in agriculture and capital formation for agriculture, the Committee estimated the proportion of GFCF of many industries which should be taken as 'GFCF for agriculture'. The industries considered for this purpose are: (i) fertilizer and pesticides, (ii) electricity/gas/water supply, (iii) construction, (iv) trade, (v) railways, (vi) storage, (vii) communications, and (viii) banking and insurance. Table 15.1 shows the proportion of GFCF estimated to be taken for agriculture in this regard. While for agriculture and agricultural machineries sectors this proportion was 1.0 (i.e. 100 percent), for fertilisers and pesticides it was highest at 0.96 (i.e. 96 percent). The proportions recommended for other sectors in descending order of their values are: storage (69.3 percent), trade (24.5 percent), communications (9.1 percent), construction (8.8 percent), electricity (8.6 percent) and banking & insurance (5.3 percent). The suggested method of adding on to the GFCF of agriculture from the capital formation in the other sectors would, thus, amount to presenting a more realistic estimate of the GFCF for the agricultural sector.

15.4 ROLE OF CAPITAL FORMATION IN AGRICULTURE

Capital and labour are the two important factors of production. To some extent, they are substitutable but to a greater extent they are complementary to each other. Both fixed capital and working capital are required for agriculture to perform its various operations in a timely and cost-effective manner. This is also needed for augmenting agricultural production and productivity by way of raising the cropping intensity, changing the cropping pattern and reducing the pre and post-harvest losses. In brief, therefore, capital formation in agriculture helps to bring technical progress by shifting the production frontier upward. It does this by providing several benefits like: (i) increase in yield; (ii) timely completion of farm operations; (iii) maximum possible land utilization; (iv) shift in the cropping pattern; and (v) diversification of agriculture. The capital formation thus facilitates to expand agricultural market as these benefits result in more marketable surplus. The market expansion, in turn, not only raises the farm income but also provides easy access to agricultural products to the consumers. In the process, it helps to ensure food security for the growing population and raw material security to the agro-based industries. Capital formation also helps in improving the quality of agricultural produce through better storage and transportation facilities. These, in turn, increases the prospects of agro-exports. India can play a major role in global market for farm products as it has a fairly large land area and large labour force under agriculture. The role of GFCF in contributing to the growth of the sector

can also be explained in terms of the types of capital in general and the complementarity that exists between the public and private capitals in particular.

Fixed Capital and Working Capital: Fixed capital comprise of investment made in machines, tools, farm building, tractor, land levellers, cultivators, harvesters, dug well & tube well, irrigation structure, tree-stock, livestock, land development, soil & water conservation harvesting structures, etc. These are assets created which would help raise the farm production, productivity and income. Likewise, working capital helps to purchase various farm inputs such as seeds, fertilizer, pesticides, irrigation water, hiring of agricultural labour, hiring of machines and draught power. Easy access to these inputs and resources is necessary for the timely performance of various agricultural operations. In other words, without access to fixed and working capitals, it would not be feasible to do farming.

Public Capital and Private Capital: It would be helpful to assess the role of capital formation in agriculture, if we classified the capital formation into two categories viz. public and private sector capital formation. Public sector capital formation comprise of investment made by central, state and local governments for creating the various tangible and intangible assets. These could be by way of: (i) land development, (ii) minor and major irrigation projects, (iii) soil and water conservation and harvesting works, (iv) afforestation, rural roads and electrification of villages, (v) agricultural research and development, farmers' training & capacity building, etc. You can see that all these investments/assets are of such a nature and magnitude which only the public investment can create. They are also of the nature of 'non-excludable public goods' for which reason alone one can argue that only the state can be expected to play this role. Private capital, on the other hand, are investment made by farmers for irrigation like wells, bore-wells, electric motors, diesel engines, tractors and other farm equipment. It also includes expenditure on land development, farm buildings etc. The working capital includes farmers' purchase of various inputs needed. Investment for agriculture would include investment made by the private companies in manufacturing farm machines, tools and other inputs, besides a certain share of investment in storage and markets. It is, therefore, clear that both public and private investment in agriculture is necessary for energizing the agricultural operations.

Complementarity Between Public and Private Capital: Public and private investment in agriculture is both complementary as well as substitutive. There are instances where an increase in public investment has led to increase in private investment in agriculture. For instance, the government investment in irrigation, roads and power projects are observed to induce private investment in agriculture. In other words, if basic agricultural infrastructure is created by the government, farmers would get incentive to invest their private capital for buying tractors and pump-sets and installing tube-wells in the canal command areas. This suggests that the complementarity effect is seen by way of induced investment by individual farmers in agriculture. On the other hand, public investment can also be considered as a substitute of private investment in agriculture. For instance, if government installs deep tube wells, especially in the canal command areas with the purpose of supplementing the surface irrigation and ensuring assured supply of irrigation water for agriculture, the farmers would not need to make their own investment in groundwater irrigation. Farmers generally make investment in fixed and working capital where they are purely in private domain, whereas public investment is done to create assets of a type that are mostly in public domain. The assets created by public investment may be used by the farming community with or without user charges. Examples of such usage can be cited in canal irrigation, soil & water conservation structures, agriculture research & extension

services, rural roads, electricity, etc. Some studies have estimated that the elasticity of private investment to public investment in irrigation and power are about 0.15. Thus, while an increase in public investment has a positive impact on private investment, there could also be situations where the private investment may increase to compensate the decline in public investments. However, such situations are unlikely to be in the larger community interest but more for private self-serving nature. In other words, asymmetry in the impact of increasing and decreasing public investment on private investment are real. Public capital is used for the larger purpose of development of new seeds, technology, inputs, agricultural services, and agricultural markets. Even though access to the new technology and inputs to the farmers is also provided by private agri-business companies and input dealers as is the case under contract farming, there can be no substitute for the larger purpose of a general kind that the public investments generate.

15.5 IMPACT OF ACCESS TO INSTITUTIONAL CREDIT ON CAPITAL FORMATION

Access to credit facilities is one of the key determinants of private capital formation in agriculture. Farmers' credit needs are met by institutional and non-institutional sources. Non-institutional sources of credit comprise of loan taken by the farmers from money lenders, input dealers, traders, relatives, etc. Institutional sources consist of commercial banks, cooperative banks, regional rural banks (RRBs) and cooperative credit societies. A majority of Indian farmers do not have access to the institutional credit and hence they mostly rely on non-institutional sources who charge very high interest rate ranging between 36-60 percent per annum. Consequently, most of the farmers come under the debt trap and find it difficult to get out of it. Of late, coupled with conditions of uncertain market trends, this has become a major reason for farmer's suicides. Although, agriculture is in the priority sector and 18 percent of total institutional credit flow is targeted for it, the bank credit to this sector has never reached this level. Ignorance of farmers, cumbersome procedures, and attitude of bank officials often restrict the farmers to get institutional credit. Banks usually avoid giving credit to farmers due to relatively higher transaction and operation costs. In case of default of payments, the procedure of recovery of bank loan is so cumbersome and complicated that it acts as a deterrent to advance loans to them.

On the basis of time period for credits, agricultural credit is classified into three categories, viz. short term, medium term and long term. The short term loan, often referred to as 'crop loan', is provided normally for a period of less than one year for purchasing seeds, manure, fertilizer, and pesticides or for meeting labour charges. It is to be repaid within one year, especially after crop harvesting. The medium-term loans are given for a period ranging from 1-5 years for purposes such as land development, purchase of livestock, farm machinery and generation of other productive assets. Long term loan is taken for fixed capital formation such as purchase of tractors, installation of tube-wells, development of land, etc. Such types of loans are taken for a period ranging from 5-20 years. As per the Situation Assessment Survey (SAS) of NSS-2003, 58 percent of the outstanding amount of loan to the farmers at all-India level was from institutional sources and the balance from non-institutional sources. Further, 58.4 percent of the total outstanding loans to the indebted farmers were taken for productive purposes.

Table 15.2 shows the trend in short term and medium/long term loans over the period 2001-11 presented for five-yearly intervals. This is because, due to year-to-year fluctuations, it is more realistic to take a look at the figures with a time lag.

Table 15.2 : Trends in Flow of Institutional Credit to Agricultural Sector

Category of credit	2000-01	2005-06	2010-11
Short term loan (% to total)	63.1	58.4	71.4
Medium/Long term (% to total)	36.9	41.6	28.6
Total (%)	100.0	100.0	100.0
Total (Rs. in crores)	52827	180485 (3.4)	446779 (2.5)

Source: Government of India (2012), State of Indian Agriculture 2011-12, Ministry of Agriculture, New Delhi.

Note: Figures within brackets denote number of times increase over the previous period.

Between the two end time points, there is an increase in the institutional credit for short term loans of farmers. This shows that the emphasis on credit has been for the purposes of input purchase and some productive assets. There is a corresponding decline in the share of credit raised for medium/long term. This trend is suggestive of either a reduced interest of farmers in the purchase of costlier assets or increased reluctance on the part of banks to provide long-term loans. In absolute terms, the increase in credits advanced has declined from 3.4 times increase over 2001-06 to 2.5 times increase over 2006-11. The decline might suggest a relatively more difficult and stressful time in the immediate preceding 5-year time period as compared to the period 2001-06. However, it also shows that the government’s policy of providing short-term credit to farmers through issuing Kisan Credit Cards (KCCs) has proved effective in catering to the short-term credit needs of farmers. The long term and medium term credit constituted only 28.6 percent of total credit flow to the agriculture in 2010-11. The shift in the composition of the agricultural credit in favour of short-term credit has implications for private sector fixed capital formation in agriculture. More seriously, since the rate of interest on KCC loan is low at 7 percent per annum and there is also a provision of interest-subsidy if loan is repaid in time, some farmers especially those having large size of holdings, are reported to have availed the cheap KCC loan and use the money for advancing loans to the needy people at the relatively much higher interest rate prevailing in the informal money market. Such trends need to be curbed by strict monitoring of credit utilisation profiles in order that the process of capital formation does not suffer.

Check Your Progress 2 [answer in about 50 words using the space given]

- 1) Give two examples on how in the current estimates of CSO on capital formation, the recommendations of UN-SNA-2008 have been adopted?

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- 2) What are the three institutional sub-sectors for which the estimates of GFCF are presented separately in the NAS? On what sources are these estimates based?

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- 3) Why was a need felt to distinguish between 'GFCF in agriculture' and 'GFCF for agriculture'? Which are the six major sectors, other than agriculture & allied, from which a proportion of GFCF was recommended to be accounted for agriculture's GFCF?

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- 4) Mention the five different ways by which capital formation in agriculture helps advance the production frontier to shift upward.

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- 5) Mention some ways in which capital formation in agriculture can increase the prospects for agriculture exports.

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- 6) What factors contribute to restricting the poor farmers from availing institutional credit? State also the reasons why banks are generally reluctant to advance credit to farmers in spite of the government's policy on priority credit for agriculture.

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- 7) Which type of institutional credit has shown an increasing trend in the past one decade? What implication does it carry for the capital formation of agricultural sector?

15.6 TRENDS IN GROSS CAPITAL FORMATION

Gross capital formation in agriculture (GCFA) as percent of total GCF of the economy was 20.2 percent in 1979-80. This has since fallen down steeply to just about 7.7 percent in 2009-10. By public/private sector distribution, this has resulted in a steep low in the share of public sector's GFCF in agriculture: from 54 percent in 1981-82 to 24.4 percent in 1991-92 (i.e. more than 100 percent decline) and to a further low of 14.3 percent in 2001-02. This shows that since the mid-1980s, capital formation in agriculture has been largely driven by the private sector's capital formation so much so that by the late 1990s, private investments accounted for approximately three quarters of total investments in the sector. However, in the more recent years, the share of public sector GCFA has increased from 14.3 percent in 2002-03 to 26.3 percent 2006-07 although there has once again been a decline to 18.5 percent in 2009-10. The declining share of agriculture in the total public and private sector GCF in the Indian economy reveals that the capital formation in the non-agricultural sectors grew faster than that in the agricultural sector. This is quite obvious because over a period of time, contribution of agriculture in the overall GDP of the country has also declined significantly. However, if we estimate GCFA in terms of its percentage share in the agricultural GDP, we find that GCFA as percentage of agricultural GDP has increased over a period of time.

15.6.1 Reasons for Decline in Public Sector Capital Formation

Declining share of public investment is a serious issue because it is not only critical for enhancing total factor productivity (TFP) growth but also for attracting private sector investment in the sector. Some estimates indicate that a 10 percent decrease in public investments leads to a 2.4 percent reduction in agricultural GDP. Notwithstanding this, there are several reasons for the deceleration of public investment in agriculture. Prominent among them are: (i) diversion of resources from direct investment to subsidies; (ii) increase in cost of maintenance of the existing projects; (iii) delays in completion of projects; and (iv) stagnated R&D investment. Above all, the process of macro economic contraction and the consequent reducing development role of the state, during the post-liberalisation period, is the main factor in reducing public sector investment in the farm sector. As curtailing non-plan expenditure in order to reduce fiscal deficit was difficult for the government, it opted for cutting down capital expenditure in both agriculture and social sector during 1990s. Although, the government could not succeed in bringing fiscal deficit under control, productive investment in farm sector significantly declined. Rising agricultural subsidies on food, fertilisers, credit, and other inputs crowded out the real investment in agriculture. Further, the agricultural subsidies distorted the cropping pattern, created inefficiency in resource allocation and adversely affected the agricultural sustainability.

Agriculture is a state subject. Most of the states are in severe fiscal crisis due to fiscal mismanagement and the populist measures adopted by them. The bad fiscal situation of the state governments has had adverse effect on the real investment in agriculture. The cumulative expenditure of the states on agriculture and allied activities as a percentage of total expenditure has hovered around 4-6 percent since the mid 1990s compared to 8 percent in 1980-81. Mid-term review of the 9th Plan emphasised the fact that the whole approach to agriculture in the previous decade had been directed at securing increased agricultural production through input-subsidization rather than through investment in productive fixed assets and infrastructure.

Public sector capital formation can be enhanced by targeting and downsizing the agricultural subsidies, and ploughing back the resources so generated to agricultural sector as investments in irrigation and other infrastructural activities. Selling off the public sector enterprises to partially finance the resources for agricultural investments also helps push up the public sector investment at the desired cost of minimising the inefficiency of such public sector agricultural organisations. Removing distorting subsidies would also lead to a reduction in environmental damage and an increase in the government resource mobilisation.

Some economists are of the opinion that decline of the public sector capital formation has been compensated by the increase in the private sector capital formation. However, increase in private sector capital formation would not entirely compensate the decline in the public sector capital formation as the nature of capital formation in private sector is different from that of public sector. Private sector investment is mostly made in creating capital formation in the areas of farm mechanisation, land levelling, groundwater irrigation (e.g. bore well/tube-wells), etc. while public sector investment is made to create long-term assets like: construction of dams, canals, roads, marketing yards, rural electrification, agricultural R&D, etc. These types of capital are clearly not formed by the private sector. In fact, these types of capital are required to induce more private capital formation in agriculture. For instance, rural electrification encourages the farmers to install electric-operated tube-wells. We shall take a more closer look at the determinants of private capital formation now.

15.7 DETERMINANTS OF PRIVATE CAPITAL FORMATION IN AGRICULTURE

There are several factors affecting the private investment in agriculture. Important among them are: (i) terms of trade and flow of institutional credit, (ii) public sector investment in agricultural infrastructure, (iii) agricultural subsidies, (iv) flow of technology, (v) increase in size of operational holdings, etc. Favourable terms of trade to agriculture would increase the profitability in agriculture and encourage the farmers to spend more in GCF.

As discussed earlier, access to institutional credit to the farmers at cheaper rate of interest is one of the key determinants of both fixed and working capital formation in the farm sector. Public sector investment in irrigation, power, road, markets, soil and water conservation, agricultural R&D, extension, etc. induces the private investment in agriculture as such public investments are complementary to private investment. Although in general, subsidies could have negative impact on private investment, agricultural subsidies on tractors, pump sets, fertilizers, electricity, diesel, etc. have positive impact on the private sector capital formation in agriculture. Likewise, while the rising agricultural subsidies adversely affects the public GCFA and increases inefficiency in the resource allocation, these subsidies induce the farmers to purchase more capital assets and thus raise the private GCFA.

Technological advancement in agriculture also positively affects the private capital formation in agriculture. The new technologies adopted in agriculture during green and post-green revolution periods have been more capital intensive when compared to the traditional technology.

Rising number of operational holdings due to division of holdings are likely to increase the GCFA, as division of holdings increases the demand for investment in farm assets and machinery. The number of operational holdings in India has increased from 97.2 million in 1985-86 to 120.82 million in 2000-01, an addition of 23.66 million holdings.

The availability of institutional credit and subsidies to the farm sector motivates these divided holdings to increase investment in farm machinery. Several empirical studies have established that terms of trade for agriculture and institutional credit to farmers have positive and significant impact on private capital formation at national level. Two inferences that can be drawn from these factors are:

- a) since public investment in key agricultural infrastructures has positive impact on private capital formation, the government should increase the public investment in irrigation, power, road, market, R&D, etc. to encourage private investment in agriculture; and
- b) terms of trade for agriculture may be improved through subsidising inputs. This suggests that agricultural subsidies should not be completely phased out but rationalised and effectively targeted.

Check Your Progress 3 [answer questions 2 to 5 in about 50 words using the space given]

- 1) Fill in the blanks.
 - a) The GCFA (gross capital formation in agriculture) as percentage of total GCF has declined from percent (p.c.) in 1979-80 to p.c. in 2009-10.
 - b) The share of public sector's GCFA has steeply declined from p.c. in 1981-82 to p.c. in 1991-92 and p.c. in 2001-02.
 - c) In more recent years, the share of public sector's GCFA has increased from p.c. in 2002-03 to p.c. in 2006-07 but has once again slid down to p.c. in 2009-10.

2) Mention the five important reasons for the deceleration of public investment in agriculture.

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3) On what ground is it argued that private sector's GCFA cannot be a compensating factor for the decline in the public sector's GCFA?

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4) Mention the five important factors which affect the private investment in agriculture.

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- 5) Going by the different factors that determine the private sector's GCFA, what two major inferences can be drawn on the required policy emphasis?
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15.8 LET US SUM UP

Although agriculture is relatively a labour intensive activity, it also requires both fixed and working capitals to perform various operations efficiently. Capital consists of those assets produced (which can be both tangible as well as intangible) which are used as inputs in the production process to generate further goods and services. Capital formation is a process of building up the stock of capital by saving a part of the current income and investing it in creating capital goods/assets. During the production process, a part of fixed asset is consumed; this is called as depreciation. If the rate of consumption of a fixed asset is lower than the rate of investment in the asset, then the stock of that fixed asset will increase.

Capital in agriculture is formed by both public and private sectors. Public sector capital formation consists of investment in agricultural infrastructure such as minor and major irrigation projects, R&D and extension services, rural roads, electrification of villages, etc. Private capital formation comprise of investment made by the farmers in farm machines, tube-wells, field channels, land development and other productive assets and inputs. Both public and private capital formation is necessary for energizing the Indian agriculture.

Trends in GCFA since 1960-61 show that GCFA as percentage of total GCF of the economy has declined after 1980s. The decline in the extent of public sector GCFA was so steep that the share of public sector GCFA to the total GCFA has sharply declined from 54 percent in 1981-82 to 14.3 percent in 2001-02. Although it has since increased to 26.3 percent in 2006-07, it is still a matter of serious issue as increase in the private sector GCFA cannot compensate the damaging effect of lower public sector GCFA. This emphasises the importance of identifying the causes for declining share of public sector investment in agriculture and taking corrective policy measures to augment the public investment in agriculture.

15.9 KEY WORDS

- Capital Accumulation** : Refers to the stock of capital asset over a period when the rate of depreciation in the asset is lower than the rate of investment made in it.
- Tangible Capital** : Refers to the productive physical assets such as tractor, farmhouses, tube-wells, diesel engines, etc.

Intangible Capital	: It consists of non-material assets that contribute to agricultural output such as investment in workers' education, training and health, etc.
Fixed Capital	: Refers to that capital which lasts for more than one year, such as farm building, tractor, pump-sets, etc.
Working Capital	: Refers to that capital which lasts less than one year, such as expenses on purchase of seeds, fertilizers, etc.
Capital Consumption	: Refers to that part of fixed capital which is consumed while producing output during the current year. It is also known as depreciation.
Institutional Credit	: It refers to the credit/loan provided by the financial institutions, such as commercial banks, cooperative banks and region rural banks.

15.10 SUGGESTED REFERENCES FOR FURTHER READING

Chand, Ramesh (2000), *Emerging Trends and Regional Variations in Agricultural Investments and their Implications for Growth and Equity*, Policy Paper, National Centre for Agricultural Economics and Policy Research, New Delhi.

Govt of India (2012), *State of Indian Agriculture 2011-12*, Ministry of Agriculture and Cooperation, New Delhi.

Gulati, A and Bathla, S. (2002), *Capital Formation in Indian Agriculture: Trends, Composition and Implications for Growth*, Occasional Paper 24, NABARD, Mumbai.

15.11 ANSWERS/HINTS TO CYP EXERCISES

Check Your Progress 1

- 1) See 15.2.1 and answer.
- 2) See 15.2.1 and answer.
- 3) See 15.2.2 and answer.
- 4) See 15.2.3 and answer.
- 5) See 15.2.3 and answer.
- 6) See 15.2.4 and answer.

Check Your Progress 2

- 1) See 15.3 and answer.
- 2) See 15.3 and answer.
- 3) See 15.3.1 and answer.
- 4) See 15.4 and answer.

- 5) See 15.4 and answer.
- 6) See 15.5 and answer.
- 7) See 15.5 and answer.

Check Your Progress 3

- 1) a) See 15.6 and answer; b) See 15.6 and answer; c) See 15.6 and answer.
- 2) See 15.6.1 and answer.
- 3) See 15.6.1 and answer.
- 4) See 15.7 and answer.
- 5) See 15.7 and answer.



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UNIT 16 AGRICULTURAL MARKETING IN INDIA

Structure

- 16.0 Objectives
- 16.1 Introduction
- 16.2 Conceptual Outline
 - 16.2.1 Market and its Functions
 - 16.2.2 Special Features of Agricultural Markets
 - 16.2.3 Marketing Needs of Small Farmers
 - 16.2.4 Marketing Costs
 - 16.2.5 Regulated Markets
 - 16.2.6 Marketed Versus Marketable Surplus
- 16.3 Agricultural Marketing System in India
 - 16.3.1 Classification of Agricultural Markets
 - 16.3.2 Marketing Channels
 - 16.3.3 Inadequacies of Agricultural Marketing System
- 16.4 Role of State in Agricultural Marketing
 - 16.4.1 Institutions and Legislations
 - 16.4.2 Model Agricultural Produce Marketing Act, 2003
 - 16.4.3 Warehousing
 - 16.4.4 Infrastructure, Grading and Standardisation
 - 16.4.5 Market Research and Information Network
- 16.5 Market Integration
- 16.6 Let Us Sum Up
- 16.7 Key Words
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- 16.9 Answers/Hints for CYP Exercises

16.0 OBJECTIVES

After reading this unit, you will be able to:

- define the major concepts of agricultural marketing;
- explain the present classification of agricultural markets in India;
- state the inadequacies in the present agricultural marketing system in India and in its light identify the factors which lead to high marketing costs;
- describe the role of state in agricultural marketing; and
- outline the concept 'market integration' indicating its importance to farmer producers.

16.1 INTRODUCTION

The establishment of a well structured marketing system carries an important bearing on the supply, income and price aspects of agricultural production. Well established market structures would minimise the losses, assure good prices for farmers which, in turn, motivate them to adopt better practices for higher productivity. As a consequence, it would mitigate conditions of distress sale. In contrast, the absence of established marketing facilities would result in the consequences of increased agricultural imports and rise in food prices. Further, given that many of the agro based industries critically depend on agricultural produce for their raw material requirement, establishment of an efficient agricultural marketing system is crucial for its non-farm sector's growth. This requires both public and private investment for which the laws must be facilitating. The length of the marketing channel should be ideal in order that the marketing costs are minimum. In the context of Indian agriculture, however, despite many initiatives by the government to establish institutions and legislations, the marketing cost has been high. Against this background, the present unit discusses the issues related to the development of an efficient agricultural marketing system. We begin with an outline of some important concepts.

16.2 CONCEPTUAL OUTLINE

We are aware that that the Indian agricultural sector is dominated by small and marginal farmers. With small amount of produce and a consequent lower marketable surplus, the returns to small farmers would be low unless their marketing costs are minimum. Marketing in agriculture, therefore, occupies an important role as the farmers' motivation to produce more and earn higher income needs to be kept high. It is, therefore, important to understand the nature of markets, its various functions, the special features of small farmers and their agricultural marketing needs, etc.

16.2.1 Markets and its Functions

The word market has varied connotations. At a micro level it refers simply to a place where commodities are bought and sold. At a more particular or specialised level, it might refer to product markets like wheat market, cotton market, etc. or a retail or wholesale market. At a macro level, it could refer to a country or region like Indian market, Asian market, etc. It can also connote an organisation which provides facilities for exchange of commodities (e.g. futures market). Functionally, in its modern context it is a comprehensive term covering many functions. These functions may be identified as: (i) collection of surpluses from the individual farmers; (ii) transportation to nearest assembling centre; (iii) grading and standardisation; (iv) pooling; (v) processing; (vi) warehousing; (vii) packing; (viii) transportation to the consuming centres; (ix) bringing the buyers and sellers together; and (x) sale to the ultimate consumers. All these functions require investment of capital and ability to take risks due to fluctuation in prices, losses, deterioration in quality, etc. The arrangements made for raising the requisite finance for the above functions bearing market risks at various levels also, therefore, form part of marketing.

16.2.2 Special Features of Agricultural Markets

Agricultural marketing has certain special characteristics such as:

- a) the produce is bulky for its value in comparison to many manufactured goods. This makes the demand on storage and transport facilities heavy and specialized involving heavy costs;

- b) the farm output is seasonal in character, whereas, its demand by the consumers is spread throughout the year. The market system must, therefore, balance the demand with the seasonal outflow of the produce from the farms;
- c) the marketable surplus (see section 16.2.6) of small farmers who dominate the agricultural sector is small and spread over large area. Its collection, therefore, poses difficulties of its own kind;
- d) agricultural commodities being perishable in nature suffer loss and deterioration in quality during storage and transportation. They, therefore, require special type of storage and transport facilities;
- e) production of certain crops like fruits and vegetables is localised while their consumption is widespread. Further, being perishable in nature they either require to be processed or quickly transported/distributed to the ultimate consumers; and
- f) most of the farmers in India being small scale producers, they cannot afford to undertake the various functions individually. Due to this reason, and because of their immediate cash needs, they fall prey to intermediaries and middlemen who often exploit them badly.

16.2.3 Marketing Needs of Small Farmers

In India, a small farmer is classified as one with a cultivable area of less than 2 hectares. If the area cultivated is less than 1 hectare then the farmer is classified as 'marginal' farmer (see Unit 2, Key Words). He is usually handicapped by a lack of economic resources and therefore a reduced ability to take risks. Due to these reasons and small quantities they have to offer, they often receive less favourable prices for their produce. They are also usually deprived of official prices announced as their need to sell in the immediate instance is high. Their produce is often, therefore, sold at the farm or by the road side in the village itself. The benefit of official prices which are higher are reaped by middlemen who collect them. Establishment of special marketing machinery for small farmers is not practicable except where they are concentrated in one area or where such machinery focuses on specific crop having production advantages for small farmers (e.g. milk). In the light of this, strategies to correct the situation of small farmers marketing needs include: (i) group action to reduce transport costs and improve bargaining power; (ii) introduction of contract systems for crops adaptable to small farmer production; (iii) fostering positive action by private entrepreneurs (like contract farming); etc.

16.2.4 Marketing Costs

The difference between the price received by the farmer and the price paid by the consumer is known as 'marketing cost'. This includes various service charges paid for the different marketing functions. The reasons for the prevalence of high marketing costs are: (i) scattered farms; (ii) small size of individual lots of produce; (iii) variability in quality; (iv) poor transport facilities; (v) inadequate development of market information services; (vi) lack of facilities for storage and processing; etc.

16.2.5 Regulated Markets

In the traditional system of marketing of agricultural produce, that is unregulated market practices, a high marketing cost was incurred by the small farmer due to many unauthorised deductions and other malpractices. With a view to minimising the

hardships faced by the farmer sellers, the government established regulated markets to control and provide facilities for proper selling of agricultural produce. Such markets were established under the provisions of an Act called Agricultural Produce Marketing Act (APMA, 1954). As per this Act, the government could notify its intention to bring a particular area under regulation. The features of such markets are: (i) sale of produce is generally undertaken by open auction or by close tender method; (ii) weighing of produce is done by licensed weigh men; (iii) produce is generally put to auction after cleaning and/or grading; (iv) market information is appropriately disseminated; (v) market charges are specified; (vi) payment to the seller is made by the buyer within the stipulated time; and (vii) all the functionaries are required to operate under a licence. The day-to-day functioning of these markets are supervised by the officials of a *market committee* (consisting of representatives of all sections viz. farmers, traders, cooperative marketing societies/banks, panchayat samiti/municipal board of the area and government officials). Sale slips of the produce sold are given to the farmers (showing details of quantity sold, rate of sale and deductions), a copy of which is also given to the market committee for checking. The market committee provide amenities like: (i) link roads; (ii) spacious market yard and sub-yards; (iii) rest houses, cattle sheds and water trough; (iv) light, watchmen, drinking water, parking space, etc.; and (v) other infrastructure like banks, canteens, post offices, etc. The amenities provided vary from state to state and market to market depending on the financial status of the market committees. The extent of amenities encourage the farmers to bring their produce for sale in the regulated market checking the tendency on their part to sell locally. Disputes arising on quality of produce, deduction of charges, etc. are solved by the sub-committees of the market committee. Prior to regulation, no such facilities existed to the farmer sellers. Regulated markets have thus helped in bringing about a general awakening among producer sellers protecting them against a number of malpractices which were formerly prevalent.

16.2.6 Marketed Versus Marketable Surplus

The total amount of a commodity that is ultimately sold by the farmer(s) depends on his own need for self-consumption, future sowing needs by way of seeds, amount given away as wages in kind and gifts to family and friends. In light of this, 'marketable surplus' can be stated as:

$$\text{Marketable Surplus} = [\text{Production}] - [\text{Utilisation for Self Consumption}]$$

The current price for the commodity in the market and the expected increase in it, relative to the waiting/storage capacity or the withholding ability of the farmers, determines the farmers decision to either immediately sell or sell later. In the Indian context, as we have seen above, what the farmers *can* sell and what they ultimately *will* sell is influenced by many factors like: small farmer's condition, vulnerability to sell under conditions of distress due to their immediate cash needs for repayment of loans raised, fulfilling social obligations, etc. In view of this, small producers often sell their produce immediately after harvest and later repurchase from the market to meet their requirements. Thus, if we consider 'marketable surplus' as the whole of the production (i.e. assuming that the farmers will not keep anything for their needs which is theoretically the maximum that they can market), marketed surplus comes out as:

$$\begin{aligned} \text{Marketed Surplus} &= [\text{Marketable Surplus}] - [\text{Losses on Account of Spoilage}] \\ &= [\text{Production}] - [\text{Utilisation} + \text{Losses on Account of Spoilage}] \end{aligned}$$

The size of the marketed surplus has implication for national food security as it indicates the amount of production available for non-farm population. The major factors influencing the marketed surplus are the prices of the produce in the market and the immediate cash requirements of the producer. The issue of providing adequate incentives for production on the one hand and keeping the retail prices of essential food items within the reach of the poorer consumers on the other are two critical issues facing the governments of many developing countries.

Check Your Progress 1 [answer in about 50 words in the space provided]

- 1) State the different connotations of ‘market’ and the various functions of an agricultural market in its modern context.

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- 2) What are the special characteristics of agricultural marketing which distinguishes them from other markets?

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- 3) What strategies are suggested to cope with the marketing needs of large number of small farmers dominating the Indian agricultural scenario?

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- 4) What is meant by ‘marketing cost’? What factors contribute to keeping it high?

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- 5) What are the special features of ‘regulated markets’?

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- 6) In what way the 'regulated markets' have helped the small farmers to realise a right price for their produce?

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- 7) How is 'marketed surplus' different from 'marketable surplus'? What is the implication of 'marketed surplus' for the nation and what major factors influence it?

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16.3 AGRICULTURAL MARKETING SYSTEM

In this section, we shall study about the classification of agricultural markets in India and the marketing channels for important agricultural commodities. We shall see that the inadequacies on the fronts of agricultural markets and longer marketing channels contribute to higher marketing costs.

16.3.1 Classification of Agricultural Markets in India

The system of marketing of agricultural produce prevailing in India is a three tier system comprising primary rural markets, secondary or assembly markets, and wholesale or terminal markets.

Primary Markets: The primary rural markets are the traditional system of markets like the periodic markets or *hats* and fairs held in rural areas. Besides marketing of many consumer goods, these institutions provide an important outlet for the disposal of surplus farm produce. Many of the periodic markets today are within the purview of regulation with the government charging a small fee from each participant for which the markets provide some basic infrastructure for smooth trading. Producers having a limited quantity to sell often find it economical to dispose off their produce in the rural market rather than go the secondary or wholesale markets. Normally, such markets serve an area of 5 to 10 km radius.

Secondary Markets: While the primary markets cater to the local demand, the secondary markets cater to distant demand. These markets serve as collection centres and as a place for the assembly of produce by traders who come from distant places. They are called 'mandis', which are usually situated at the district head quarters near to railway stations. Such markets have good communication facilities and draw supplies from their hinterland spread over a radius of 10-30 kms. They are wholesale daily markets from where the produce are transported in truckload of goods to the city markets.

Terminal Markets: These are the third tier of markets where sale of goods to retailers takes place. In these markets the goods are finally disposed of to final consumers

or processors or assembled for shipment to foreign destinations. The area served by these markets is very large. The terminal markets are of two types: primary wholesale markets and secondary wholesale markets. The primary wholesale markets are larger in area and attract many retailers as they are able to assort the products as per their requirement. They also serve as transit points to distant small town markets. Being governed by the APMA, the primary wholesale markets generally have the requisite infrastructure and a system for smooth trading. They are located in important towns near production centres where the producer-farmers bring their produce for sale. The secondary wholesale markets are located at points nearer to resident population. Thus, in both the type of terminal markets, the produce is either finally disposed of to the consumers or processors or is assembled for dispatch to distant markets and also for exports.

16.3.2 Marketing Channels

The sequential activities that determine the movement of products from the point of production to the point of consumption (i.e. end use) is referred to as the 'marketing channel'. It refers to the complete route followed in its movement from the source to the destination. An important dimension of the marketing channel is its length. The length of the marketing channel essentially relates to the number of intermediate individuals or institutions involved in the flow of commodities from the origin to the destination. As each participant receives a share in the total price paid by the consumer for the product in the final stage, the efficiency of the marketing system lies in its optimum or shortest length of the channel. Since the objective is to maximise the welfare of both the producers and consumers, the efficiency of the marketing system or channel is indicated by: (i) the share of producers in the prices paid by the consumers; and (ii) the difference between the consumer and the producer prices. Clearly, both these should be maximum for the optimal conditions to prevail for the consumers and the producers. Generally, perishable commodities like fruits and vegetables tend to have shorter channels as compared to the non-perishable commodities like food grains.

Marketing channels in countries like India are different from those in developed countries. While in developed countries consumers prefer processed food items (e.g. wheat in the form of bread), in developing countries most food grains are purchased by consumers in raw form. In other words, the level of development of a society determines the final form in which consumers demand the product. Second, within a country marketing channels differ from product to product. For instance, marketing channels for fruits, which demands better packaging, is different from that of food grains. Third, lots originating from small farms follow different routes than those from the large farms. For instance, while small farmers usually sell their produce to village traders, large farms sell their produce in the main market from where it goes to wholesalers. Generally, produce sold immediately after the harvest follows longer channel than those sold in the later months. With the expansion in transportation and communication network, marketing channels for farm products in India also has undergone considerable change both in terms of length and quality.

A longer marketing channel reduces the producer's share in the ultimate price paid by the consumer. This has the potential of killing the incentive of the producer to adopt innovative practices of production. Removing the constraints for direct marketing in the existing laws of regulated markets and facilitating contract farming would help achieve better returns to the producers. You will study about the measures taken by the government to ease the situation on the legal front in section 16.4 of this unit. You will study about contract farming in Unit 18 of this block.

16.3.3 Inadequacy of Agricultural Marketing System

The existing realities point out to many inadequacies in the Indian agricultural marketing sector. These can be indicated as follows.

a) Inadequate/Improper Warehouses

There is a near absence of proper warehousing facilities in the villages. This compels the farmers to store their produce in pits and mud vessels. Such unscientific methods of storage lead to considerable losses of produce by wastage. To minimise their losses farmers tend to dispose of their produce in the nearest local markets. This creates an abundant supply yielding low and un-remunerative prices to the producers, particularly the small producers as the large producers have the capacity to arrange for the required storage facilities. While the setting up of central and state warehousing facilities has improved the situation to some extent, there is every need to expand the facilities much more on this front.

b) Lack of Grading and Standardisation

The practice of selling graded items which can fetch better return is missing among the small farmers. The common practice is to sell them in heaps of one lot with items of different qualities mixed up. The low returns received as a result of this practice do not induce the farmers to adopt better methods and practices for producing quality produce.

c) Inadequate Transport Facilities

Good road connectivity to transport the produce to mandies (the places where produce are sold in bulk) with adequate motorized transport facilities is a must. The practice in India, particularly for small farmers, is to transport their goods in bullock carts. The feasibility to transport items to far off places is greatly constrained by this means of transportation. In light of this, even if the prices are low they generally sell them at the nearest place. This is particularly so with perishable commodities. Even though the situation is changing for the better, cases where such constraints are continued to be faced by small farmers are not insignificant.

d) Presence of Large Number of Intermediaries

As we have seen above, the length of marketing channel is not small or optimum to realise maximum returns to the producers. The situation is particularly adverse due to number of intermediaries or middle men operating in the names of village traders, kutchra/pucca arhatiyas, brokers, wholesalers, retailers, money lenders, etc. This feature reduces the returns to the farmers greatly. Estimates in this respect indicate that in the aggregate, farmers get about 53 percent of final consumer's payment; the share of middlemen being 31 percent and the rest being other costs including marketing expenditures. For vegetables and fruits, the corresponding percentage of producer's returns is even worse (39 percent) with the share of intermediaries being still higher (34 percent).

e) Malpractices in Unregulated Markets

The number of unregulated markets are still large in India. Even in regulated markets, due to the ignorance and otherwise, several problems like getting cheated in matters of under-weighting, arhat or pledging charges to be paid to the arhatiyas, etc. continue to exist. Many of these problems can be eliminated with proper information flow

about regulated market facilities. Notification of facilities available free of cost and those available for specified or prescribed charges would help minimise exploitation of small farmers. Stricter monitoring of operational facilities in regulated markets is also equally important. There is a long way to go in establishing fair methods and practices in this regard in India.

f) Inadequate Market Information

Very often, farmers do not get the right information about prices in the markets. Taking advantage of this ignorance on the part of farmers, middlemen take undue benefit of the situation. The situation is changing with the government making use of media like radio, newspapers, etc. to announce and disseminate information on prices in markets. However, there are problems of time lag and the consequent less reliable information reaching the sellers. This leads to traders often paying less than the prices quoted by the government in the news media.

g) Inadequate Credit Facilities

Situations of distress sale by poor farmers arise because they do not have the required credit or financial means to store their produce in anticipation of better prices in the markets at a future date. The cooperatives which are meant to provide help to the farmers in this respect are not very effective. The large number of small farmers who generally get left out from such organized means of protecting their interests continue to suffer by having to pledge their produce to local money lenders whose help they often take to tide over their difficulties. One way out of this crisis is to expand storage facilities and offer pledging/credit facilities against agricultural produce. But this has not caught up to the required extent in India.

To sum up, therefore, the above outlined inadequacies in the state of agricultural marketing system in India, leading to higher marketing costs, can be identified for its various disabilities as follows: (i) multiplicity of market charges; (ii) unjustified trade allowances (e.g. charges for dryage, moisture, dirt, etc. even after inspection); (iii) adulteration and lack of grading; (iv) the under-over (or *hatha*) method of sale in which only the negotiators know the price being negotiated; (v) improper and incorrect weighing practices; (vi) large samples being taken away by the buyers without payment; (vii) delayed payment of sale proceeds; (viii) superfluous middlemen; (viii) inadequate storage facilities, (ix) defective transport; and (x) lack of market information. That in spite of the APMA being in enactment for over five decades many such inadequacies continue to exist point out towards the lack of effective implementation on the one hand and the renewed role of the government in agricultural marketing required on the other. We shall study some of the other measures initiated by the government and the need for reforms in the agricultural marketing system in the subsequent section of the unit.

Check Your Progress 2 [answer in about 50 words in the space given]

1) What are primary markets? What are its advantages?

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2) In what respects the 'terminal markets' are different from 'secondary markets' in agriculture?

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3) What is meant by 'marketing channel'? What does the term 'length of market channel' refer to?

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4) How are the marketing channels in developed countries different from those in developing countries? What does it signify?

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5) State the different disability factors contributing to higher marketing costs in the agricultural markets of India.

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16.4 ROLE OF STATE IN AGRICULTURAL MARKETING

We noted in 16.2.5 about the initiative of the government in establishing regulated markets. Apart from this, there are many other initiatives by the government, of an institutional significance, to streamline the marketing functions for agricultural products. We shall study about some of the important efforts of the government in this section.

16.4.1 Institutions and Legislations

The cooperative sector was considered by the government to hold immense promise in assisting the farmer producers in the marketing of their agricultural produce. For boosting this, a national agricultural cooperative marketing federation (NAFED) of India limited was established in 1958. Its main function is to coordinate the activities of its state federations by rendering expert advice and technical guidance on problems of: (i) marketing, (ii) processing, (iii) inter-state trade, (iv) export, (v) market/price trends, (vi) business techniques, etc. In terms of its organisational structure, NAFED was assisted by state cooperative marketing federations at the state level and primary marketing cooperative societies at the agricultural market (mandi) level. While this is the 2-tier structure existing in many states (e.g. Assam, Bihar, Kerala, Karnataka, M. P., Orissa, Rajasthan, W. B. etc.), in other states it is a 3-tier structure with district level marketing societies functioning at the middle level. NAFED's grass roots level functioning unit are the primary marketing societies (PMS). Although in terms of its track record NAFED has functioned like a business enterprise, earning profits for many years, the cooperative marketing structure for agriculture produce has been found to suffer from many weaknesses. These can be identified as: (i) absence of forward and backward linkages in its structure; (ii) most marketing cooperatives being engaged mainly in supply activities (i.e. supply of improved implements, fertilisers and other agricultural inputs) rather than marketing activities; (iii) only few societies making outright purchases and selling farmers' produce through pooling; (iv) very few societies providing credit assistance against pledge of farm produce; (v) many PMSs being financially weak and unable to mobilise adequate working capital for its activities; (vi) many cooperatives engaging themselves in activities having lesser risk with no long term perspective; etc.

Need for Integrated Approach: In order to overcome the weaknesses of cooperative marketing, steps for integrating the activities to minimise duplication are suggested. In order to achieve this, the principles recognised as needed to be followed are: (i) avoiding unhealthy competition and duplication of functions at different levels; (ii) higher level structure to always work for the benefit and development of lower level units and not independently or in competition with them; and (iii) gradual decentralisation and specialisation of functions in different fields to be aimed.

TRIFED and Some Other Major Organisations: The tribal cooperative societies' marketing development federation (TRIFED) of India limited was established by the government (in 1986) to cater to the marketing and other needs of tribal people engaged in agriculture and allied activities. Like the PMS are the primary level units for NAFED, for TRIFED the base level functioning units are the 'large-sized agricultural multi-purpose cooperative societies' (LAMPS). LAMPS are mainly formed in those states (about ten in number) where there is higher concentration of tribal population. They assist in the marketing of minor forest products (MFPs) collected by the tribal population. Some of the other important organisations of the government which have been set up to assist the marketing needs of agricultural produce are: (i) the Directorate of Marketing and Inspection (DMI) attached to the Department of Agriculture and Cooperation (DAC) (Faridabad); (ii) the Ch. Charan Singh National Institute of Agricultural Marketing (NIAM) (Jaipur) and (iii) the Small Farmers Agri-Business Consortium (SFAC) (New Delhi). The main functions of DMI are: (i) rendering advice on regulation, development and management of agricultural produce markets to state governments and UTs; (ii) promotion of standardisation and grading of agricultural and allied produce; (iii) conduct of market research surveys; (iv) training of personnel in agricultural marketing; (v) providing market extension services and

establishment of agricultural market information network; (vi) construction of godowns; and (vii) development of agricultural marketing infrastructure. In the year 2000, DAC has launched a central sector scheme, called 'agricultural marketing research and information network (AGMARKNET)', to facilitate collection and dissemination of information for better prices. Another central sector scheme introduced by the DAC in 2002 is the 'Grameen Bhandaran Yojana' to promote the construction of rural godowns. The scheme aims at creation of scientific storage capacity (with allied facilities) in rural areas to meet the requirements of farmers for storing farm produce and prevent their distress sale. The NIAM was set up in 1988 to impart training to senior and middle level executives of agricultural and horticultural departments, agro industries, state marketing boards, agricultural produce marketing committees, etc. It also imparts training to farmers on marketing management. The SFAC was set up in 1994 as a registered society of DAC with a mission to support innovative ideas for generating income and employment in rural areas by promoting private investments in agri-business projects.

Other Regulatory Measures: While the primary markets are regulated by the APMA of various states, there are other legal instruments to regulate the activities of traders and processors relating to trading, stocking, maintenance of quality, grading, packing, processing, blending, etc. Some of the important legislative measures include (i) Agricultural Produce (Grading and Marking) Act, 1937, 1986; (ii) Prevention of Food Adulteration Act, 1954, 1964, 1976, 1986; and (iii) Essential Commodities Act, 1955.

16.4.2 Model Agricultural Produce Marketing Act, 2003

The basic purpose of enacting and implementing the APMA was to make the markets more efficient. Efficient markets, by fostering competition among traders, were expected to ensure remunerative prices for farmers. They were also expected to minimise the exploitation of the small and marginal producers. As things happened, however, the markets continued to be imperfect which, over time, led to a substantial decline in the proportion of consumer's spending reaching the farmer producer (as per one estimate it has declined from 89 percent in 1951-52 to 34 percent in 2011). In other words, despite the efforts of the APMA in many states, over the decades, the APMA markets acquired the status of restrictive and monopolistic markets. They were able to provide no help in direct and free marketing by promotion of organized retailing for a free and smooth flow of raw material supply to agro industries. Further, the implementation of economic reforms in 1991 and the subsequent emphasis on competition and open market policies led to a situation in which the need for major reform in agricultural marketing was experienced very strongly. To facilitate this transition, an inter-ministerial task force was set up in 2001 to suggest measures for increasing the efficiency and competitiveness of the agriculture markets in India. This resulted in the formulation of a model Agricultural Produce Marketing Act in 2003. The Act proposed a range of amendments to the existing APMA in three major respects viz. (i) removal of restriction on direct marketing by farmers, (ii) opening up of the development of market infrastructure to non-government agencies, and (iii) establishing a framework for contract farming. The model Act especially provides for the promotion of PPP (public private partnership) based agricultural markets. Although many states are yet to implement the model Act fully, as of September, 2011, there is considerable progress achieved in its implementation. Table 16.1 shows some of the important reforms and the States where these are implemented.

Table 16.1: Implementation of Some of the Reforms as per Model Act 2003 by Area/States

Sl. No.	Area of Reforms	States where the reforms have been implemented
1.	Permitting any person, local authority or growers to set up new markets	Chhattisgarh, Goa, Assam, Mizoram, Nagaland, Sikkim, Tripura, Uttarakhand and Jharkhand
2.	Setting up of Special Markets and Special Commodity Markets	Andhra Pradesh, Gujarat, Maharashtra, Karnataka, Nagaland, Sikkim, Tamil Nadu Tripura, Jharkhand and Uttarakhand
3.	PPP in Market Extension activities	Andhra Pradesh, Himachal Pradesh, Karnataka, Nagaland and Sikkim
4.	Starting of e-trading (for which Market Committee may establish regulatory system), creation of infrastructure to undertake other activities	Gujarat, H.P., Karnataka, Nagaland, Sikkim, Mizoram, Goa, Maharashtra and Uttarakhand
5.	Opening of the position of CEO of Market Committee to include professionals from open market	Nagaland, Sikkim, Mizoram, Maharashtra
6.	Registration of Contract Farming Sponsor with the Marketing Committee or with a prescribed officer.	Andhra Pradesh, Arunachal Pradesh, Assam, Goa, Himachal Pradesh, Karnataka, Haryana, Maharashtra, Madhya Pradesh, Mizoram, Nagaland, Orissa, Rajasthan, Chhattisgarh, Sikkim, Tripura, Jharkhand and Uttarakhand

Source: IGIDR (2011)

16.4.3 Warehousing

For augmentation of storage capacity, a capital investment subsidy scheme called 'Construction of Rural Godowns' is being implemented since April 2001. The scheme aims at creation of scientific storage capacity with allied facilities in rural areas to meet the various requirements of farmers like storage, processing, etc. The scheme thus prevents distress sale by creating the facility of pledge loan and marketing credit. The scheme provided a subsidy to the tune of 25 percent of capital cost of the project. For NE States, hilly areas and SC/ST entrepreneurs, the subsidy provided was higher at 33.3 per cent of the capital cost of the project. The Scheme was partially modified in 2004 to: (i) extend the subsidy of 25 percent to farmers, Agriculture graduates, cooperatives and Central/State Warehousing Corporations; and (ii) provide a reduced subsidy of 15 percent of project to all other categories of individuals, companies and corporations. The scheme has been made farmers' friendly by allowing subsidy for smaller godowns of 50 MT size in general and of 25 MT size in hilly areas. The scheme is being implemented through NABARD and NCDC.

16.4.4 Infrastructure, Grading and Standardisation

The Ministry of Agriculture is implementing another central sector scheme called 'Development/Strengthening of Agricultural Marketing Infrastructure, Grading and Standardisation'. Under the scheme, investment subsidy of 25 percent of the capital cost of the marketing infrastructure development project is provided subject to a maximum of Rs 50 lakh for each project. The percentage of subsidy is higher at 33.3 percent of capital cost (subject to a maximum of Rs 60 lakh) per project in NE states, hilly areas and to SC/ST entrepreneurs. In respect of infrastructure projects of state-governments/state-agencies, there is no upper ceiling on subsidy to be provided under the scheme. The scheme is reform linked, to be implemented in those States/UTs where the law allows for the setting up of competitive agricultural markets in private and cooperative sectors providing for direct marketing and contract farming. The States of Andhra Pradesh, Punjab, Kerala, Tamil Nadu, Manipur, Sikkim, Madhya Pradesh, Himachal Pradesh, Nagaland, Rajasthan, Chhattisgarh and Union Territories of Andaman and Nicobar Islands, Daman and Diu and Dadra and Nagar Haveli have so far notified to receive assistance under the Scheme. The remaining States/UTs are in the process of amending their APMC Acts.

16.4.5 Market Research and Information Network

Market information is an essential input to farmers' production and marketing decisions. It helps farmers deciding their production schedule (i.e. what to produce and when/where/how to market their produce). It also guides their long-term investments. Market prices are one of the most important types of market information with studies of IARI reporting substantial increase in the returns to producers with timely and correct availability of information on prices. In the absence of a system of market information, farmers primarily rely on other farmers for production and marketing information. This is followed by agricultural traders in markets for their second most common source of market information. The range of information exchanged extends to the use of fertilizers and pesticides as well as grading and other post-harvest practices. Agricultural extension officers and the mass media play an important but limited role.

Given the importance of timely and appropriate market information for all the stake holders in the system, it is proposed to develop and strengthen a nation-wide information network for speedy collection and dissemination of price and market related information. Under this, electronic connectivity is being provided to all important agricultural markets in the country under a central scheme called 'Market Research and Information Network'. For this, the AGMARKNET program discussed above collects the data on arrivals and prices in the regulated markets and makes them available on the Internet. The system is expected to contribute to improving access to real-time price information. So far, over 2,408 market nodes, 92 state marketing boards and DMI offices have been networked on a single portal, wherein daily prices of more than 300 commodities and about 2000 varieties are being stored.

Check Your Progress 3 [answer in about 50 words in the space given]

- 1) What are the weaknesses of the cooperative agricultural marketing sector in India?

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**State and
Agricultural Sector**

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- 2) What is the approach suggested to overcome the weaknesses of the cooperative marketing sector?

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- 3) What is AGMARKNET? How is it beneficial to farmers?

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- 4) Mention the different laws enacted to serve as regulatory measures in the functioning of agricultural marketing sector.

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- 5) What were the major reasons for experiencing the need for domestic agricultural market reforms in India?

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- 6) What are the three major areas in respect of which amendments to the existing APMA was proposed in the model-APMA of 2003?

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16.5 MARKET INTEGRATION

Market integration is defined as the degree of price transmission between two related markets. In application, it is known as the law of one price (LoP). In agricultural commodity markets, it reflects the extent and speed of transmission of information on commodity price changes. Ideally, when markets are well integrated, the difference in the price for a commodity of similar quality should be equal to the transportation cost from a surplus market to a deficit market. The three essentials of a well integrated market system are: (i) quick flow of information, (ii) adjustment in demand and supply position with a swift movement of commodities and (iii) an efficient inter-market price adjustment. The smallest variability in price between the markets is thus the essence of a well integrated market system. As some degree of variability is unavoidable, we can say that the integration of spatially separated markets refer to the extent to which prices in the two markets move together. The opposite of integration is segmentation. A market is said to be geographically segmented if the location of the buyer and seller influences the terms of transaction in a substantial way (i.e. by more than the marginal cost of physically moving the goods from one location to another).

The variation in the market arrivals and prices can be classified as: (i) temporal variation and (ii) spatial variation. The former is the result of a complex mix of changes associated with cyclical, season and irregular components. Among these three, seasonal component is considered the most important. It refers to a regularly recurring pattern that is completed once in twelve months such as is seen in the prices of farm products. Following the seasonality in production and arrivals, the prices also exhibit seasonal variations. Ordinarily, the prices of storable produce are lower at harvest time and rise as the season progresses reaching their peak just prior to the next harvest. The study of seasonal variations is important as a guide to the producer to market his products and to the consumer to purchase his needs at the right time. Spatial price variation refers to the variation in the observed prices in different markets. They occur due to the difference in the location of production and consumption centres. The inter-relationship between the price movements in different markets mostly depend on the nature and extent of competition, dissemination of market information and attitude of market functionaries. The efficiency of any marketing system is determined by the degree to which the wholesale prices of a commodity in different markets are related to one another. Analysis of such inter-relationships helps in understanding the efficiency of a marketing system. They are also useful for evolving suitable policy measures for improving the efficiency of market's functioning and in ultimately achieving the desired market integration.

In the Indian agricultural context, making an analysis of improvement in the transport sector over the period 1994-2003, a study in 2006 brings out that its domestic economy is integrated across states and centres as well as among the commodity markets with the price variations identified to be accounted for by high transportation cost, distribution margins, etc. Despite these price differentials, the commodity markets and state markets are revealed to reflect spatial market integration. Policy initiatives needed to move closer to complete market integration are suggested as:

- abolition of octroi (i.e. a tax on entry of goods within areas of local bodies) and other indirect taxes and levies on food articles;
- enlarging the coverage of futures markets to minimise fluctuations in commodity prices as also for hedging risks as envisaged under the national agricultural policy;

- subsidies on goods and public distribution system, which distort prices in the market economy, to be phased out and permitting the fair price shops to sell other commodities at full market price so as to ensure economic viability;
- full freedom for states to be given for setting up public or joint venture companies for food procurement, transportation and distribution wherever commercially viable;
- enhancing the role of private agencies in food procurement activities;
- development of better and cheaper railway network for freight and removing the distortions in the tariff policy for freight movement by rebalancing the rail tariff to improve the fare-freight ratio;
- FDI in retailing to be allowed to lower prices through competition, economies of scale and improved efficiency in the supply chain especially in food and grocery sector; and
- policy initiatives to provide universal access of commercial fuel at affordable prices by a tariff rationalisation in the power sector.

16.6 LET US SUM UP

Establishment of well functioning agricultural markets are important to keep the marketing costs optimum. For this, it is necessary to have enabling institutions and legislations. The progress of agricultural development in India is marked for various measures initiated by the government in this direction. While the enactment of APM Act and the establishment of many regulated markets under its purview has contributed to improving the situation in many respects, the agricultural market scenario continues to be dominated by unregulated markets in India. As of March 2011, while the total number of primary agricultural markets in the country were 27,777, the number of regulated markets were only 7246. Thus, even now close to three-fourths of agricultural markets are unregulated. Further, the APM Act required that all agricultural produce must be channelled through the regulated markets; in other words, it prohibited direct sale/purchase of produce. Besides, over time, even the regulated markets had come to acquire the status of restrictive and monopolistic market features. Such conditions contributed to preventing private investment in agricultural marketing development. To rectify this situation, towards the beginning of 2000, the government took steps to modify the APM Act and enacted a model-APM Act in 2003. This Act provided scope for establishment of private markets, provisioned for the setting up of direct purchase centres and promoted PPP modelled investment for agricultural infrastructure development. A number of state governments have since implemented many of the provisions of this model Act. Notwithstanding this, there is still a long way to go in the direction of establishing effective market integration so as to keep the differences in prices of agricultural commodities between markets low.

16.7 KEY WORDS

Marketing Channel

: Refers to the sequential activities that determine the movement of commodities from the point of production to the point of consumption. The length of the marketing channel, which relates to the number of intermediate individuals or institutions, should be optimum in order that the producers get their maximum share in the

ultimate price paid by the consumers for the commodities.

- Marketed Surplus** : Refers to 'marketable surplus' minus 'losses'. It is equal to: 'total production' minus 'sum of quantity for self-consumption of farmers needs plus losses on account of spoilage'.
- Market Integration** : Refers to the extent and speed of inter-market price adjustments.

16.8 SUGGESTED REFERENCES FOR FURTHER READING

1. Acharya, S. S. and A. N. Agarwal (2004), Agricultural Marketing in India, Fourth ed. Oxford and IBH, New Delhi.
2. IGIDR (2011), 'Status of Agricultural Marketing Reforms', IGIDR Proceedings/ Project Series, PP-069-11b, (by Gokul Patnaik), <http://www.igidr.ac.in/newspdf/srijit/PP-069-11b.pdf>.
3. Report of the Working Group on Agricultural Marketing Infrastructure and Policy Required for Internal and External Trade, for the XI Five Year Plan 2007-12, Agricultural Division, Planning Commission, Government of India, 2007.
4. Virmani Arvind and Mittal Surabhi (2006), Domestic Market Integration, Working Paper No. 183, ICRIER, New Delhi.
5. World Bank (2008), Taking Agriculture to the Market, Report No. 35953-IN.

16.9 ANSWERS/HINTS FOR CYP EXERCISES

Check Your Progress 1

- 1) See section 16.2.1 and answer.
- 2) See section 16.2.2 and answer.
- 3) See section 16.2.3 and answer.
- 4) See section 16.2.4 and answer.
- 5) See section 16.2.5 and answer.
- 6) See section 16.2.5 and answer.
- 7) See section 16.2.6 and answer.

Check Your Progress 2

- 1) See section 16.3.1 and answer.
- 2) See section 16.3.1 and answer.
- 3) See section 16.3.2 and answer.
- 4) See section 16.3.2 and answer.
- 5) See section 16.3.3 and answer.

Check Your Progress 3

- 1) See section 16.4.1 and answer.
- 2) See section 16.4.1 and answer.
- 3) See section 16.4.1 and answer.
- 4) See section 16.4.1 and answer.
- 5) See section 16.4.2 and answer.
- 6) See section 16.4.2 and answer.



UNIT 17 COOPERATIVE MOVEMENT AND AGRICULTURE IN INDIA

Structure

17.0 Objectives

17.1 Introduction

17.2 Characteristics of Cooperatives

17.2.1 Cooperatives and Non-cooperatives: Distinction

17.2.2 Agricultural Cooperatives: Types/Functions

17.3 Evolution of Cooperatives in India with Specific Reference to Agriculture

17.3.1 Pre-Independence Phase

17.3.2 Post-Independence Phase

17.4 Performance of Agricultural Cooperatives in India

17.4.1 Factors Influencing the Performance of Cooperatives

17.5 Legislations on Cooperatives

17.5.1 Multi State Cooperative Societies (MSCS) Act

17.5.2 Modifications Required in MSCS Act, 2002

17.6 Let Us Sum Up

17.7 Key Words

17.8 Suggested References for Further Reading

17.9 Answers/Hints for CYP Exercises

17.0 OBJECTIVES

After reading this unit, you will be able to:

- provide a historical account on the evolution of agricultural cooperatives in India;
- distinguish between cooperative institutions and other organisations in terms of their characteristics like principles, philosophy, approach, etc.
- state the different types of cooperatives that are established in India to cater to the needs of its agricultural sector;
- evaluate the performance of agricultural cooperatives by making an appraisal of the role of Primary Agricultural Credit Societies (PACS);
- identify the factors influencing the performance of PACS; and
- outline the changes required in the legislation on cooperatives in order to revamp their functioning in India.

17.1 INTRODUCTION

The need for cooperatives in India, aimed at strengthening the condition of large rural peasantry, was recognised by the government more than 100 years ago. Based on the experience of their success in the west, they were envisaged to provide an

answer to the plight of poor peasants who were suffering badly due to lack of *mainly credit facilities* (though also in many other services related to agriculture like supply of inputs, storage/transportation, etc.). The objective was to reduce the poor farmers' dependence on local landlords and traders who were exploiting them by charging very high rates of interest often interlocked with land mortgages and product markets. However, the cooperative movement as it evolved in India did not develop on the lines in which their counterparts in other countries had grown to become successful. Patronised by the government (both in infusing the capital for the functioning of the cooperatives as also in their management), while the cooperative movement grew in terms of their numbers over the decades, they were not based on the principles that were required for their successful and sustained working. The vital element missing was the effort towards capacity building for generating their own resource base. Realising the poor state of development of Indian cooperatives, the government of India instituted several committees from time to time seeking suggestions towards appropriate measures needed to revitalise them. Many legislations, each drawing upon the experience of performance of cooperatives, were enacted from time to time. In spite of these measures spread over the last more than 100 years of its functioning, the movement could not get the real importance that was envisaged for its development. Against this background, beginning with an overview on the evolution of cooperatives, the present unit aims at outlining the different features of cooperative movement in India. Presenting an appraisal of the performance of cooperatives, focusing in particular on the primary agricultural credit societies (PACS) which is the lowest tier unit responsible for catering to the credit needs of farmers at the village level, the unit identifies the important determinants for their good performance. Finally, reviewing the important features of legislative efforts made for the establishment of cooperatives, the unit presents the modifications needed to revitalise the functioning of agricultural cooperatives in India.

17.2 CHARACTERISTICS OF COOPERATIVES

Cooperatives differ from other organisations in some basic respects. These can be classified in terms of their principles, philosophy and approach. The different forms of organisations, classified by their increasing hierarchy of ownership of resources and profit, moving progressively upwards to the collectively owned forms of organisations, may be stated as: (i) individual or family owned business enterprise; (ii) unincorporated partnership firm; (iii) joint stock company registered (i.e. incorporated) as a private limited firm; and (iv) a government undertaking or corporation. Cooperatives may be classified in this hierarchy as a fifth type of enterprise. We shall see that they stand apart from all other organisations in view of their specific nature of formation and functioning. The distinguishing features of cooperatives may be explained as below.

17.2.1 Cooperatives and Non-cooperatives: Distinction

A private organisation or enterprise is basically formed for the purpose of making profits. A government organisation, except when they are run on a corporate style, usually operate for rendering a societal service. For instance, in the participation of government in basic services like education, health, sanitation, the element of profit is not paramount and even be altogether absent. However, under the market economic dispensation, there is a gradual move towards corporate style of functioning even in public services. In this, efficiency of an organisation takes precedence for which surplus or profit becomes essential. A cooperative organisation, on the other hand, right from its earliest inception (way back in 1844) is conceived as an organisation

formed for the mutual benefit of its own members. Further, in the case of non-cooperatives, the good or service is sold to 'others'. But in the case of cooperatives, such a dichotomy of trader-customer is absent. In view of this, profit as a motive, though is present to the extent of viability of a cooperative enterprise, it is not reflected in explicit terms, but is shifted to its members in the form of lower prices charged for the services. To this extent, therefore, surplus or profit is as important for a cooperative for its survival and growth as it is for a non-cooperative firm. The difference would be more importantly in respect of the: (i) manner of earning/distributing profit; and (ii) emphasis in objectives other than profit.

Principles of Cooperatives

Cooperative principles are evolved by the International Cooperative Alliance (ICA). Based on the Rochdale Principles (so named after the original set of principles laid down in 1844 by the Rochdale Society of Equitable Pioneers, England), they were first adopted by the ICA in its convention of 1934. These are revised from time to time to keep them in tune with the changing situations. The latest, of ICA 1995, spells out ten principles for cooperatives. These are: (i) voluntary and open membership; (ii) anti-discrimination; (iii) motivation and rewards; (iv) democratic member control; (v) member economic participation; (vi) limited compensation to members (for their equity capital and appropriate use of surplus for the growth of cooperatives); (vii) autonomy and independence; (viii) education, training and information; (ix) cooperation among cooperatives; and (x) concern for community. Together these principles imply: (a) members are also users of the service of cooperatives; (b) every member enjoys equal voting right (based on 'one member, one vote' principle); (c) members contribute equitably to the capital and they receive as returns limited compensation (the rest of which to be used for further growth of the cooperative); (d) they are autonomous in character i.e. they are self-help organisations who could enter into agreement with other organisations including governments freely; (e) they provide education and training to members and inform the general public about the nature of benefits of cooperatives; (f) they can interact freely with other cooperatives by working together through local, regional, national and international structures; and (g) they are concerned about the community in which they exist.

Philosophy of Cooperatives

The philosophy of cooperatives, derived from their principles, encompasses the social, political and economic spheres. The principle of concerns for others and society makes up its social philosophy. Their political philosophy is derived from its open and voluntary membership, democratic member control, and autonomy & independence in functioning. The principle of limited compensation to member's equity capital and using the remaining part of profits for the growth of cooperative constitutes its economic philosophy. The principle of education, training and information makes it possible for the effective observance and application of all the three principles.

Approach to Function as Business Enterprise

As already noted above, the dichotomy of customer-trader is absent in cooperatives. Further differences in their approach can be pointed out in terms of: (i) membership; (ii) capital mobilisation and returns for capital; (iii) decision making and control; and (iv) relationship between members and management. While membership in partnership firms is closed, open and voluntary membership is a characteristic of cooperatives which is also shared by joint stock companies. However, the characteristic of personal knowledge of members with each other is present in cooperatives which is absent in joint stock companies. Further, membership to cooperatives is among those willing

to self-help themselves and among weaker sections of society who are aware that individually they cannot effectively help themselves. On capital mobilisation, whereas private businesses can borrow and float shares, cooperatives by virtue of their strong emphasis on self-reliance in capital cannot do so. Again, decision making in cooperatives lies with its general body whereas in partnership firms it is with limited individuals and in joint stock companies it is run by professionals who do not share the risks and uncertainties of running the enterprise. Finally, the relationship between members is rooted to the concept of development of the community and the cooperative. All members in cooperatives are treated equally and they jointly share the risks of the cooperative enterprise.

17.2.2 Agricultural Cooperatives: Types/Functions

An agricultural cooperative is an enterprise of a group of persons performing a common activity related to farming (cultivation, marketing, etc.) and who have got together due to their common problems like credit, supply of inputs, etc. In India, credit cooperatives have evolved hierarchically into a 3-tiered structure with the Primary Agricultural Credit Societies (PACS) at the base/village level, the District Central Cooperative Banks (DCCB) at the district level and the State Cooperative Banks (SCB) at the state level. The SCB is thus the apex bank while at the operational level the PACS are supposed to promote the economic cooperative interest of its members. The broad aim of PACS is achieved by: (i) promoting savings among members; (ii) providing loans to the members; (iii) supplying agricultural and domestic requirements; and (iv) arranging for the marketing of their agricultural produce. The credit assistance extended are of three types viz. short term credit, medium term credit and long term credit. The short term credit are for purchase of seeds, fertilizers, pesticides and to meet seasonal family requirements of farmers. The medium term credit are for purchase of bullocks, milk cattle, improved implements, betterment of land and wells, etc. The long term credit are for permanent improvement of land, construction of wells and tanks, installation of pumping sets and other water lifting facilities, purchase of tractors, etc. The cooperatives also help in formulating and implementing a plan for agricultural production for the village and undertake educative, advisory and welfare functions.

Based on the nature of activities/service provided, the agricultural cooperative societies can also be classified as: (i) cooperative farming societies and (ii) cooperative service societies. The former can once again be sub-classified into three types viz. (a) cooperative tenant farming societies, (b) cooperative joint farming societies and (c) cooperative collective farming societies. In the cooperative tenant farming society, large area of land is procured by the society and then divided into small plots with each plot allotted to a tenant cultivator who is a member of the society. The tenant is entitled to the produce of the land but has to pay a stipulated rent to the society. The society undertakes the supply of credit, seeds, manure and heavy agricultural implements. In the cooperative joint farming society, land holders pool their small plots of land for joint cultivation. The proprietorship of plots rest with the owners but the cultivation is done in accordance with the programmed decisions taken by the society. Each member gets wages for his/her daily labour irrespective of the ownership of land. The produce raised is disposed off collectively. In the cooperative collective farming society also land is cultivated jointly but the ownership of land shifts to the society. The produce is raised collectively and is distributed among members in proportion to labour and other resources contributed by each. Further, each member receives wages for the work done and net profits are divided in proportion to wages earned by each member.

With the development of modern scientific agricultural methods, the dependence of the cultivator farmers has largely increased on outside supply. The agricultural service cooperatives play an useful role here by maintaining a constant flow of supplies of essential agricultural services. The concept of service cooperative is thus different from the farming cooperatives with the functions of the former being: (i) arranging the supply of farming requirements like improved seeds, fertilizers, implements, etc.; (ii) supplying and maintaining the agricultural machinery on hire; (iii) providing essential household needs; and (iv) encouraging thrift and savings among the members so as to make them self-sufficient. The service cooperatives have been organised to meet the specific needs of farmers like: cooperative irrigation, consolidation of holding, soil conservation and reclamation, stock breeding, insurance, etc.

Besides the above, cooperatives have also been organised on specific product/service lines. Examples for this are: sugar cooperatives, fruits & vegetables cooperatives, cooperatives for cold storage and warehousing, cooperative for processing of plantation crops, rice mills cooperatives, cooperative spinning mills, cooperative jute mills, cooperative oil seeds processing units, etc. There are also other allied agricultural cooperatives like: dairy cooperatives, fishery cooperatives, poultry cooperatives, cooperative cattle societies, etc.

17.3 EVOLUTION OF COOPERATIVES IN INDIA WITH SPECIFIC REFERENCE TO AGRICULTURE

Conceptually, cooperatives are envisaged as organisations formed on voluntary membership of local persons/farmers. They are meant to be autonomous self-help organisations with a concern for the welfare of co-members. More importantly, the cooperatives are expected to function in a manner that they could exert the required peer-pressure for repayment of loans taken by the members. This, therefore, requires that the membership of cooperatives should not exceed a certain size making the application of the peer-pressure principle unmanageable. Further, though initially meant to provide only the much needed credit facility to their members, cooperatives were expected to gradually emerge as thrift (i.e. saving) societies, developing in the process the potential to become self-sufficient in terms of their financial independence/sustenance. Through this, the cooperatives are expected to herald to its members a worldview of development that is based on mutual support and self-help.

17.3.1 Pre-Independence Phase

i) 1904-1930

The passage of the first Indian Cooperative Credit Societies Act in 1904 was a result of the realisation that the basic cause of indebtedness and poverty of the Indian farmers was their dependence on usurious (see section 17.7 on 'key words') moneylenders. Following this, many rural credit societies were formed. The experience on their functioning during the course of next few years, however, made the government realise some of the shortcomings in the Act. This led to the replacement of the Act by a more comprehensive Cooperative Societies Act in 1912. The absence of the word 'credit' from this modified Act shows that the effort was also aimed at giving recognition to non-credit societies. In spite of this, in the years that followed, rural credit societies continued to be predominant. Many provinces like Bombay, Madras, Bihar, Orissa and Bengal enacted their own cooperative laws on the lines of this 1912 Act. Subsequently, based on the 1915 Maclagan Committee's report on

cooperatives, provincial cooperative banks (PCBs) were established in almost all the major provinces. This was followed by the Usurious Loans Act of 1918 which sought to impose a ceiling on the interest charged by the money lenders limiting it to not more than the principal amount of debt.

By the 1930s, the state of affairs of cooperative banks had been such that there was a clear acknowledgment of its not having taken off in India as it had happened in Europe and other countries. In 1929, the Central Banking Enquiry Committee (CBEC) report estimated that the accumulated burden of inherited rural indebtedness on account of cooperative credit was to the tune of Rs. 900 crore. The government recognised that the poor take-off of cooperatives was due to two main factors viz. (i) the sharp socio-economic divisions in rural India; and (ii) the running of cooperative credit societies by rich landlords and moneylenders themselves in many cases. It was realised that the cooperatives had only become an addition to the dealings of the rural money lenders and not an alternative. Despite these discouraging results, the Royal Commission on Agriculture in India, in its report submitted in 1928, suggested that not only the cooperative movement should continue to focus on expanding rural credit but the state should patronise and protect the cooperative sector. Subsequent debate, therefore, centred on whether there should be a single purpose or a multi-purpose cooperative at the village level.

ii) 1930-1950

The second phase of pre-independence cooperative movement in India can be traced to the years 1930-1950. There was a steep fall in the agricultural prices during the period of Great Depression causing a large number of legal suits to be filed for attachment of lands of borrowers. The official response to this was a spate of Debt Conciliation Acts which were passed by many provincial governments during the years 1933 to 1936. This was complemented by the Debtors Protection Act of 1935 which provided for the compulsory licensing and registration of moneylenders aimed at establishing a proper record of transactions and accounts. A major development during this phase was a statutory incorporation to the RBI Act in 1934 provisioning for the establishment of an Agricultural Credit Department (ACD) in RBI for extending refinance facilities to the cooperative credit system. Under this, emphasis was laid on setting up and strengthening of viable provincial cooperative banks, marketing societies and primary agricultural credit societies. In 1942, the RBI also began extending credit facilities to provincial cooperative banks for seasonal operations and marketing of crops. In 1945, two committees viz. the agricultural finance sub-committee and the Cooperative Planning Committee (CPC) were set up. The establishment of these two committees was especially in the backdrop of serious reports on signs of sickness in the rural cooperative movement. Many of the cooperatives had gone under severe stress owing to problems of frozen assets because of heavy over-dues in repayment. The sub-committees' recommendation to deal with the situation was that the frozen assets should be liquidated to adjust the claims of the societies. More importantly, the CPC identified the small size of the primary cooperatives as the principal cause of their failure. As a measure for rejuvenating their failing health, the CPC advocated state protection to the cooperative sector. This suggestion, which was accepted and implemented in subsequent years, marked the beginning of an erosion of one of the very principles of cooperative movement viz. the member-centric characteristic of cooperatives. In other words, the two suggestions of CPC viz. state protection and increasing the membership size of cooperatives together, in later years, became the factors for the erosion of the cooperative principles thereby contributing to their inefficient functioning.

17.3.2 Post-Independence Phase

i) 1950-1970

With rapid and equitable economic development becoming the central policy focus, the years immediately after independence saw the cooperative movement gaining a centre stage yet again. The All India Rural Credit Survey (AIRCS: 1951-1954) revealed that: (i) despite the cooperative credit societies being in existence for close to 50 years, the share of formal credit institutions to the rural credit needs was less than 9 percent, and within that the share of cooperatives was below 5 percent; and (ii) the lending by traders and rich landlords accounted for more than 75 percent of rural credit. To improve this situation, the AIRCS had suggested that: (i) the cooperatives must take the lead in an Integrated Scheme of Rural Credit under which, in addition to the cooperatives, a critical role for all commercial banks in the matter of lending credit to agriculture was envisaged; and (ii) the role of commercial banks must be in lending for agricultural marketing and processing activities rather than direct farm output operations. It thus demarcated the role of credit operations from those of non-credit nature making the two type of institutions (i.e. cooperatives and commercial banks) responsible in their own respective spheres. In 1954, the RBI issued a directive for the commercial banks to open at least one branch in each unbanked rural and semi-rural areas. While these measures saw the share of cooperatives in rural credit to cross the 20 percent mark by 1971, the share of commercial banks in rural credit remained low at 2.4 percent. In spite of this improvement in respect of rural institutional credit flow in general, it was revealed that the cooperatives continued to be dominated by the rural elite, and commercial banks continued to have an urban bias in their operations. Going into the underlying causes behind this trend, K. N. Raj observed in 1965 that: “there are important reasons why banking enterprises, seeking to maximise their profits, would not venture out into areas and sectors of activity to which high priority need to be attached from a larger social and economic point of view”. His contention was that rural credit was not merely a commodity that needed to reach the poor to free them from usurious money lenders but it should be seen as a ‘public good’ critical to the development of backward agrarian economy like India. Based on the earlier theoretical foundations to the issues that critically underlie the borrowing and lending practices, Raj had summed up his views on institutional credit to poorer segments thus: “the very basis of profit-making in banking activity sets limits to the enterprise that it can display and there are high information and transaction costs of dealing with many small borrowers which act as a major disincentive”. The nationalisation of 14 of India’s largest scheduled commercial banks in 1969 may in this light be recognised as a major policy initiative to usher in a new era of institutional credit to rural development in general and agricultural credit requirement in particular.

ii) 1970-1990

The decades of 1970-1990 consolidated the state’s direct involvement in the running of cooperative institutions. The state policy came to be premised on the view that the government should ensure the supply of cheap institutional credit to rural areas through the cooperatives. The Bawa Committee (1971) had recommended the setting up of large multi-purpose cooperatives in tribal areas. The National Commission on Agriculture (1976) had recommended the setting up of Farmers Service Cooperative Societies with the active collaboration of the nationalised banks. Further, based on the Sivaraman Committee report in 1981, a new major institutional structure viz. the National Bank for Agriculture and Rural Development (NABARD) was created in 1982. The NABARD replaced the three RBI wings viz. the agricultural credit

department (ACD), the Rural Planning and Credit Cell (RPCC) and the Agricultural Refinance and Development Corporation (ARDC).

In the primacy accorded to cooperatives as the major means of delivering institutional credit to rural areas, the government injected large amounts of funds directly. Upper tier cooperative banks were encouraged to accept public deposits and borrow from other financial institutions. However, the system gradually grew to be burdened by over-dues. Even though during the phase of post-nationalisation of banks there was deep penetration of commercial banks in the rural sector, with the increased financial involvement of the government, there was considerable bureaucratic interference in the functioning of the cooperative institutions. There was frequent compulsion to compromise on the norms of credit worthiness. The cooperatives were used by the political class for launching many subsidy-based programmes for the poor. The usage of cooperatives as a conduit to distribute political patronage, accommodating members of the political class as members of the cooperative boards to influence decisions, etc. gradually eroded the quality of credit extended and also caused problems in credit recovery. The 1989 scheme of loan waiver to farmers greatly aggravated the already weak credit discipline in the cooperative system which further eroded the financial health of cooperatives. Against this trend, the Agricultural Credit Review Committee (Khusro Committee, 1989) suggested thrift and savings for the cooperatives. Emphasising the need for better business planning at the local level, the committee recommended strategies to enable cooperatives to become self-sustaining.

iii) Post-1990s

The 1990s witnessed more concerted efforts to explore ways to revitalise the cooperatives. Several committees were set up to suggest cooperative sector reforms. The Chaudhary Brahm Prakash Committee (1991) suggested the restoration of the democratic character of cooperatives and the preparation of a Model Law to amend the flaws in the existing legislations on cooperatives. Consequent to this, Andhra Pradesh was the first state to enact the Mutually Aided Cooperative Societies (MACS) Act in 1995. This was followed by the passage of similar Acts by eight other states. In all these cases, the new law provided for cooperatives to be democratic, self-reliant and member-centric without the involvement of state or its financial support. Although the new laws did lead to the emergence of a new generation of autonomous financial cooperatives, these developments did not make much impact on the way of functioning of cooperatives. This led to the constitution of many more expert/advisory committees and task forces of which the Task Force on 'Revival of Cooperative Institutions' in 2004 by the RBI (under the Chairmanship of Prof. A. Vaidyanthan) was an important landmark in the history of cooperatives in India. This is not only on account of the completion of 100 years of cooperative experience in India but also because much of its recommendations were later reiterated by several other committees and the government implemented them in the later years. Two of the most important recommendations of this Task Force are: (i) improvement in the legal framework and institutional restructuring in order to make the cooperative institutions democratic, member driven, autonomous and self-reliant; and (ii) an approach for providing financial assistance to the cooperatives, shared mutually by both the centre and the state governments, aimed at wiping off the accumulated losses and strengthen their capital base. The most recent of the committees to have been formed and the report made available on cooperatives is the Report of the High Power Committee on Cooperatives (2009) under the Chairmanship of S. G. Patil. Reiterating that the cooperatives have not been given their due importance despite the continued emphasis for the same by successive governments and the Planning Commission, the Committee

specified certain amendments to the Constitution and to the Multi-State Cooperative Societies Act, 2002. You will read about them in the section 1.5 of this unit.

Check Your Progress 1 [answer in about 50 words in the space provided]

- 1) In what way the Usurious Loans Act of 1918 sought to help the poor indebted peasants?

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- 2) What are the two reasons due to which the cooperatives in India could not become successful during the initial years of their formation in the early 20th century?

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- 3) Which Act sought to establish a record of informal rural credit transactions? In what way did it try to achieve this?

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- 4) What were the two significant findings of the Cooperative Planning Committee suggesting as the principle cause of failure of cooperatives in India?

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- 5) What were the two findings of the AIRCS (1951-54) survey on the performance of cooperatives? In this light, what were its two suggestions for their restructuring?

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- 6) How did the noted economist late Prof. K. N. Raj characterise the poor performance of commercial banks in the matter of social sector banking?

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7) Towards the end of 1960s, what was a major policy decision taken by the government on priority sector banking to agriculture? What were the major changes on institutional restructuring that followed in the subsequent decade following this major policy decision of the government?

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8) What can you identify as a single scheme that contributed to the aggravation of credit discipline of cooperatives towards the end of 1980s? Which committee recommended the two measures required to enable the cooperatives to become self-sustaining in such a context? What were the two measures suggested?

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9) In what ways did the new laws enacted by many state governments in the post-1990s help the cause of cooperatives in India? In what way it did not?

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10) For what reasons would you consider the Task Force on 'Revival of Cooperative Institutions' constituted in 2004 as a landmark development in the history of Indian cooperatives? What were the two important recommendations of this Task Force?

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17.4 PERFORMANCE OF AGRICULTURAL COOPERATIVES IN INDIA

An assessment of the performance of cooperatives can be made on the basis of empirical data on variables like number of cooperatives, number of members in cooperatives, average members per society, total deposits, total borrowing, loans outstanding, proportion of borrowing members, ratio of loans outstanding to loans advanced etc. While the macro level data (i.e. data based on all India survey results) helps to know the performance of cooperatives at the aggregate level, they would conceal the specific instances of cooperatives which would have fared better. To know about them, we need to go by micro level case studies. In the present section, we shall look at the performance of PACS (i.e. primary agricultural cooperative societies) in the aggregate. The focus on PACS is because they are the grass roots level units responsible for distributing the credit to the applicants/farmers. A perusal of the data on some of these variables (Table 17.1) reveals the following:

- 1) In terms of loans advanced, the long term average annual growth over the period 1951-2010 has been a high 14.4 percent per annum.
- 2) The loans outstanding has also, however, increased by a similar rate i.e. at an average annual growth of 14 percent (over 1951-2010). This has kept the ratio of loans outstanding to loans advanced consistently above 1. This speaks of the poor performance of cooperatives in recovery of loans. Despite this scenario in the aggregate, in individual sectors there are success stories which is not revealed by an analysis of macro data.

Table 17.1 : Growth of PACS: 1951 to 2010

Year	1951	1961	1971	1981	1991	2001	2006	2010
Number (Lakhs)	1.1	2.1	1.6	0.9	0.8	1.0	1.1	1.0
Members (Lakhs)	44.1	170.4	309.6	576.5	801.2	999.2	1252.0	1264.2
Average members per PACS	42.0	80.4	192.3	613.3	966.4	1011.3	1176.8	1264.2
Deposits (Rs. Crore)	4.5	14.5	69.4	291.3	1349.0	13481.1	12561.2	35286.1
Loans advanced (A) (Rs. Crore)	22.9	202.7	577.9	1769.4	4678.9	25698.3	42919.6	74937.5
Loans outstanding (B) (Rs. Crore)	29.1	218.0	784.5	2450.6	6877.2	34522.3	51779.0	76479.8
Ratio of B to A	1.3	1.1	1.4	1.4	1.5	1.3	1.2	1.0

Source: NAFSCOB, Performance of PACS, 2009-10.

Evidence of Non-Credit Cooperative Success

During the first few decades after independence, the cooperative sector played a pivotal role in making significant contribution to the primary sector production. Its role was in aiding green revolution by way of building up a network for distribution of new varieties of seeds, fertilizers and cash credit as also in creating an environment of participation and hope among the rural people. Beginning with Amul in Gujarat, it took extraordinary strides in the dairy sector. There are at present more than 170 district cooperative milk producer unions. Although the cooperatives in the dairy sector have transformed India to become the largest milk producing nation, bringing substantial raise in the family income of millions of milk producers across the country, of late the sector has begun showing signs of fatigue. The production in the dairy sector has reached a plateau and the rate of capital formation inadequate.

17.4.1 Factors Influencing the Performance of Cooperatives

The factors which have contributed to the poor performance of cooperatives in India can be identified as follows.

Membership Size: Initially, the Maclagan Committee (1914) had stressed for small size of cooperatives. However, with the cooperatives seen as a panacea for all the ills, the membership size of cooperatives grew through the years. This is attributed to the policy stand that viability of cooperatives is best assured with a larger membership size. Empirical verification of macro level data reveals that as the membership size of the PACS grows, it proves detrimental for the credit recovery. Thus, peer pressure which was expected to ensure recovery and recycling of capital has been eroded by large membership size making the loan outstanding adversely affect the performance of cooperatives.

Government Participation and Control: The increased contribution by government to the share capital of PACS has proved detrimental to the performance of the PACS. Cooperatives by principle are, however, supposed to be of a self-help nature i.e. they are inherently supposed to draw neither from state nor from the market. A government centric cooperative structure, having drawn on the capital infusion by the government, has thus contributed to violate the principle of member-centric operation of cooperatives in India.

Bureaucratisation/Politicisation of Cooperative Leadership: The colonial rulers had provisioned for the post of a Registrar of cooperatives. It is argued that such a position was created to exercise a degree of control over the cooperatives not allowing them to blossom as a people's movement. The government of independent India not only retained this position but also added a complex structure of bureaucratic power structure to the administration and management of cooperatives. Besides going against the logic/principles of cooperative movement, such a move has rendered the politicisation of cooperative leadership by the appointment of many ambitious political persons to the boards of cooperatives.

Missing Multi-Directional Reform Agenda: The process of withdrawal of government from many service areas in the wake of the opening up of the economy should have catapulted the need for heightened degree of cooperative enterprises. In other words, in the context of increased global integration, the resulting pressures should have been addressed through an up-scaling of self-help/cooperative initiatives. That this has not happened underscores the weak roots of a movement even with its 100 years of history. There is thus a need to comprehensively revive and strengthen

the cooperative sector by adopting a multi-dimensional reform agenda covering all aspects of legal, institutional and policy changes.

Check Your Progress 2 [answer in about 50 words in the space given]

- 1) What are the five different types of organisations based on their ownership of resources and control?

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- 2) The absence of which type of dichotomised relationship, makes the cooperatives different from all other types of organisations? Besides this major difference, what are the other four differences in terms of the cooperatives' approach to function as business enterprises?

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- 3) State the different principles of cooperatives adopted by the ICA 1995.

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- 4) What are the three types of credit extended by PACS to agriculture? For which purposes are they extended?

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- 5) Mention the three different types of agricultural cooperative farming societies? In which of these three societies, the ownership of land shifts to the society from those of the members?

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- 6) State the four functions of 'agricultural service societies'. Illustrate the type of specific needs of farmers which the service cooperatives meet.

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- 7) What has been the growth rate in respect of 'loans advanced' by the PACS over the period 1951-2010? How does this compare with the growth in 'loans outstanding' over the same time period?

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- 8) How have cooperatives contributed to the Green Revolution in India? In which particular sector the cooperatives' success has been particularly laudable?

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- 9) To which particular factor you can possibly attribute the adverse performance of PACS in India? This is attributable to the violation of which particular principle of cooperatives?

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- 10) Which four factors have influenced the performance of PACS adversely in India? Which one of these needs to be especially focused upon to revive the cooperatives to effectively achieve the envisaged role for cooperatives?

17.5 LEGISLATIONS ON COOPERATIVES

The Indian cooperative sector has completed 108 years of its existence in 2012 (compared to the year of its first legislative enactment in 1904) . In all these years, the legislative environment and framework has been one of the most important dimensions of cooperative sector's development in India. Of these, the most important legislation of pre-independence period can be identified as the Multi Unit Cooperative Societies (MUCS) Act of 1942. This Act enabled the incorporation and winding up

of cooperative societies operating in more than one state. In the post-independence period, following the recommendations of the AIRCS (1951-54) committee's recommendation, many states enacted/amended their laws on cooperatives. Over the years, the cooperative societies having jurisdiction in more than one State began encountering problems in coping with different laws. This gave rise to the need for an enactment of the Multi-State Cooperative Societies (MSCS) Act.

17.5.1 Multi State Cooperative Societies (MSCS) Act

The Multi-State Cooperative Societies (MSCS) Act was enacted in 1984. Although an improvement over the MUCS Act of 1942, over the next few years of its implementation there was a realisation that factors like undue interference from the state, lack of autonomy and widespread politicisation have severely impaired the functioning of the cooperatives. In the succeeding years, based on the recommendations of several committees, the need for replacing the existing government dominated cooperative law by a new people-centric legislation was felt. States like Andhra Pradesh enacted Mutually Aided Cooperative Societies (MACS) Act and opened a stream of cooperatives without government intervention. The announcement of a National Policy on Cooperatives in 2002 and the replacement of the MSCS Act of 1984 by a fresh statute viz. the Multi-State Cooperative Societies (MSCS) Act, 2002 were two other major initiatives by the government in this regard. Subsequently, following the recommendation of the Task Force on Revival of Cooperative Credit Institutions (2004), the government introduced the 106th Constitutional Amendment Bill in May, 2006. In essence, the provisions of the Amendment were meant to reiterate the autonomous and democratic functioning of cooperatives, ensuring at the same time the 'accountability and management to the members and other stakeholders'. However, there was severe criticism on the proposed provisions of the Amendment. Some contended that the Amendment would make the cooperatives part of the government machinery making them ever more dependent on the government thus defeating the very purpose of their existence. Many subsequent committees and commissions, including the National Advisory Council and the Parliamentary Standing Committee on Agriculture (PSCoA), concurred with this view. The PSCoA in particular favoured that the Bill should be converted into a Comprehensive Model Law. While the debate on these issues is still continuing, some major modifications to the MSCS Act of 2002 to strengthen the working of the cooperatives have emerged.

17.5.2 Modifications Required in MSCS Act, 2002

The High Powered Committee on Co-operatives, in its report of 2009, and the 9th Report of the Second ARC, 2008 have made many suggestions to modify the MSCS Act, 2002. Some of the important modifications proposed are as follows:

- 1) The internationally accepted definition of Cooperative Society reflecting its voluntary, autonomous and democratic nature be introduced into the Act.
- 2) To ensure that the cooperatives are user-owned and user-controlled, a concept of 'active member' be introduced in the Act. A definition of active member be included providing further that only active members shall have the right to vote/contest elections.
- 3) It should be made obligatory on the part of cooperative leaders to undergo training on cooperative and business management (as in many other countries) within six months of their being elected. Manuals for such training, which should be gender sensitive, should be worked out.

- 4) A fair, but enforceable, provision for ‘fiduciary responsibility’ as provided in the Companies Act be introduced. It should be mandatory for the directors on cooperative boards to disclose certain information in order to avoid conflict of interests.
- 5) Cooperatives need to avail expert assistance in areas required from time to time and for this they must be free to hire the services of suitable experts on a contractual basis. A provision needs to be made in the MSCS Act, 2002, for the cooption of experts on the Board of cooperatives.
- 6) To improve the financial strength of the cooperatives, provisions for raising of capital through the issue of non-voting shares and IPO must be included. This provision is made with the idea of infusing a corporate line of functioning to the cooperatives.
- 7) Elsewhere in other countries, wherever cooperatives have thrived, they have worked on corporate lines but within the principles of cooperatives. The cooperatives are also registered as producer-owned business companies. In order that the Indian cooperatives also move in this direction, the cooperatives under the MSCS Act should be encouraged to incorporate themselves as Producer Companies under the existing provisions of the Indian Companies Act, 1956. To this extent, suitable provisions in the Companies Act, 1956 needs to be made.

17.6 LET US SUM UP

The history of cooperatives in India is more than a century old. In agricultural development, the cooperatives have contributed significantly during the stage of its green revolution period. However, despite their success in some specific areas like the dairy sector, over the years, the cooperatives in general have lost many of their initially avowed principles viz. they should function as *autonomous, voluntary, self-reliant* and *democratic business enterprises* which can serve the economic needs and aspirations of their members. The factors that have been recognised as influencing the performance of cooperatives adversely include: large membership size, government participation and control, bureaucratisation/politicisation of cooperative leadership, etc. In order to revamp the cooperatives by restoring their democratic and autonomous values, in the beginning of 2000s, a Model Law was suggested. In addition, many changes in the MSCS Act, 2002, have also been suggested to enable the cooperatives to function like *corporate* entities. For strengthening their capital base, autonomy to raise capital from the market by the issuing of IPOs are also suggested. Another suggestion made is that they should incorporate (i.e. register) as producer-companies under the Indian Companies Act. In brief, the need to revive and strengthen the cooperative sector in India can be summarised as the adoption of a multi-dimensional reform agenda covering all aspects of legal, institutional and policy changes.

17.7 KEY WORDS

- Usurious** : The practice of lending money at unreasonably high rates of interest.
- Rochadale Pioneers** : The first ever consumer society formed, by Robert Owen in England, based on the principle of self-help and mutual concern for members.

Fiduciary responsibility : The word ‘fiduciary’ is often used in conjunction with responsibility. Thus, a member on a cooperative board, charged with ‘fiduciary responsibility’, is supposed to conduct himself in a far stricter standard of behaviour than applicable to common citizens. In particular, the fiduciary has a responsibility not to be in a situation where his ‘fiduciary duty’ conflicts with his personal interests. Enjoined with this provision, the conduct of a member on the board of cooperatives is supposed to be of a standard in which the interests of the cooperative shall always be upper most.

PACS : The PACS, or the primary agricultural cooperative societies, are the base level units responsible for distributing the credits to the farmers at the village level. In terms of their numbers, there has not been much growth over the period 1951-2010. But their average membership size has increased by nearly 30 times making them lose out on the enshrined principle of peer-knowledge and pressure important for ensuring the repayment of loans taken.

17.8 SUGGESTED REFERENCES FOR FURTHER READING

Golait, Ramesh (2007), ‘Current Issues in Agricultural Credit in India: An Assessment’, RBI Occasional Papers, Vol. 28, No. 1.

Government of India (2008), Ninth Report of the Second Administrative Reforms Commission on ‘Social Capital – A Shared Destiny’, Chapter 6 on Cooperatives, GoI.

Government of India (2009), Report of the High Powered Committee on Cooperatives, Ministry of Agriculture, GoI. (Chairman: S. G. Patil).

Misra, Biswa Swarup (2006), “Performance of Primary Cooperatives in India: An Empirical Analysis”, Xavier Institute of Management, Bhubaneswar [<http://mpra.ub.uni-muenchen.de/21890/>]

17.9 ANSWERS/HINTS FOR CYP EXERCISES

Check Your Progress 1

1) to 10) See section 17.2 and answer.

Check Your Progress 2

1) See section 17.3 and answer.

2) See section 17.3.1 and answer.

3) See section 17.3.1 and answer.

**State and
Agricultural Sector**

- 4) See section 17.3.2 and answer.
- 5) See section 17.3.2 and answer.
- 6) See section 17.3.2 and answer.
- 7) See section 17.4 and answer.
- 8) See section 17.4 and answer.
- 9) See section 17.4.1 and answer.
- 10) See section 17.4.1 and answer.



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UNIT 18 INSTITUTIONAL FINANCE, CONTRACT FARMING AND FOOD SUPPLY CHAIN

Structure

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18.0 OBJECTIVES

After reading this unit, you will be able to:

- state the different sources of institutional finance to agriculture;
- explain the specific risks associated with agricultural lending;
- analyse the performance of leading institutions especially set up for the purpose of extending credit to agriculture over the last four decades;
- outline the other institutional initiatives and issues of significance on agricultural credit/development in India;
- discuss the concept and types of ‘contract farming’;
- appraise the performance of ‘contract farming’ in India and thereby identify the conditions necessary for its success; and
- define the concept of ‘food chain’ establishing its link to other crucial needs of agricultural development like ‘cold chain’, ‘value chain’ and ‘supply chain’.

18.1 INTRODUCTION

In the previous unit we read that the cooperatives were basically promoted to help meet the credit needs of the agricultural sector in order to free the poor farmers from

the exploitation by the usurious money lenders. We also noted that while the role of cooperatives was subsequently extended to many other areas, their primary role continued to be to address the credit needs of farmers. We also saw that one of the major objectives of nationalisation of commercial banks in 1969 was to extend more bank credit to hitherto neglected sectors like agriculture. In this unit, we will first take a look at the major factors which distinguish the agricultural sector, rendering them relatively riskier, in providing credit services. We shall then make an analysis of the efforts made in the direction of providing institutional finance to agriculture during the last three decades from 1980-2010. We will also study about some other institutional initiatives like micro-finance institutions (MFI) and issues of concern relating to institutional finance in India. Then we turn to a different institutional development in agriculture viz. 'contract farming'. This phenomenon developed in 1990s was in part meant to ease the situation on agricultural credit besides helping the farmers on other fronts like marketing and assured returns to output. We particularly focus on the types/performance of 'contract farming' system identifying in the process the conditions necessary for its efficient functioning. The importance of maintaining a healthy 'food chain' with due regard to the concerns of environment and equity has occupied the centre stage of policy planning and research in the recent decades. In this context, we will study the concept of 'food chain' with its associated elements on the institutional aspects of storage, transportation, information dissemination, value addition, price management, etc.

18.2 INSTITUTIONAL FINANCE (IF)

Institutional finance (see 'key words'), in the context of agriculture, refers to credit extended by public agencies like cooperative societies or banks, regional rural banks (RRBs) and scheduled commercial banks (SCBs) for meeting the credit needs of agriculture. Being regulated institutions, besides charging regulated interest rates, under the broader national objective of 'social banking', quite often they charge concessional rates of interest to priority sectors like agriculture. The term social banking signifies the larger social obligation of promoting small enterprises and agriculture including 'food security' by meeting the credit needs of informal enterprises and peasantry (i.e. the large segment of poor and marginal farmers) who are bypassed by the mainstream commercial banking system. Financial institutions do face certain unique type of risks which arise mainly due to the specific nature and characteristics of the agricultural sector.

18.2.1 Risks Associated with Agricultural Finance

There are certain unique risks in agricultural lending. These emanate from factors like:

- i) its politically sensitive nature due to which state intervention often results in rural financial markets (e.g. waiver of loans);
- ii) seasonal activity dependent on unpredictable factors due to which farmers have limited control over conditions of production with the resultant yield uncertainty;
- iii) high transaction costs both to lenders and borrowers due to little knowledge of heterogeneous farm households. This makes supervision of loans by lenders expensive/risky. There is also high opportunity cost to borrowers which includes transaction costs like transportation expense, fees & bribes, etc. proving a heavy burden particularly to poor farmers;
- iv) large number of farmers are unable to produce required loan collateral owing

to possession of few physical assets in many cases and face difficulty in demonstrating legal ownership of assets where they possess some assets; and

- v) integrated production/consumption needs of poor farmers makes them use up the money borrowed for production for purposes of consumption and social needs.

Due to the above factors/reasons, the risks associated with agricultural lending are especially distinguishable from other commercial lending activities.

18.2.2 Performance of Leading Credit Institutions in Agriculture

A direct method of assessing the performance of institutional finance is to study the distribution of credit advanced to agriculture by the three leading institutions viz. Cooperatives, Regional Rural Banks (RRBs) and Scheduled Commercial Banks (SCBs). This would also tell us about the changes in their relative share of credit advanced over time. It is important to see the growth in the performance of these institutions as also for their aggregate performance. Table 18.1 presents the trends in the credit advanced by the three major types of institutions to agriculture over a period spanning close to three decades. The trends reveal the following.

- The relative share of cooperative banks has declined from about 57 percent in 1980-81 to 18 percent in 2008-09. There is a corresponding increase in the share of commercial banks from about 40 percent to 72 percent during the period.
- The RRBs, which were launched in 1971-72 performed in a more stable manner. The share of RRBs in the total institutional credit to agriculture increased from about 2.4 percent in 1980-81 to 10.5 percent in 2008-09.
- In terms of growth rates between 1981 and 2009, the SCBs have registered a compound annual growth rate (CAGR) of 16.5 percent. The RRBs have performed better with a growth of 20.2 percent over the corresponding period. The performance of cooperative banks has been lower during this period with a CAGR of 9.7 percent.
- A degree of variation in performance during the intermittent periods has to be expected. Giving allowance to this, and considering the aggregate performance of each of the three type of institutions over the longer period of 1981-2009, the inter-institutional variations show the growing importance of RRBs and commercial bank's credit to agriculture.

Table 18.1: Source-wise Distribution of Institutional Credit to Agriculture

(percentages)

Year	Cooperative Banks	Regional Rural Banks (RRBs)	Scheduled Commercial Banks (SCBs)	Total
1980-81	57.2	2.4	40.4	100 (7538)
1990-91	35.9	6.0	58.1	100 (29316)
2000-01	50.3	7.9	41.8	100 (91654)
2008-09	17.9	10.5	71.6	100 (357531)
Growth Rate 1981-2009 (%)	9.7	20.2	16.5	14.2

Note: Figures within brackets in the last column are total credit advanced in crores of rupees.

Source: RBI/NABARD.

Table 18.2: Relative Share (%) of Borrowing of Cultivator Households by Institutional/Non-Institutional Sources: 1951-2010

Source of Credit	1951-52	1961-62	1971-72	1982	1992	2003
Non-Institutional	92.7	81.3	68.3	36.8	30.6	38.9
Institutional	7.3	18.7	31.7	63.2	66.3	61.1
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: RBI for 1951-52 and 1961-62, and for later years NSSO, All India Debt and Investment Survey.

- The aggregate performance from all three type of institutions in terms of CAGR during the period 1981- 2009 is 14.2 percent, which is credible in terms of the quantitative performance of credit to agriculture, although it is less than the 18 percent target set by the government.

A question of interest in this context is to see whether there has been a decline in the burden of agricultural credit availed by the non-institutional sources. The data in this respect presented in Table 18.2 shows that there has been a steady increase in the extent of institutional finance to agriculture from a low share of 7.3 percent in 1951-52 to a high of 61.1 percent in 2003 although it was less than the 66.3 percent peak reached in 1992. The main reason for this decline is a set back to the pace of institutional credit by the financial sector reforms introduced during the post-1991 years. A committee appointed by the RBI (the Narasimham Committee, 1991) for reviewing the credit system with the larger social and redistributive objectives had recommended the winding up of priority sector preference to agriculture and small industry. Although the government did not accept its recommendations fully, for a period of close to a decade, the pace of expansion of rural bank branches suffered a set back. As a result, lending activities to agriculture suffered leading to an increased dependence of cultivators on informal credit. However, the severe agricultural crisis witnessed in the subsequent years compelled the government to relax the restrictions imposed during 1990s and in 2003-04 a policy of doubling of bank credit to agriculture was introduced. This contributed to an improvement in the disbursal of agricultural credit as evidenced from the growth performance of overall institutional finance (14.2 percent over 1981-2009).

18.2.3 Other Initiatives in IF

Priority Sector Lending and Agriculture

One of the important policy initiatives in the post-nationalisation era of banking relates to the earmarking of 40 percent of bank lending to the 'priority sector'. Priority sector includes agriculture, small enterprises, microcredit, retail trade, education loans and housing loans with certain ceiling. Of the 40 percent earmarked for the priority sector, agriculture's share is 18 percent. Under priority sector lending, credit to agricultural sector includes loans sanctioned for different agricultural operations and in the case of small and marginal farmers, it includes loans for the purchase of land. Since mid-1990s there has been a set-back to meeting the target of 18 percent priority sector lending to agriculture. For instance, in 1996-97, the share of agriculture in bank credit declined to 12.4 percent and further declined to 11.0 percent in 2002-03 (Singh 2012). Though it increased in the years that followed, it never reached the 18 percent target set.

There have been a few other initiatives of institutional nature in facilitating the access to credit needs of agricultural class. For instance, a Rural Infrastructure Development Fund was established in 1995. One of the specific objectives of this fund was to enable the commercial banks (i.e. SCBs) which failed to meet the target of 18 percent credit mark (i.e. the share of agricultural credit in total SCB's lending) to deposit the balance in RIDF. The major objective of this fund was to raise resources to complete the ongoing rural infrastructure projects. Another initiative was the issuance of Kisan Credit Card (KCC) in 1999. The major objective behind this initiative was to overcome the rigidities inherent in the credit system and make the credit market more borrower-friendly by functioning in a flexible, hassle-free and cost-effective manner. The credit limits are, however, fixed on the basis of landholding size, cropping pattern and scale of finance. The factors which determined the scale of finance covered the entire credit needs for a full year including ancillary activities related to crop production like maintenance of agricultural machinery, electricity charges, etc. The KCC scheme has been implemented by all leading agricultural finance institutions like SCBs, cooperatives and RRBs. Another initiative of an institutional nature, once again involving all three leading institutional groups is the Self-Help Group – Bank linkage (SBL) programme. The objective of SBL programme is to provide thrift linked credit support to members of SHGs by getting loans in a reasonably short time at low cost. The programme has emerged as the largest 'micro-finance' initiative. The SBL programme enables banks to reduce their transaction costs and risk in delivering small loans. This initiative has greatly improved the outreach and credit flow to the poor. Being largely women's groups, the programme has encouraged financial inclusion of poor and asset-less. A distinctive feature of SBL is its high on-time recovery. In the context of agricultural finance, the SBL has a share of close to 80 percent of its members from the farming households.

An yet another institutional initiative of relatively recent origin is the emergence of Microfinance Institutions (MFIs). Although largely like SBL, MFIs differ in many respects like: (i) they do not operate under government template, (ii) they do not have social mobilisation, (iii) are purely profit-oriented organisations which see the institutional vacuum in the rural credit market as a pure business opportunity, etc. They operate through NGOs (i.e. non-governmental organisations) which form self-help groups with the sole objective of lending money to small borrowers and recover them in a time-bound manner. They are especially known for employing coercive recovery procedures. The operation of MFIs are limited to places where the SBL programmes are successful. The MFIs have spread deep into the rural areas particularly where there are inadequate institutional credit facilities. Their functioning is opposite to the spirit of social banking and are of late termed as 'money lenders in a new garb'.

18.2.4 Critical Issues and Role of State

Decline in Share of Credit to Small/Marginal Farmers: During the period 1981-2002, the number of marginal farmers in total area operated has increased. But their share of credit, though has also increased, has increased in the same proportion of the area operated by them. This has contributed to their share of bank credit disbursed (to the share of area operated by the small/marginal farmers) to decline from 1.02 in 1982 to 0.41 in 2003. The corresponding ratio for farms of more than five acres has increased from 1.08 to 1.48. The decline in the share of credit of small/marginal farmers calls for urgent steps to improve their overall share in the total credit disbursed.

Regional Disparities: There are also large regional disparities in the credit disbursed. The southern region account for nearly one-third of the total agricultural credit disbursed

although they account for less than one-fifth of total farm households in the country. Five states viz. Andhra Pradesh, Uttar Pradesh, Tamil Nadu, Karnataka and Maharashtra account for more than 50 percent of bank credit. In contrast, the share of northeast and eastern region in credit is much lower. For instance, Bihar's share in agricultural credit is a mere 2.4 percent while its share in the total number of farmer households is 8 percent. Half the Indian States/Union Territories have a share of below one percent in credit. This uneven flow of agricultural credit across states in India needs rectification. Low credit-deposit (C-D) ratios are observed for the districts of north-eastern, eastern and central regions with the southern region having the high C-D ratio.

Role of State: The specific features of agriculture, which makes it riskier for IF to effectively service the sector, calls for special effort on the part of government to enable the financial markets to serve the farming sector and rural population more effectively. More specifically, the role of state should include the following functions.

- Improve the basic rural infrastructure like roads, electricity, communication, marketing infrastructure, irrigation, etc. by increasing the financial allocation in the first instance and improving the monitoring of the projects sanctioned in the second;
- Assist the provision of 'public goods' such as information, facilities for HRD and agricultural research;
- Institute an appropriate financial system which: (i) reduces the transaction costs of effective financial intermediation and increase the access of farmers to financial services; and (ii) facilitate the development of appropriate loan collateral by establishing relevant land records and tenurial titles along with the setting up of regulatory bodies to support the financial institutions;
- Facilitate term lending operations of primary financial intermediaries through strengthening the second tier or apex financial institutions; and
- Develop risk management mechanisms such as crop insurance and loan guarantee schemes wherever they are economically justified and can be administered in a cost effective manner.

Check Your Progress 1 [answer in the space given in about 50 words]

1) What are the major public institutions engaged in advancing credit services to agriculture?

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2) How is 'high transaction cost' a factor to influence the advancing of agricultural credit adversely?

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3) How do you rate the performance of cooperative banks (vis-à-vis the RRBs and the SCBs) in meeting the credit needs of agriculture during the post-reform years i.e. during 1991-2010?

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4) Which particular factor is responsible for the declining performance of institutional finance to agriculture during the 1990s? To what extent there is an improvement in this regard in the post-2000 years?

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5) What are the two major objectives behind the setting up of RIDF?

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6) What was the major objective behind the introduction of KCC scheme in 1999?

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7) What are the specific features of the SBL programme that has enabled it to emerge as the largest micro-finance initiative?

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8) How are MFIs different from the SBL programme? Why have the MFIs become unpopular in recent years?

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- 9) Which state/regions have lagged behind in the share of institutional credit to agriculture? What are the indicators that suggest this disparity?

18.3 CONTRACT FARMING (CF)

The concept of contract farming (CF) is not entirely new to Indian agriculture. In its earliest application, during the colonial period, it was tried in the production of cash crops like tea, coffee, rubber, etc.. Later, beginning with the introduction of the system in tobacco cultivation in Andhra Pradesh in 1920s, its application was extended through the decades with varying response from farmers. While the pre-independence efforts were mostly arrangements to exploit the small peasantry, the post-independence attempts centred around some innovative farm-forestry schemes. In this, the cultivation of poplars in the northern states of India is especially notable for good farm response and success. In its operational features, the method of CF was varied from loose buying arrangements to simple purchase agreements, supervised production with input provision, tied loans/advance with risk coverage, managed production with input provision, etc. In its true perspective, therefore, it is an evolution of competitive production and marketing practices.

18.3.1 Contract Farming: Concept and Types

Contract farming is defined as a system for the production and supply of agricultural or horticultural products that involves a forward contract between producers/suppliers and buyers. The contract is a commitment by the cultivator to provide an agricultural commodity of a certain type, at an agreed time, price, and quantity to a committed buyer, usually a large company. According to the contract, the farmer is required to plant the contractor's crop on his land, harvest and deliver to the contractor a certain amount of produce. The terms are based on an anticipated yield and contracted acreage. A typical contract is one in which the contractor supplies the material inputs as also the technical advice required for cultivation with the farmer supplying land and labour. In the current context of economic liberalisation and global market integration, contract farming is increasingly considered as a solution to the problems of Indian agriculture particularly by major international donor agencies, multinational companies and the government. It is argued that private sector participation will be promoted through contract farming and land leasing arrangements will allow accelerated technology transfer, capital inflow and assured markets for crop production, especially for oilseeds, cotton and horticultural crops.

Types of Contract Farming: Distinction is made in literature on contract farming between two types of models viz. direct procurement model and open-source intermediation model. The former relates to a kind of farm-firm linkage in terms of procurement of raw materials for production and their subsequent marketing. A

corollary of the latter is the bi-partite/tri-partite model in which the terms of exchange are more explicitly defined.

Direct Procurement Model

Under this, there are different models of farm-firm linkage ranging from simple marketing agreements, to risk sharing, forward marketing and futures contracting. The objective of all these arrangements is to keep the 'supply chain' moving for which the processors and retailers choose to source their raw material supply from small traders or directly from farmers instead of government regulated markets. Such procurement is preferred due to its lower transaction costs and avoiding the quality problems associated with procuring from government regulated markets. A distinctive feature of such arrangements is that there is generally no contractual tie-up with the farmers. Produce is purchased from the traders/farmers subject to the satisfaction of the quality criteria. Many corporate retailers like Reliance, Spencer's, and Food Bazaar are adopting this model at present. However, direct procurement from farmers can be done only in states which have amended their Agricultural Produce Marketing Committee (APMC) Act, on the lines of the proposed Model Act 2003, permitting the buyers to purchase directly from producers. In states that have not amended their APMC Act, purchases are made through government regulated markets. Of late, however, there are instances where some retailers and processors (e.g. Field Fresh, Pepsico, and Nijjer) have entered into contractual buyback arrangements with the farmers specifying the quantity, quality, and a pre-agreed price. Some of these also provide back-end support to farmers like extension services, provision of seed and other inputs and credit facilities (with the costs adjusted in final payments made to farmers). Such backward linkages are driven by the size and quality requirements of the market and the need to ensure smooth and regular supply of a product to meet the quality standards. This trend is indicative of the changing competitive conditions under which uncertainty of raw material supply are making the companies feel vulnerable to their business.

Open-Source Intermediation Model

In the open-source intermediation model, provision of information about market prices, crop, good cultivation practices, etc. are provided to farmers. The main objective is to bridge the knowledge and information gap that exists at the farm level and also supply inputs to farmers without any 'lock-in' agreement. Research and development activities lose their effectiveness unless they reach farmers' fields with the effectiveness further depending on suitable extension services. This is the underlying motive for companies to take initiatives under this model. The open-source intermediation model offers the potential for a specific supply line to take effect at a subsequent point of time.

PPP-Models

Rural business or "agri-hubs" under the PPP-model (i.e. public-private partnership model) between panchayats and the private sector) are a variant of the open-source model. Under this, the corporate companies provide input services for farmers with an assured market for the produce under a contract. Several private sector players are engaged in developing the concept of business hubs to reach out to farmers (e.g. *DSCL Hariyali Kisan Bazar*, *TATA Kisan Kendras*, *Godrej Aadhaar*, *ITC e-Choupal*, *Choupal Sagar*, etc.). The scale of these operations are, however, small in comparison to the needs of farmers in rural areas. The advantage of 'agri-hubs' is the potential provided for 'one stop shopping' for farmers with inputs like quality

seeds, technology, credit, extension and insurance services, etc. provided to the farmers by a single source.

Bi-Partite and Tri-Partite Models

The bi-partite model is a contract exclusively between the company and the farmers. Figure 18.1 presents the direct link between the grower-farmer and the company where the company provides inputs such as seeds, fertilizer, pesticides, etc. on credit. The final product is purchased at a fixed price by the company. This kind of arrangement exists in the case of Field Fresh, Pepsico and Nijjier in India. A variant of this model is the tri-partite model where a facilitator/middleman is involved between the grower and company. The intermediary plays a key role in facilitating the transaction. FLI (Pepsi) Potato in Maharashtra and Karnataka are examples of this kind of an arrangement. Figure 18.2 indicates how the three parties involved in a contract contribute to enhancing the ‘supply chain’ of agri-produce.

Figure 18.1: Bipartite CF Model

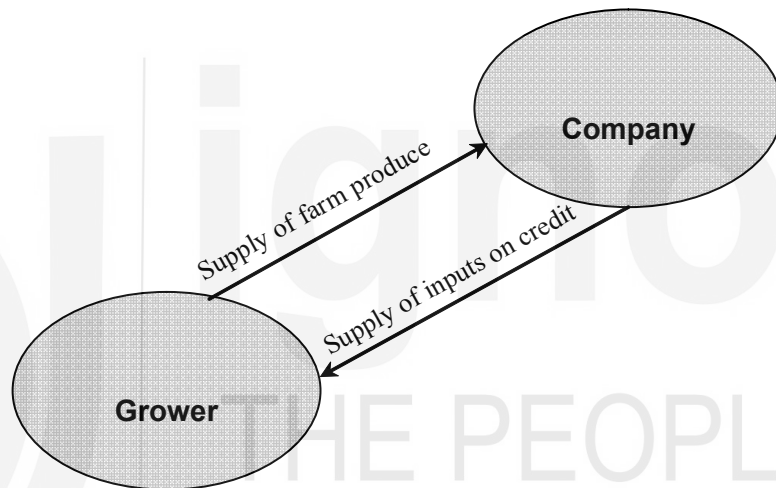
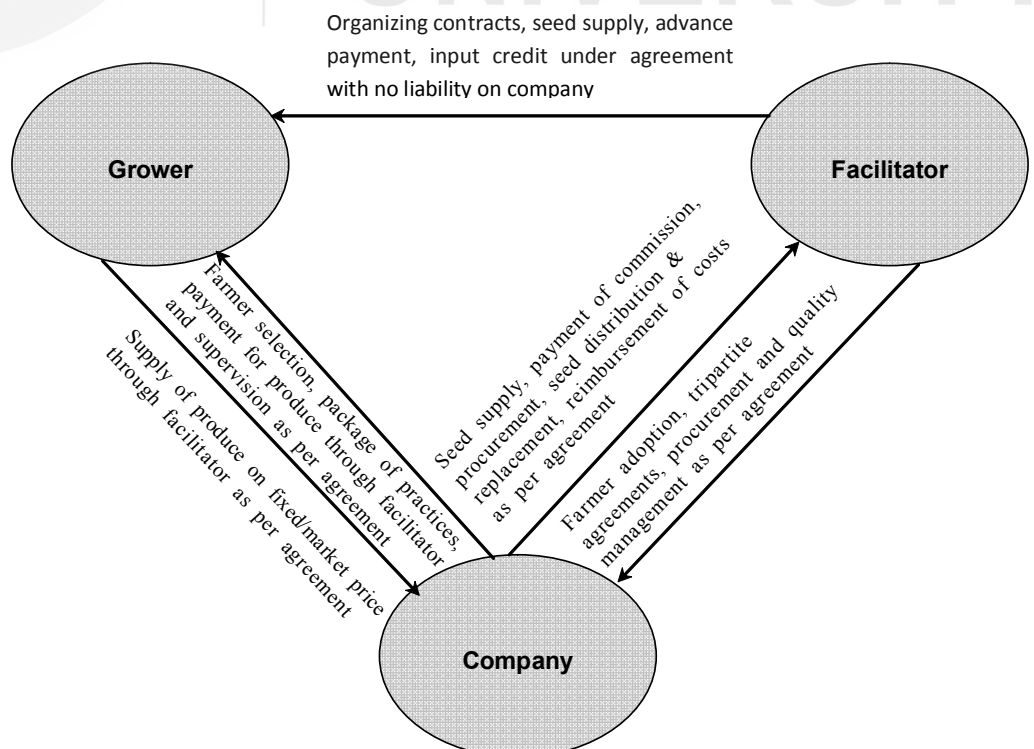


Figure 18.2: Tripartite CF Model



18.3.2 Limitations of CF: Conditions for its Success

Theoretically, farmers stand to gain from contractual agreements that provide lower transaction costs, assured markets, and better mechanisms to deal with risks/uncertainty. On the other hand, contracting firms have the advantage of more assured supplies and reasonable control over quality. However, in practice, there are practical problems that emerge in agricultural contracts resulting in losses to both farmers and firms. For instance, most of the contracting agreements are verbal or informal in nature. Even in case of written contracts, quite often they do not provide the legal protection in India of the kind that exist in other countries. In other words, the market and mechanisms to facilitate the drawing up of and enforcement of such contracts needs to still mature in the Indian context. Lack of enforceability of contractual provisions result in their breach by either party. There have been instances of farmers in India refusing to sell to contracting firms when the market prices exceeded the contract price, and of firms refusing to purchase contracted quantities, or pay the contracted price, due to market conditions. Further, neither the contracting firm nor the farmers are keen to contest these issues in a court. Most often, therefore, it is the mutual understanding and faith that drives contractual relationships.

Among the different state government experiences in contract farming (CF), the case of Punjab (where the state has argued in favour of CF as being the best means of crop diversification) is worth noting. Many of the recent corporate interest in Punjab agriculture is in basmati farming which is one of the great water-guzzlers and thus ecologically disturbing. Thus, amidst the question of ecological disturbance and the challenge for sustaining the natural resources like water and soil, the experience of the state in CF is mixed. While the contract farming in Punjab is argued to have generated more employment opportunities due to the labour intensity of most vegetable crops (as compared to the traditional crops like wheat or paddy), there are instances of farmers in Punjab having become increasingly resentful of a system that has put them under the total control of corporations which will decide not only the crops grown but also the procurement price. There are growing incidents of the pre-determined prices being reduced on the pretext of inferior quality of the crop which has added to such resentment. There are also instances of wage levels having been pushed down to subsistence level due to increased competition for work. In spite of these ups and downs, the Punjab experience of contract farming is generally considered to be among the more successful in India.

Contract farming arrangements are criticized for being biased in favour of firms and large farmers, exploiting in the process the limited or poor bargaining power of small farmers. In such situations, a suggested viable approach is to form clusters of small farmers that can give the benefit of scale effect and also enhance the bargaining power of the farmers. Success in developing contracting models, or other forms of farm-firm linkages that are effective for small holders, is thus a key challenge to small holder participation in contract farming models in Indian agriculture. Important conditions for the success of CF practices, from the point of view of small producers, include: (i) increased competition for procurement (instead of a single buyer in the case of a bi-partite or tri-partite model), (ii) guaranteed market for farmer produce, (iii) market information to increase the farmers' bargaining power with companies, and (iv) larger volume of transaction through groups of farmers. In this context, you may recall the successful experiments of CF in Karnataka and Maharashtra by the small/marginal farmer segment about which you studied in section 5.5 of Block 2 of this course before.

Check Your Progress 2 [answer the questions in about 50 words in the space given]

- 1) Do you think the experience of ‘contract farming’ is new to India? In its true perspective, in what words would you state the real essence of the CF system?

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- 2) What benefits are expected to result by CF practices particularly in the present context of global market policies pursued?

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- 3) What is the main objective behind the ‘open-source intermediation model’ of CF? What underlying motive can you identify for the corporate sector’s proactive action in driving themselves through this approach?

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- 4) What advantage is experienced by the farmers in the agri-hub practice under the PPP model of CF?

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- 5) Mention the four conditions that are considered important for the success of CF system in India.

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18.4 FOOD SUPPLY CHAIN

The term food supply chain refers to the network of food-related business enterprises through which the food products move from the point of its production to its ultimate point of consumption. The six typical links in the food supply chain may be identified as: inputs, producer, processor, distributor, wholesaler, retailer and consumer. Recall that in Unit 16 (section 16.2) we studied that the length of the ‘channel’ between the producer and the consumer, should be minimum in order that the producer’s returns are the maximum. Thus, the requirements of an efficient food chain would integrate itself with the maximum welfare of the producer (as also the consumer as he too gets the best price advantage), if the food supply chain is optimum like: farmer → retailer → consumer. This optimality of chain length can be starkly contrasted with the existing food supply chain links in India as: farmer, village agent at taluka level, market agent at mandi level, wholesaler, semi-wholesaler, retailer and consumer. Indeed, with so many intermediaries grabbing their share, it is no surprise that an Indian farmer is estimated to get only 28 percent of what the final consumer pays for their products. This also explains why despite India being the leading world producer in many products, in particular being in the top most rank with regard to fruits and vegetables (vide section 2.5, Unit 2), the share of India in the export market for processed horticultural produce is less than 1 percent (compared to 70 percent in US/Brazil, 78 percent in Phillipines, 83 percent in Malaysia, etc.). This poor status is attributable to the low status of post-harvest Indian management practices which requires us to pay more attention to areas of: grading, packaging, pre-cooling, storage and transportation facilities. In this, the role of ‘cold chains’ is crucial.

A distinction could be made in the food supply chain between retail supply chain and value supply chain. If a commodity reached the consumer in the same form as produced by the farmer, without any processing, it could be called as retail supply chain. An example is a tomato consumed as a vegetable by the final buyer. If a commodity produced by a farmer reaches the consumer after processing, it could be seen as a part of value chain, because processing adds value. An example is tomato ketchup bought by a consumer, which carries value addition to the tomato produced by the farmer. These two types are discussed below.

18.4.1 Retail Supply Chain/Cold Chain

Cold chain could be seen as a part of the retail supply chain. Cold chain are a logistic system of providing a series of facilities ideally required for maintaining the right storage conditions for perishable items. Such facilities are required to be established from the point of origin to the point of consumption in the entire food supply chain. The chain needs to start at the farm level and cover up to the consumer level. A well organised cold chain reduces spoilage, retains the quality of the harvested products and guarantees a cost efficient delivery to the consumers. The main feature of the cold chain is that if any single link is missing or weak, the whole system fails. The logistics of infrastructure of a cold chain can be identified as: pre cooling facilities → cold storages → refrigerated carriers → packaging → warehousing → information management system (i.e. traceability and tracking).

It is estimated that about 30 percent of fruits and vegetables grown in India get annually wasted due to gaps in cold chain. This results in instability in prices with the farmers not getting the expected returns. This has the potential to result in rural impoverishment and farmers’ frustration. Combined with other inadequacies of markets

and price management, it is estimated that India wastes more fruits and vegetables than it consumes. You would have studied in the recent newspapers (May, 2012) that due to bumper crops but poor matching storage facilities, India is forced to export food grains at a massive subsidy burden to the exchequer. This means that while attention to pre-harvest practices has been accorded its due share, the post-harvest issues have been neglected. The operating cost of Indian cold storages are estimated at \$60 per cubic meter per year, as compared to less than \$30 in the developed countries. Further, while the energy expenses makes up for about 28 percent of total expenses of Indian cold storages, it is just about 10 percent in the developed countries. While these factors have made the setting up of cold storage economically unviable in India, it is estimated that about 30 to 35 percent of losses can be reduced by transporting the freshly harvested fruits and vegetables in 'refrigerated containers' (see 'key words'). The total number of refrigerated containers (as opposed to the less efficient refrigerated trucks) required in India is estimated at about 20,000. It is also estimated that every 1 percent reduction in wastage of fruits and vegetables would translate to a saving of 0.13 billion US dollars. Further, a stage-wise break-up of this loss is estimated as: poor handling – 30%; poor storage – 30%; poor transportation – 30%; intermediaries – 5% and; lack of knowledge about better preservation techniques – 5%. With right policy support for investments made in establishing the required infrastructure to reduce this post-harvest loss, the welfare of nearly 50 percent of our labour force engaged in agriculture can be improved. This is the crucial social angle of the issue which should receive the attention of the government at this current juncture in Indian agriculture.

18.4.2 Value/Supply Chain

Indian agriculture is lagging behind in realising its potential from agro processing. This is evident from the low 7 percent value addition in Indian food products as compared to 23 percent in China. As outlined above, a beginning should be made by making the required public investment (facilitating to attract further private investment) to remove the food/cold chain deficiencies. Further, the direct sourcing of products to the retailers must be facilitated by the required modification in the APMC Act in those states where it has not been done yet. Although there are more than 27,000 food processing units in the country, with 95 percent of them in the cottage industry sector with low investment, the units work at minimal capacity due to their inability to exploit the technological developments. This is posing a stumbling block in meeting the internationally required phyto-sanitary standards. Further, the taxes imposed by the government and the cost of packaging form a major chunk of the expenses incurred by the small entrepreneur. The laws are unattractive and hindering for the entry of big buyers who can develop and assure a steady business for the small processing units. In short, notwithstanding the rationale for the current debate on allowing the multinational companies into the retailing business in India, an acceptable model for promoting the agricultural development in line with the current demands of the sector is urgently required. It is important that the small and marginal farmers should be enabled to reap the benefits of the ongoing retail boom. The FMCG (fast moving consumer goods) companies which are eager to source their produce from small and marginal farmers and leverage their brand equity, must be facilitated to take part in market development within the confines of an appropriate regulatory framework. This is required both for the development of Indian agriculture in line with the current policy of market orientation, as also to ensure the concerns of distributive equity of the growth linked inclusive development model under debate.

Check Your Progress 3 [answer questions 2-6 in about 50 words in the space provided].

- 1) Fill in the blanks:
 - a) An Indian farmer is estimated to get percent of the final price paid by the consumer. This is in stark contrast with the corresponding percent in U.S./Brazil, percent in Phillipines and percent in Malaysia.
 - b) As per estimates, percent of fruits and vegetables grown in India gets annually wasted.
 - c) The operating cost of Indian cold storages per cubic meter per year is as compared to in the developed countries.

2) Define the term 'food supply chain' mentioning its six typical links.

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3) State the advantages of a well organised cold chain system identifying the logistics of its infrastructure.

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4) Mention the present (2012) crisis arising out of bumper food harvest in India and identify the underlying cause for this paradoxical situation.

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5) What would you identify as the crucial 'social angle' of the current state of Indian agriculture?

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6) Mention the two critical fronts on which facilitating public policy is urgently required to improve the efficiency of value/supply chain's functioning in Indian agriculture.

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18.5 LET US SUM UP

The term institutional finance in the context of Indian agriculture, defined in a restrictive sense, includes public bodies like cooperative credit societies, scheduled commercial banks and RRBs specifically set up to meet the credit needs of Indian agriculture. Considering the performance of these three major agencies over a fairly long term time period of 1986-2010, with an aggregate average annual growth of close to 18 percent in the quantum of credit extended, the performance of institutional finance to Indian agriculture cannot be considered poor. Also, besides these public agencies, there are many other initiatives which would indirectly contribute to improving the status of institutional agricultural finance to Indian farmers. These include the setting up of RIDF, KCC, SBL-programme, etc. While these measures have facilitated to an extent, they are still short of the actual need. This, combined with the competitive environment generated by the pursuing of open market policies, has rendered the situation for the large small and marginal farmer segment extremely vulnerable to volatile market conditions. To ease the situation on this front, the concept of contract farming, which in its varying forms was under practice for decades even before independence, has been tried out in many states of India in the recent past. Although its experiences are mixed, that there is a fair degree of success in its application in some states is worth noting. More importantly, it is critical to focus upon establishing the conditions ideally required for its efficient functioning. These include: (i) generating increased competition by allowing more players to function in the market; (ii) improving market information system to increase the farmers' bargaining power with companies, (iii) enlarging the volume of transaction of small/marginal farmers by group or collective action, etc. Improving the critically needed infrastructure like 'cold storage' would reduce the wastage in perishable commodities like fruits and vegetables which is estimated to be a significant 30 percent of total production. This, combined with the inadequacies on the food/supply chains, is greatly hindering in realizing the full value of our significantly improved production in quantitative terms. Focusing, therefore, on the efficient practices of post-harvest stages of agricultural production is critically needed. This would go a long way in increasing the current negligibly low share in the export market for agro-products from India.

18.6 KEY WORDS

- Institutional Finance** : In its extended scope, the Task Force on Credit Related Issues of Farmers, GoI, 2010, in its definition of 'institutional finance' includes financial institutions of private sector also. Such institutions included are: (i) user owned institutions like SHGs; (ii) new generation thrift and cooperative societies registered under the more liberal cooperative laws, not-for-profit NBFCs (i.e. non-bank finance companies) and other not-for-profit NGOs.
- Contract Farming** : Is a system for the production and supply of agricultural or horticultural products. It is a forward contract between producers/suppliers and buyers under which there is a commitment by the cultivator to provide an agricultural commodity of a certain type, at a time and

price, and in the quantity required by a known and committed buyer.

Cold Chains : Are a logistic system of providing a series of facilities ideally required for maintaining the right storage conditions for perishable items.

Refrigerated Containers : Are standard Twenty Foot Equivalent Unit (TEU) size transport vehicles with 0.24 million sq. metres of solar PV panels fixed on their roof tops to ensure independent power grid for their operation. For the Indian terrain conditions, these are considered more efficient than the convention refrigerated trucks.

18.7 SUGGESTED REFERENCES FOR FURTHER READING

- 1) ICAR/IFPRI/USDA (2008), Contract Farming in India: A Resource Book, A Product of Indo-US Knowledge Initiative on Agriculture, An Online Resource Book [http://www.ncap.res.in/contract_%20farming/index.htm].
- 2) Government of India (2010), Report on the Task Force on Credit Related Issues of Farmers, MoAg., June.
- 3) Surjit Singh (2012), Recent Experience in Agriculture Finance in India: Concerns for Small Farmers, Institute of Development Studies, Jaipur.

18.8 ANSWERS/HINTS FOR CYP EXERCISES

Check Your Progress 1

- 1) See Section 18.2 and answer.
- 2) See Section 18.2 and answer.
- 3) See Section 18.2.2 and answer.
- 4) See Section 18.2.2 and answer.
- 5) See Section 18.2.3 and answer.
- 6) See Section 18.2.3 and answer.
- 7) See Section 18.2.3 and answer.
- 8) See Section 18.2.3 and answer.
- 9) See Section 18.2.4 and answer.

Check Your Progress 2

- 1) See Section 18.3 and answer.
- 2) See Section 18.3.1 and answer.
- 3) See Section 18.3.1 and answer.
- 4) See Section 18.3.1 and answer.
- 5) See Section 18.3.2 and answer.

Check Your Progress 3

- 1) See Section 18.4 and 18.4.1 and answer.
- 2) See Section 18.4 and answer.
- 3) See Section 18.4.1 and answer.
- 4) See Section 18.4.1 and answer.
- 5) See Section 18.4.1 and answer.
- 6) See Section 18.4.2 and answer.



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