
UNIT 23 AGRICULTURAL TAXATION, SUBSIDIES AND INSURANCE

Structure

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23.0 OBJECTIVES

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

- explain the different kinds of taxes and their impact on output and prices;
- discuss the two main issues of a tax policy on agricultural income and indicate the proposals to deal with these issues;
- describe the concept, rationale and types of agricultural subsidies;
- state the arguments made against subsidies and present an inter-country profile of agricultural subsidies;
- enumerate the specific characteristics of agricultural insurance; and
- indicate the salient features of agricultural insurance schemes under implementation in India.

23.1 INTRODUCTION

Through taxes the government collects money from people. Through subsidies it transfers money to people focusing on those who need them most. The people who pay taxes are thus not necessarily the persons who benefit from subsidies. Subsidies, therefore, transfers money among people in a way that the concerns of equity are addressed. In addition, through taxation, the government generates income for financing its various

other expenditures on services of public importance (e.g. roads, markets, utility services, etc.). This provides the vital infrastructure services necessary for efficient economic functioning. Taxes and subsidies are thus the two instruments used by the government to achieve the twin objectives of 'equity for social justice' on the one hand and provide the basic means to attract investment for production of goods and services on the other. While these are two direct objectives of taxes and subsidies, the level of taxes levied bears an influence on the output levels. If the tax is heavy and burdensome, the producers will lose their incentive to produce. This will stifle the economy with low growth and sets-in the consequent ill like unemployment. Further, quite often, there would be losses to producers on account of unforeseen situations arising from price and demand fluctuations. It is here that insurance comes to help a producer to recoup some of his losses. The interplay of taxes, subsidies and insurance determines the efficient functioning of the economic system in general. In this unit, we first take a look at the different type of taxes and their effects on prices and output in general. We then take a quick look at the agricultural tax policy of the government. The rationale behind agricultural subsidies, its different types and how it compares in an international comparative perspective will then be discussed. Finally, with a reference made to specifying the characteristics of agricultural insurance (as distinguished from those of non-agricultural products), we take a look at the different agricultural insurance schemes operated in India. Given the objectives of taxation and subsidy policies as outlined above, it is evident that the government must formulate its tax policies in such a way that it is conducive for economic growth and social welfare. In this light, we shall examine in this unit whether the government in India has used the instruments of taxation and subsidy efficiently for the development of the agricultural sector.

23.2 TYPES OF TAXES

In general, four types of taxes can be distinguished. These are: (i) lump-sum tax; (ii) per unit (of output) tax; (iii) ad-valorem tax; and (iv) profit tax. In this section, we shall examine how each of these taxes affect the output and price decisions of the producer. We are assuming a *perfectly competitive* market. This implies that an individual producer cannot influence the price in the market as he is too small compared to the entire market. Secondly, there is no *product differentiation*, i.e. the product sold by a producer is identical to that of any other producer. In a perfectly competitive market, the producer (the farmer in this case) is a *price taker* because he accepts the prevailing market price. At the on-going price he is free to sell as much as he can. On the other hand, if the producer enjoys monopoly power he can influence the market price by restricting supply. In case of Indian agriculture, if we ignore the government intervention for fixing the remunerative prices to ensure adequate returns to the farmers, the market meets the conditions of perfect competition. There are a large number of farmers, each supplying a negligible amount of the total supply to the market. Moreover, the products are largely homogeneous in nature. Therefore, no individual farmer is in a position to influence the market price.

23.2.1 Lump-sum Taxation

Lump-sum taxes are imposed on the producers irrespective of the level of output produced. For instance, a farmer-producer might be required to pay 1000 rupees to the government as taxes, no matter how much output is produced. In this case, although the tax adds to the cost of the producer, it is a fixed cost. We are aware that while the fixed cost adds to the cost of production, it is not the cost on which the decision on the level of output to be produced is taken by a producer; it is the marginal cost which is taken into account by a producer. As the marginal cost is unaffected by the imposition

of lump-sum tax on a farmer, it does not influence his production decisions as long as it is not very high. A high lump-sum tax, however, can cause substantial reduction in the profit level of producers acting as a strong disincentive for production. Thus, the imposition of lump-sum tax, in a normal sense, does not affect the output level of individual producer.

23.2.2 Per Unit Tax

Per unit tax is imposed as a levy on the units of output produced. For instance, for each unit of output the producer can be required to pay five rupees to the government. In this case, how much tax the producer pays depends on the level of output. Per unit tax affects the cost of producing an additional unit of output (i.e. the marginal cost) which is important to a producer to determine the level of output beyond which it is not profitable for him to produce any more units. This can be shown in terms of a diagram (Figure 23.1) where the quantity of output produced is represented along the horizontal

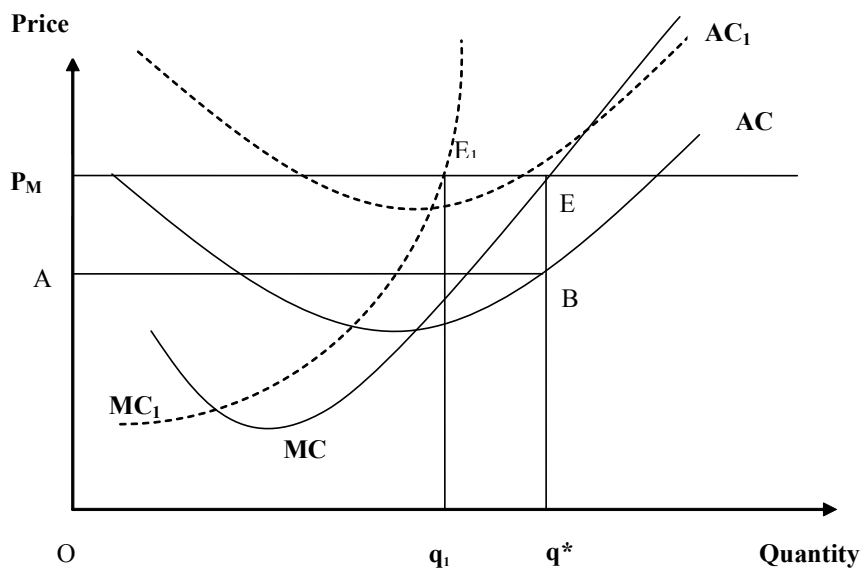


Fig. 23.1: Effect of Per Unit Tax

axis and the price/cost are measured along the vertical axis. The market price P_M is indicated as a horizontal straight line on the assumption that the price remains reasonably stable at least during the short term. The AC curve denotes the *average cost* of production and the MC curve the *marginal cost* of production. While AC is defined as 'total cost divided by the number of units of output produced', MC measures the 'rate of change in the total cost' (given by the 'slope' of the curve) if the producer decides to increase the level of output. The producer's equilibrium is at that level of output where MC and P_M intersects which is happening at the point E . Drawing Eq^* perpendicular to the horizontal axis, we get Oq^* as the equilibrium level of output. At this level of output, the profit per unit (which is the difference between the average cost and the price) is EB . The total profit earned is $EB \times Oq^* = \text{area of } ABEP_M$. If the output produced is at a level where $MC < P_M$ (i.e. to the left of E), there is unutilized potential which can be used to earn higher revenue or profits. In other words, profits can be increased by producing more units without adversely increasing the cost of production. On the other hand, at a level of output where $MC > P_M$ (i.e. to the right of E), the producer is compelled to revise his strategy by reducing the level of output to q_1 .

With the imposition of the per-unit tax, both the marginal and the average cost curves will shift upwards (i.e. increase) to MC_1 and AC_1 . This results in the point of intersection (between the P_M and the MC_1) to shift to E_1 (which is to the left of E). Thus, when the

tax is imposed on the basis of per unit of output, it leads to a fall in output level and a consequent fall in profits of the producer.

23.2.3 Ad-valorem Tax

Ad-valorem tax is imposed not on the output level but on the price charged in the market.

Suppose the price line is indicated by ' P_M '. Then after the imposition of the tax ' t ', the price that is received by the producer is $(1-t) \times P_M$. In this case, while there is no change in the two cost curves, the price line P_M shifts downwards to $(1-t) \times P_M$. Consequently, there is a decrease in the profit of the producer in the post-tax situation.

23.2.4 Tax on the Income of Producers

The income of the producers is the profit earned by them which is equal to the total revenue minus the total cost. If a tax ' t ' per unit of profit is imposed, then the producer is left with the post-tax fraction of the profit viz. $(1-t) \times \text{profit}$. Thus, while with the imposition of this tax the level of output is not going to be affected, the income of the producer falls. If it falls below some minimum level, the producer may lose his incentive to produce and altogether stop production. In other words, the output produced falls to zero. This case is similar to the lump-sum tax case outlined in 23.2.1.

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

- 1) What are the twin objectives of taxes and subsidies? Why is it important to keep the level of taxes at an optimal level?

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- 2) Do you agree that the agricultural markets in India are perfectly competitive? Why?

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- 3) What is a lump-sum tax? Does this type of tax has any serious effect on the output level of a farmer-producer?

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- 4) In what way is the 'average cost' different from 'marginal cost'? Which of these two determines the level of output to be produced by a farmer-producer?

- 5) How does the imposition of a per-unit tax affect the two cost curves? What are its two consequences?

- 6) What is an ad-valorem tax? What is the effect of this type of tax on the 'price line'? How does this affect a producer?

- 7) Define the term 'profit'. State the effect of a tax on the profit level of a farmer-producer. In what way a high level of tax has a similar effect as the lump-sum tax?

23.3 TAX POLICY FOR AGRICULTURAL INCOME

With a substantial segment of the labour force in India continuing to be dependent on agriculture for their livelihood, the per capita income from agriculture continues to be low. Note that this is in relative terms [i.e. agricultural per capita income (see key words) in relation to the overall per capita income of the economy] as the income of agricultural workers in India on a per-capita basis is also increasing over time in absolute terms. The low per capita income in agriculture is due to the relative low agricultural productivity in India on which you have already studied in unit 13 (section 13.4.1) before. To recall, some of the specific factors contributing to this situation are: (i) small size of holdings held by a large number of small and marginal farmers segment, (ii) the consequent low ability of small farmers for private capital investment, (iii) inadequate availability of institutional credit, etc. As a result, the sector continues to be characterized by: (i) high level of underemployment (i.e. workers getting far less work than they are capable of doing), (ii) inequitable distribution of land, (iii) lower wages, etc. Given this situation, the issue of taxation of agricultural income has remained contentious. With no clear cut policy emerging on taxing the income from the sector, the situation is resulting

in a loss of investible surplus to the government. The two major issues due to which the formulation of a policy on agricultural taxes is hindered can be identified as follows.

Agricultural Income: The term is defined as income earned from farm sector activities up to, and exclusive of, the processing stage. Thus, while income from processing stage onwards is rightly treated as non-agricultural income, income from a farmhouse (even when used for non-agricultural purposes) is treated as agricultural income. The latter has left scope for evasion of tax by rich landlords by reporting the use of land to their advantage. In general, income from all basic operations on land (e.g. cultivation, growing crops) including secondary operations like land removal, digging, etc. are classified as agricultural income and is exempt from tax. However, income from sale of trees, breeding of livestock, fishing activities, poultry farming are not classified as agricultural income. Over the years, due to the fact that agriculture is a state subject and many politico-regional factors have dominated a policy decision on agricultural taxation, land tax has not only been abolished in some states but has also fallen in real terms in other states as the rate of taxation has not been revised for many years. In view of these conceptual and policy deficiencies, the issue of agricultural income and its taxation has continued to benefit big farmers at the cost of many small and marginal farmers. This is to the extent that every sector should ideally generate investible surplus for itself by taxation and private investment. This has affected the Indian agricultural development in general and those of small and marginal farmers in particular.

Rental Income in Agriculture: A related contentious issue of taxing the income from agriculture is of rental income from non-self-cultivated land. Given that tenancy is widely practiced in India, and the landlords who lease out lands are well-off and powerful, the policy of exempting the rental income has lacked a rational basis. Realising this lacunae in the agricultural tax policy of the government, the Supreme Court has ruled that the income from agricultural operations earned by those not directly involved in the actual production activities should be taxed. In order to cope with this situation, some proposals have been made to bring agriculture into the direct tax fold. These include the following.

- a) **Imposition of land taxes on the basis of ownership:** Arguing that only the marginal and small farmers should be exempted from the tax, this proposal lays emphasis on *ownership of land* as the criteria for tax levy. In essence, the proposal seeks to bring all absentee landlords into the tax net.
- b) **Non-agricultural income reported as agricultural income:** To deal with this problem of reporting, the proposal argues that land should be taxed according to the nature of the crops grown on it. Wherever agricultural land is not used for cropping purposes, a policy of imposing land-tax, irrespective of its use is suggested. There is a contention that such a tax should be based on the potential fertility of soil with the more fertile land taxed more than the less fertile. A related suggestion is that more valuable crops should invite a higher tax rate compared to the land where non-lucrative crop is grown.

While the debate on the above issues has gone on for the last few decades, usage of agricultural land for non-agricultural purposes like large farmhouses, hotels, tourism, other industrial purposes, etc. seeking exemption of taxes has continued. In other words, poverty of small and marginal farmers has continued along side the rich farmers enjoying tax exemption from income earned from their land not used for cropping purposes. What explains this state of affairs is the policy vacuum. It is a fact that an average Indian farmer is vulnerable and has to be provided with tax benefits. But tax benefits have largely gone to the undeserving due to the policy lacuna on agricultural income.

23.4 SUBSIDIES

Subsidies are the opposite of taxes. Taxes reduce the income of the farmers. Subsidies on inputs and prices, on the other hand, increases the income of the farmers. It increases profits indirectly by making the inputs cheaper and directly by making the outputs lucrative. We shall see how this happens by a discussion on the rationale and types of agricultural subsidies in vogue.

23.4.1 Rationale for Subsidies

For an agrarian economy like India, with bulk of its farmers being of small and marginal kind, the rationale for agricultural subsidies are easily understood. Since many farmers are close to subsistence level of living, subsidies sustain them in carrying out the production and consumption activities. While this is the fundamental rationale for subsidies, there are many other *objectives* with which subsidies are provided to farmers.

- a) **Productivity Enhancement:** Subsidies given on inputs (like seeds, fertilizer, pesticides, water, electricity, etc.) makes the inputs cheaper to the farmers. As a result, cost of production per unit becomes less for the farmers. This, therefore, has the effect of increasing the productivity levels.
- b) **Promotion of Technology:** For introduction of improved inputs and technology, the government can provide subsidized farm machinery (e.g. harvester, tractor, irrigation devices) either directly or through bank loans given at lower interest rates. This helps in promotion of technological practices.
- c) **Infrastructural Development:** In order to promote the production of certain crops, price and other subsidies can be extended by the government. This can be in the form of: (i) cheap transportation facilities for marketing the harvest, (ii) establishment of storage facilities, (iii) higher procurement prices offered, etc. Such subsidies, besides promoting the specific crops, have the indirect effect of improving the returns to the farmers by minimising losses and increasing profits.
- d) **Export Promotion:** Subsidies can be granted to the farmers to produce for exports. This type of subsidy helps the farmers in becoming more competitive in global market. It also helps them gain a larger share of the global demand.

23.4.2 Types of Subsidies

There can be several forms of subsidies, each of which aims at achieving a specific purpose. We shall discuss them here in brief.

- a) **Input Subsidies:** Subsidies can be granted through distribution of inputs at prices less than the market price. Input subsidies are like per unit subsidy as they bring down the per unit cost of production. The effect of such subsidies will, therefore, be to reduce the marginal and average cost thereby increasing the profits. They also motivate farmers to produce more which reduces the price of agricultural goods. Several type of subsidies can be listed in this category:
 - i) **Fertilizer Subsidy:** This is extended by way of distribution of cheap chemical (or non-chemical) fertilizers to the farmers. It is also given as relief to manufacturers to off-set some of their costs and keep the prices lower. This type of subsidy, therefore, ensures: (a) cheap inputs to farmers; (b) reasonable returns to manufacturer; (c) stability in fertilizer prices; and (d) regular supply (i.e. availability) of fertilizers. In some cases, this type of subsidy is extended by lifting tariff on the import of fertilizers.

- ii) **Irrigation Subsidy:** These are costs borne by the government to ensure irrigation facility to the farmers. This is the difference between the per unit operating and maintenance cost of irrigation infrastructure and the actual per unit irrigation charges recovered from the farmers. The government bears this type of subsidy by constructing canals and dams and charging low prices for the irrigation facilities provided to the farmers.
 - iii) **Power Subsidy:** This is similar in nature to the irrigation subsidies. It refers to the difference between the per unit cost of generating and distributing electricity and the price charged from the farmers for its use. Such subsidies act as an incentive to farmers to invest in pump-sets, bore-wells, etc.
 - iv) **Seed Subsidy:** This refers to high yielding seeds provided by the government at low prices to the farmers. It also includes investment in R & D (Research and Development) to produce such seeds.
 - v) **Credit Subsidy:** This refers to the difference between the interest charged from farmers and the actual cost of providing credit. It also includes other costs such as write-offs on bad loans, administrative expenses, etc. The government can provide this kind of subsidy by: (a) incurring expenditure on the setting up of more banks in rural areas for specifically advancing agricultural loans, (b) by charging interest rates at lower level, (c) by relaxing the terms of credit such as collateral requirements, etc.
- b) **Price Subsidy:** It is the difference between the price at which food grains are procured from the farmers and the price at which they are distributed through the PDS. This kind of subsidy is extended by the government to off-set the losses to the farmers when the market price is low. In such a situation, the government procures the crop from the farmers at a price higher than market price. The effect of this kind of subsidy is the opposite of ad valorem taxes (which has a reducing effect on output and profits) as it increases the profits of the farmers and could motivate them to produce more.
- c) **Infrastructural Development and Crop Promotion:** Good roads, facilities for cold storage, regular supply of power, market information services, transportation services, etc. are vital for carrying out the agricultural operations efficiently. The cost of establishing such public services is also huge which can be borne only by the government. Such services are in the domain of public goods as the benefit from such facilities accrue to all the cultivators in an area. Such investments, therefore, amount to providing indirect subsidies to the farmers by minimising their losses which would otherwise be high for the farmers in the absence of such critical services.
- d) **Export Subsidies:** This type of subsidy is extended to encourage farmers to produce for the export markets. They help earn foreign exchange. As we have already noted, it is important to promote exports so that we can take the benefit of our comparative advantage in agriculture and gain a place in the global market. Agricultural exports are thus encouraged by providing subsidies by the government. It is, however, important to achieve this objective with due regard to meeting the domestic requirements.

We must note that while subsidies raise the profit level of some farmers, it does not in any way benefit the agricultural labourers who constitute about 40 percent of those engaged in agriculture. They are specifically called as 'landless labourers'. Thus, if the purpose of the government is to improve the living conditions of the poorest sections, it

should go beyond subsidies. For this, it should effectively implement the minimum wage Act, make regular amendments of agricultural wages to compensate for rising prices, implement land reforms in earnest, etc. For the owner cultivators also, to avail the benefits of cheaper pump sets, fertilizers, electricity, etc. a farmer has to have a minimum amount of land and capital at his disposal. This is because the new technologies are not scale-neutral with respect to resources (i.e. productivity improves with a certain optimum volume of resources). So subsidies have once again benefitted the rich farmers. The poor farmer's condition has not only not improved much, in many cases he has become poorer because of increase in input prices. He is also affected with the rise in food prices as he is the net buyer of food items. Further, subsidies have remained a major problem in the expenditure structure of the government. Food subsidy (due to public distribution system operations) and input subsidy (particularly fertilizer) constitute the major components of total subsidy in India. Low user charges in sectors such as power, road transport and irrigation have impaired state budgets. However, over the years this has declined. Nonetheless, rationalising the user charges and evolving methods by which the subsidies can be targeted to the really needy are directions in which efforts are critically needed.

23.4.3 Inter-Country Profile

Agricultural subsidies are quite low in India as compared to the OECD countries. Table 23.1 gives a comparison of the subsidies provided by India in agriculture with other developed countries. Although the data presented is up to 1999, it still tells us that our subsidy for agriculture is far lower than that in other advanced countries. The question of subsidies is hotly debated both in the international context (which is mainly due to WTO compulsions on which you will study more in unit 27 of this course) as also in the context of domestic constraints on fiscal imprudence. Many critics recommend abolition of subsidies. Their argument is that subsidies distort prices by not letting the market allocate resources efficiently. Another argument made is that it leads to higher fiscal deficit causing higher inflation, balance of payment difficulties and falling exchange rate. It is also argued that subsidies result in 'crowding out' of public investment leading to lower capital formation (i.e. the resources available to the government being limited, the resources spent on subsidies, to that extent, reduces the availability of resources for infrastructure development). A related argument is that subsidies do not contribute to 'capacity development' whereas resources spent on skill and infrastructure development programmes does this by enhancing the ability of the beneficiaries for better productive engagement. However, as we have seen above, subsidies serve many useful purposes of a short term nature. In light of this, decisions on changing the nature and extent of subsidies should be made only after properly evaluating their consequences.

**Table 23.1: Agricultural Subsidies in Select OECD Countries and India
(in US \$)**

Country	1986-88		1997		1998		1999	
	Per Farmer	Per Hectare	Per Farmer	Per Hectare	Per Farmer	Per Hectare	Per Farmer	Per Hectare
Canada	12000	75	7000	42	8000	48	9000	52
EU	11000	707	16000	815	18000	890	17000	831
Japan	15000	10048	21000	10211	22000	10005	26000	11792
USA	17000	98	12000	73	19000	116	21000	129
OECD	11000	187	10000	189	11000	209	11000	218
India	11	8	55	43	61	46	66	53

Source: Department of Agriculture and Cooperation, Ministry of Agriculture, Government of India. (<http://agricoop.nic.in/statistics/stock2.htm>)

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

- 1) What are the two major issues due to which a clear-cut policy on agricultural taxes has not emerged in India? Which of these two would you identify for a conceptual lacuna in evolving a policy on agricultural taxation? Why?

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- 2) For which two reasons has 'land tax' remained constant in real terms over time in India? In what way has this affected the Indian agricultural development?

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- 3) Which of the two issues identified for 1 above is related to the tenancy system in Indian agriculture? On what grounds has this been criticised to lack a rational basis?

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- 4) What are the two proposals made to bring agriculture into the direct tax fold? Which of these two proposals is differentiating in its principle? How?

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- 5) How are subsidies opposite of taxes? What characteristic of Indian agriculture provides the 'fundamental rationale' for agricultural subsidies in principle?

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- 6) Do you agree that subsidies have a role in promoting technology absorption and also result in infrastructural development? How?

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- 7) Mention the four types of input subsidies. How do they contribute to increasing the profit of farmers?

- 8) Which of the input subsidies promote technology absorption? How?

- 9) Which subsidy bears the character of a 'public good'? In what way is it beneficial to farmers?

- 10) State the objectives behind the granting of 'export subsidies'.

- 11) Have 'subsidies' benefited all class of persons dependent on agriculture? If not, in what direction efforts are needed to remedy this anomaly?

- 12) What are the other problems caused by subsidies? What can you suggest to rectify this adverse situation?

- 13) How did the per-farmer and per-hectare subsidy in India compare in the later years of 1990s as compared to other developed countries?

- 14) What are the three arguments made against subsidies in agriculture?

23.5 AGRICULTURAL INSURANCE

Insurance aims at spreading the risk associated with production across different producers and time. By paying a certain amount per year or month to the insurer, called premium, the producer gets to recover by the insurer any loss suffered in production due to specified factors probable in occurrence but difficult to guard oneself against. The amount of premium can vary depending on the sum insured i.e. the amount of money the producer is going to be paid if there is damage to the output. The insurance company makes profit because any loss or damage to the output may not happen to all the producers. Thus, only a few producers will have to be paid the damage claim which can be made up by the premium received from other producers whose output may not be damaged. Also, the damage may not happen at all periods of time i.e. damage to be paid to some producers at some points of time can be made up from the premium received by other producers at other points of time. While this rationale works in general, and to an extent even in agriculture, we must note that agricultural operations bear some special characteristics because of which insurance companies are more cautious. These are: (a) damage to crop is more likely to occur across farmers in a region (e.g. drought or flood affecting all farmers in a region); and (b) it is difficult to monitor the activities of the farmers as the farming activity stretches over long periods of time and space. Because of this, when the farmer is not monitored, he may take actions which raises the risk of production and therefore the liability of the insurance company, called the problem of 'moral hazard'. In such a case, the insurance company will have to pay more damages than anticipated and can make it bankrupt. In view of these factors, private sector agricultural insurance has not been successful in many countries. Nonetheless, the importance of agricultural insurance is well recognised and catching up across countries and regions. Moreover, it has been observed that insured farmers tend to take many productivity enhancing measures generally not undertaken by uninsured farmers. Such a course of well conceived responsible action is pointed out to be the sector's long run self-sustainable element towards which the government and the insurance sector should work. In India, the government (and a few private companies) have launched many agricultural insurance schemes over the last few years. We shall briefly review them in this section.

- i) **Crop Insurance Scheme (CIS) (1972-78):** Based on an individual centric approach, this was one of the earliest insurance schemes launched in India. The scheme covered select crops like groundnut, H-4 cotton, wheat and potato. The scheme was launched on a voluntary basis and was implemented in six states. About 3000 farmers were covered under the scheme. The actual claims settled under the scheme (Rs. 0.38 crores) was far in excess of the total premium amount collected (Rs. 0.05 crores) with the ratio of 'premium to claims' being 1 : 7.6.
- ii) **Pilot Crop Insurance Scheme (1979-85):** The scheme was area-centric in approach and covered crops like cereals, millets, oilseeds, cotton, potato and chick pea. The scheme covered loanee farmers on a voluntary basis with 50 percent subsidy on premium for small and marginal farmers. The total number of farmers covered were 6.23 lakhs. The total premium collected (Rs. 1.95 crores) exceeded the total claims settled (Rs. 1.56 crores) with a favourable premium to claims ratio of 1 : 0.8.
- iii) **Comprehensive Crop Insurance Scheme (1985-99):** The scheme was area-centric and covered foodgrains and oilseeds. The scheme was made compulsorily applicable to all loanee farmers. A total of 763 lakh farmers were covered with the claims settled (Rs. 2303 crores) far exceeding the total premium amount collected (Rs. 404 crores). As a result, the ratio of premium to claims is: 1 : 5.7.
- iv) **Experimental Crop Insurance Scheme (1997-98):** The area-centric scheme covering cereals, pulses and oil seeds, covered non-loanee small and marginal farmers segment in addition to the loanee farmers. About 4.78 lakh farmers were covered under the scheme. The claims settled (Rs. 39.78 crores) was far in excess of the total premium collected (Rs. 2.86 crores) with the ratio of premium to claims being most critical (1 : 13.9).
- v) **National Agricultural Insurance Scheme (1999-till date):** The scheme was both area and individual centric. It was open to all farmers with 10 percent premium subsidy provided for the small and marginal farmers. The scheme covered foodgrains, oil seeds, annual commercial and horticultural crops. The total farmers covered are the highest of all the schemes so far tried (971 lakhs). Further, the ratio of 'premium to claims settled' [2944 : 9857; (in Rs. Crores)], was modest, though still adverse at 1 : 3.3.
- vi) **Farm Income Insurance Scheme (2003-04):** This was a scheme operated for one year for insuring against production and market risks compulsorily for loanee farmers. It was a area-centric scheme covering the crops of wheat and rice for a total of 2.22 lakh farmers. This is the second scheme for which the premium (Rs. 15.68 crores) to claims (Rs. 1.5 crores) ratio was favourable (1 : 0.10).
- vii) **Weather/Rainfall Insurance Scheme (2003-04 to till date):** This is a individual centric scheme which covered all farmers based on rainfall received at the specified blocks. It has covered a total of 5.39 lakh individuals for products like foodgrains, oil seeds, annual commercial and horticultural crops.

With the estimated total number of farmers covered by the insurance schemes being low at 15 percent, the above details of schemes (implemented over the last four decades in India) tells us that the schemes are heavily state supported. The desired direction being to make them self-sustained, the agricultural insurance sector in India has a long way to go.

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

- 1) Mention the three specific characteristics of agricultural insurance which makes it generally a non-profit venture.

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- 2) In spite of the agricultural sector bearing the above characteristics, what logical argument is advanced to highlight its ability to be self-sustained in the long run?

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- 3) What are the seven agricultural insurance schemes implemented in India over the last four decade period? Which particular feature is commonly seen in most of these schemes?

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- 4) Of all the insurance schemes implemented so far, which two schemes are notable for their favourable ratio of 'claims to premium'? What are these ratios? Of the remaining insurance schemes, what is notable about the NAI scheme?

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23.6 LET US SUM UP

Average agricultural income in India is very low. Keeping this in view, the government has chosen the policy of not taxing the sector. However, it is the rich farmers who are benefited maximum from such exemptions. Same is true for the non-agricultural rich who show their income to be agricultural and reap the benefits. This situation needs to be rectified by rationalising the land tax and by including absentee landlords under the tax net. Government provides agricultural subsidies for various reasons. Subsidies in general raise output and profits, and in certain cases reduce price. However, it should be selectively given to poor farmers and for selected crops. In India, subsidies have served its purpose at many crucial junctures and has helped in raising the living standards of poor peasants. Most important of all, it has mitigated the food crisis. However, the

uneven distribution of subsidies have led to greater inequality. The remedy is not to do away with subsidies but target them appropriately to poor farmers and consumers. The high level of impoverishment of the majority of Indian farmers and the need for food security of the poor necessitate that subsidies be continued. Apart from taxes and subsidies, insurance is an important instrument useful in providing the required degree of confidence for producers to take risks. Many insurance schemes have been operated in India for close to four decades. Most of them are marked for heavy state subsidy. The principle of insurance, however, requires it to be self-sustainable. This means a large number of farmers must buy insurance against a small premium and guard themselves against probable loss. This would make the insurance companies profitable with a relatively small number of insured actually claiming the insurance payment. However, seen from the 'ratio of premium to claims' settled, the experience of Indian insurance in agriculture has been adverse. Two exceptions to this are: (i) the Pilot Crop Insurance Scheme (1 : 0.8) and (ii) the Farm Income Insurance Scheme (1 : 0.10). The NAIS launched in 1999 (and continued to be in operation), is a scheme which is also notable for its relatively lower ratio of premium to claims (1 : 3.3). Although the claims are more than three times higher than the premium, of all the other schemes, this scheme has relatively the lower liability factor. Judged from this performance indicator, agricultural insurance has a long way to go in India.

23.7 KEY WORDS

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| Imperfectly competitive market | : Refers to the market form where there are only a few producers and where goods are differentiable (i.e. each producer produces goods which are somewhat different from others). Therefore, each producer has some limited power to influence the market price. However, if price is raised, output falls due to a downward sloping demand curve. |
| Perfectly competitive market | : Refers to the market form where the goods produced by all the producers are identical and each producer produces a very small amount of the aggregate output produced in the market. As a result, no producer can influence the price. |
| Agricultural per capita income | : The share of agriculture in GDP has fallen from 39 percent in 1980 to 18 percent in 2010. The percentage of population dependent on agriculture has also fallen from 70 percent in 1980 to 56 percent in 2010. This has led to a fall in the share of agricultural per capita income from 56 percent in 1980 to 32 percent in 2010 although in absolute terms the per capita agricultural income has increased from Rs. 4745 in 1980 to Rs. 10865 in 2010 (i.e. an increase of 2.3 times over three decades in 2004-05 prices). In contrast, the overall economy's per capita income has |

increased from Rs. 8540 in 1980 to Rs. 33802 in 2010 (i.e. an increase of nearly 4 times over the three decades). This means that the agricultural per capita income has risen slower than that in the other sectors viz. manufacturing and the services.

Public goods

- : These are those goods whose utility cannot be limited to one or two individuals e.g. improvement in infrastructure like better roads. In other words, consumption of such a good by one person does not exclude anyone else from consuming it.

Agricultural insurance

- : This is the insurance provided for agricultural operations like rainfall deficiency, harvest failure, natural calamities, etc. Like other insurance schemes the insurance policy holder pays a premium at regular intervals to the insurance company in return of compensation to the policy holder for loss of agricultural produce against the stated factors. The compensation amount is called sum assured.

23.8 SUGGESTED BOOKS/REFERENCES FOR FURTHER READING

Kapila, U. (ed.), 2009, *Indian Economy Since Independence 2008-09*, Academic Foundation, Delhi.

Parikh, K. S., 1997, *India Development Report 1997*, Oxford University Press.

Patnaik, U., 1999, *The Long Transition*, Tulika Publications, New Delhi.

Raj, K. N., 1990, *Organizational Issues in Indian Agriculture*, Oxford University Press, New Delhi.

23.9 ANSWERS/HINTS FOR CYP EXERCISES

Check Your Progress 1

- 1) See section 23.1 and answer.
- 2) See section 23.2 and answer.
- 3) See section 23.2.1 and answer.
- 4) See section 23.2.2 and answer.
- 5) See section 23.2.2 and answer.
- 6) See section 23.2.3 and answer.
- 7) See section 23.2.4 and answer.

Check Your Progress 2

- 1) See section 23.3 and answer.
- 2) See section 23.3 and answer.
- 3) See section 23.3 and answer.
- 4) See section 23.3 and answer.
- 5) See section 23.4.1 and answer.
- 6) See section 23.4.1 and answer.
- 7) See section 23.4.2 and answer.
- 8) See section 23.4.2 and answer.
- 9) See section 23.4.2 and answer.
- 10) See section 23.4.2 and answer.
- 11) See section 23.4.2 and answer.
- 12) See section 23.4.2 and answer.
- 13) See Table 23.1 and answer.
- 14) See section 23.4.3 and answer.

Check Your Progress 3

- 1) See section 23.5 and answer.
- 2) See section 23.5 and answer.
- 3) See section 23.5 and answer.
- 4) See section 23.5 and answer.