

SEMESTER: IV (UG)
SUBJECT: INDIAN ECONOMY (MODULE-II) UNIT-III (a)
TOPIC: AGRICULTURAL SECTOR
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LECTURE NOTE # 1

Agriculture is the most important sector in the Indian economy from the perspective of poverty alleviation and employment generation. Agriculture has always been the backbone of the Indian economy over the years and despite concerted industrialisation in the last six decades, agriculture still occupies a place of pride. It provides employment to around 60 percent of the total work force in the country.

The significance of agriculture in the national economy can be best explained by considering the role of agriculture under the following heads:

1. Share of agriculture in national income in India :

Year	Share of Agriculture in total GDP(percentage terms)
1950-'51	56.5
1970-'71	45.9
1990-'91	34.0
2000-'01	24.7
2005-'06	19.55
2006-'07	18.51
At 2004-2005 prices	
2007-'08	17.8
2008-'09	15.7
2009-'10 (P.E)	14.7
2010-'11	14.5
2011-'12*	13.9

TABLE 1 : Share of Agricultural Sector in TOTAL GDP (at 1999-00 prices)

Data Source: Central Statistical Organisation

P.E---Provisional Estimates

*---Advanced estimates

With respect to the data shown in Table 1 we can make the following observations :

- Agriculture has been the major source of livelihood in the Indian economy .
- Agriculture and allied activities have substantially contributed to the Gross Domestic Product , though over the years the contribution of agriculture have gradually declined as the shares of the manufacturing sector and the tertiary sector have increased .While the share of agriculture in the national income has been declining , the workforce involved in this sector has exhibited only a marginal decline.

2. Indian agriculture and the pattern of employment in the economy :

Agriculture dominates the economy to such an extent that a very high proportion of working population in India is engaged in agriculture. Data provided by the Census of India reveals that

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in absolute terms , agriculture provided employment to 98 million persons in 1951 ; the number of people working on land (cultivators and agricultural labourers) increased to 235 million in 2001 . In terms of percentage , however , people working on land came down from 70 to 59 during the five decades between 1951 and 2001.

Notwithstanding the major diversification in the structure of the economy over the last few decades, the dependence on agriculture still remains . As agriculture remains a key sector in rural areas, it continues to have great potential for reducing poverty and hunger in the rural sector. The pulls and pressures in the agricultural sector continue to exert their influence on the overall course of economic activity, although the relative dependence of the economy on the agricultural sector had registered a marked decline.

The Tenth Plan (2002-07) estimated that the agricultural sector provided employment to almost 57 percent of India' s work force and is the single largest private sector occupation . It is, however , really disturbing that the proportion of agricultural labourers has increased from 20 to 27 percent between 1951 and 2001 but that of cultivators registered a decline from 50 percent to 32 percent . This shows clearly the growing pauperisation of the rural peasantry .

3. Linkage between the Agricultural and Industrial Sectors :

The linkages between the agricultural and industrial sectors focus on the role of agriculture as (i) supplier of wage goods to the industrial sector , (ii) provider of raw materials to agro-based industries ,(iii) generator of agricultural income that encourages rural demand for industrial products.

There is enough empirical evidence to show that a unit increase in agricultural output would positively affect both industrial production and national income.

Hence we may conclude that Indian agriculture has served to be the most important source of supply of raw materials to our leading agro-based industries like that of cotton and jute textile industries , sugar, flour mills vanaspati and plantations etc. . Many small scale industries and cottage industries are indirectly dependent on agriculture like handloom weaving, oil crushing etc. for the raw materials ...together they account for 50 % of the income generated in the secondary sector in India. Again, in recent years the development and growth of food processing industries have also led to an increase in generation of income and employment.

4. Role of Agriculture in the field of International Trade :

The agricultural products like that of tea , sugar, oilseeds, tobacco , spices forms the main items of exports of India. The proportion of exported agricultural commodities to the total exports were about 50 % and not only that all the agro- based manufacturing industries also contribute a considerable amount to the total exports of India. However ,with the diversification of exports the agricultural exports have increased from 18.5% in 1990-'91 to 20.3% in 1996-'97 but gradually started to decline persistently and were of the order of only 9.9% in 2010-'11. Imports of agricultural products have also been a considerable part of India's foreign trade and they include items like textile fibres, fertilizers, vegetable oils , fats , agricultural implements and machinery. These imports of agricultural commodities have drained a lot of foreign exchange and have increased the current account deficits in the front.

5. Role of agriculture in Economic Growth and Development

Agriculture plays a significant role in the development of the economy of India. For example, agriculture supports India's transport system which secure bulk of their business from the movement of primary goods .Internal trade too is influenced much by agricultural operations ; that is quite a substantial part of India's internal trade deals with the agricultural products. The operations of the agricultural sector also provides considerable support to other services like

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banking , storage, etc. and thereby enables development of these sectors through both forward and backward linkage effects .Agricultural growth to a considerable extent had been quite successful in eradicating poverty of the rural masses , especially after the introduction of the strategy of Green Revolution though at the same time it had also raised the problem of inequality .Thus it may be inferred that agricultural sector is the backbone of the Indian economy. The rural areas serve as considerably larger markets for low -priced and medium -priced consumer goods even the consumer durables. Again, the rural domestic savings also serve as an important source of resource mobilisation. Accordingly any change in this particular sector of the economy will have a multiplier effect on the economy as a whole. However, since, 2002-2003, the Indian agricultural sector had been almost going through a severe crisis--- huge food grains surplus have been wiped out, import of wheat imports have been planned and a nation of more than a billion people had become dependent on the imports of the basic items like that of food grains and edible oils and this led to the increase in deficits. Hence the Tenth Five Year Plan asserted that the agricultural sector not only acts as a tower of strength for maintaining the food security but also maintains the national security as well. Further the allied sectors like animal husbandry , horticulture ,dairy and fisheries also play a significant role in improving the overall economic conditions and health condition of the masses. Keeping in mind the role played by agriculture and the allied sectors, all the Five Year Plans have emphasized that “ agricultural development is central to the economic development of the country.”

Before we discuss the problem of low productivity in Indian agriculture ,let us first discuss in brief the salient features of Indian agriculture .

The salient features of Indian agriculture are discussed under the following heads:

- ***Diversity in agricultural systems*** : The huge expanse of this country and diverse climates have resulted into diverse agrarian systems. In different parts of the country, agriculture has conspicuously different traits appertaining to terrain, slope, temperature, rainfall, soil properties, and size of holdings, technology, and availability of irrigation, labour, infrastructure and marketing facilities. Consequently, there are macro and meso regional variations in agricultural topologies and agricultural systems. For example, the hill dwellers of northeast India are still practicing jhoom cultivation (shifting cultivation) while in the upper Brahmaputra valley (Dibrugarh, Lakhimpur, Jorhat) tea plantation is the dominant economic activity. The farmers of West Bengal and Bihar have the intensive subsistence (dominated by paddy crops) while the Punjabi and Haryanvi farmers are growing wheat and rice as the commercial crops. Since each crop performs well under certain optimal geographical conditions the farmers of each region have adopted appropriate technologies for the cultivation of their crops. Thus the Indian agricultural landscape has all sorts of agricultural systems ranging from nomadic herding and shifting cultivation to subsistence agriculture, plantation and commercial farming.
- ***Dependence on Nature*** : A dominant reality of Indian agriculture is that it faces a lot of uncertainty on account of the uncertainties in climatic conditions prevailing in India. In India agriculture is still a gamble on monsoon. Due to the failure of monsoon ,crop production is also very uncertain. The farmers in certain areas face drought conditions while in some areas there are also occurrence of floods .Strong dust laden winds ,locust and other features of harsh weather make agriculture an uncertain occupation.
- ***Diversity in different spheres***: There is a large diversity amongst regions and even within the regions there are differences in matters like ownership of land , methods of irrigation ,size of landholdings, system of agriculture , rotation of crops etc. These differences are not the result of economic and historical factors but also are caused by differences in

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social , political and cultural reasons. These differences emphasize that it becomes very difficult to draft a uniform agricultural policy for the economy and thereby implement it effectively.

- **Low levels of productivity:** The agricultural productivity in India is low as compared to that of the developed countries. The low levels of agricultural return may be attributed to obsolete technology, small size of holdings, scattered fields and inequality in ownership. Most of the farmers are tradition bound, superstitious, uneducated, and conservative and their risk taking capacity is very low. They are generally shy in the adoption of new technology and their poor economic condition is an impediment in the purchase of new seeds, fertilizers, good tools and technology and development of irrigation and other infrastructural facilities in their fields.
- **Large Inequality :** It is clear from the presence of wide disparities in the farm size and land holdings. The differences in operational holdings (i.e. owned and /or leased in land) also reflect the income inequalities among the small and large farmers.
- **Absentee Landlords :** As per the land reform measures though the Zamindari system was abolished, there are still numerous absentee landlords in all parts of the country. According to one estimate about 50 per cent of the cultivated land of the country is under written or oral tenancy. The big farmers are invariably carrying on their agriculture with the help of agricultural labourers and sharecroppers. There is a tremendous increase in the number of agricultural workers and marginal cultivators who assist the big farmers in the cultivation of crops. These workers, marginal farmers and sharecroppers are often exploited by the landlords as usury is still in vogue.
- **Vast underemployment :** Yet another dominant feature of Indian agriculture is the presence of massive underemployment . Barring a few places where irrigation facilities permit multiple cropping , people dependent on agricultural activities are often found to remain either seasonally unemployed. Again there is also the presence of disguised unemployment in the agricultural sector and hence the marginal contribution of these labourers to the production process is almost nil.

Problem of Low Productivity in Indian Agriculture

The major challenge for the planners and policy makers is to prescribe ways and means to keep the growing population sufficiently fed but the major problem faced by them is the low levels of productivity in Indian agriculture. Although India has attained self-sufficiency in food staples to an extent , the productivity of its farms is below that of Brazil, the United States, France and other nations. We may define agricultural productivity as the ratio of total agricultural output to total agricultural input used in farm production. Keeping other things unchanged ,productivity can be used to measure the efficiency with which the factors can be used in the production process. Dewett opined that “Productivity expresses the varying relationship between agricultural output and one of the major inputs, like land or labour or capital, other complementary factors remaining the same.....”. Though there has been a very gradual and steady increase in the productivity in a number of crops since independence . However , despite this increase it is an established fact that agricultural productivity in India is very low. It can be stated that agricultural productivity is considered from two perspectives--- (i)productivity of land and (ii) productivity of labour engaged in agriculture. It had been observed that over the years not only productivity per hectare is low in land but also the average productivity of labour engaged in agriculture is also very low as compared to the other countries. Let us now delve into the causes of low productivity of agriculture in India.

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Causes of low productivity in Indian Agriculture

The causes of low productivity can be attributed to the following categories:

- General Causes
- Institutional Causes
- Technical Causes
- Other Causes

Let us now discuss each of these causes in brief:

General Causes:

Social Environment: The social environment of the villages is regarded as of the major hindrances to the development of Indian agriculture. It has been observed that in general the Indian farmers are illiterate, superstitious, conservative and do not respond to the new and modern agricultural techniques. Again the working conditions as well as the health conditions are very poor and it has lessened the productive capacity of the farmers.

Pressure of Population on land: The population of India had been increasing by a huge extent over the years. With demographic growth rates being what they are, an increasing addition to the labour force could be expected to be absorbed in the industrial sector of the economy. But the rate of growth in the industrial sector has been far from adequate. Consequently, the increasing population has fallen back on land for its livelihood, with the result that the mounting pressure had led to the development of several problems like:

(i) fragmentation and subdivision of holdings; (ii) supply of improved practices and services always falling short of requirements, (iii) conditions of unemployment and disguised unemployment, etc.

Institutional Causes

Among the more important causes responsible for low productivity in agriculture are the institutional and structural arrangements that exist in India. Some of the institutional and structural weaknesses from which Indian agriculture suffers are enumerated below:

Land Tenure System :

The Zamindari system prevalent in India in the pre-independence period can perhaps be regarded as one of the prime causes of low productivity in Indian agriculture. Highly exploitative in character, this system had wiped out the very capacity, willingness and the enthusiasm of the cultivators to increase production. In the immediate post-independence period, the zamindari system was abolished. The new system that has taken its place has proved no better. These people only change their garb and became large landowners. Exploitative practices still prevailed along with the presence of absentee landlords, large rents were still extracted, even though land reform measures were introduced, there is no security of tenure. These situations manifested the presence of semi-feudal production relations. In such a situation agricultural productivity could be increased only through technological changes. If investment in agriculture had to be increased it was necessary to eliminate the rentier class of zamindars and usurious class of money lenders.

Lack of credit and marketing facilities:

It has often been misconstrued that Indian Farmers continue to produce the same agricultural output even on more attractive prices. However the facts were different. The

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studies of Raj Krishna, Hooper and Stern indicated that the Indian farmers reacted rationally to their economic environment. Most of the times on account of lack of proper marketing facilities and non-availability of credit at a fair rate of interest, the cultivators are not able to invest the requisite resources in agriculture. Thus, deficiency of investment in this sector is another problem and hence, the rate of capital formation in this sector had been inadequate. Again there had been inadequacy of agricultural support programmes and further, there had been a considerable decline in public investment in agricultural infrastructure and all these factors have led to a fall in productivity of not only of land but also of the cultivators.

Uneconomic holdings:

According to the National Sample Survey, 52% holdings in 1961-'62 had a size of less than 2 hectares, in 1990-91 78% of the total holdings came under this category. As per the data from the Agriculture Census 2010-'11 small and marginal holdings of less than 2 hectares account for 85% of the total operational holdings and 44% of the total operational area. Most of these holdings are not only extremely small, they are also fragmented into a number of tiny plots such that cultivation in these lands can only be cultivated using labour intensive techniques and this leads to low productivity. Unless these excessive labourers are transferred to some alternative jobs or if large scale farming are not initiated through consolidation of land holdings or by practising cooperative farming, modern techniques of agriculture could not be adopted and hence the hope of raising the level agricultural productivity will be difficult to achieve.

Technological Causes

Outmoded agricultural techniques:

Indian agriculture primarily provided subsistence to the Indian farmers and commercialisation of agriculture was not much prevalent during the time of Independence. Most of the Indian farmers generally adopted traditional methods of farming and thus used outmoded agricultural techniques. Most of the Indian farmers still use the bullocks and wooden ploughs and there was also inadequate availability of highly expensive modern inputs. Again the use of fertilizers and the new high yielding variety (HYV) seeds were very limited. The HYV seeds ushered the strategy of Green Revolution in India but only 86% of total wheat production and 74% of total rice production comes from the HYV seeds. This is due to the fact these seeds require a lot of water in addition to the other inputs like that of fertilizers and pesticides. However, these require a lot of investment, which is also quite risky given the uncertainties associated with uncertain monsoon as well as limited irrigation facilities. Again use of chemical fertilizers in an unbalanced proportion most of the times degraded the soil fertility and hence lowered the level of agricultural productivity. The problems of pests, insects, different crop diseases etc. affected growth of crops to a huge extent and thus inhibited the agricultural growth and lowered the crop yields over the years. Empirical evidence shows that the insects and pests affect the damages vegetable production to approximately about 40%. The loss in production of crops have exhibited an increasing trends over the years. The estimated losses due to attack of pests and insects were about Rs.6000 crores in 1983 and that had risen to about Rs 20,000 crores in 1993 and to 29,000 crores in 1996.

There was also a very slow diffusion of agricultural technology to the farmers, especially marginal and small farmers. These factors also led to low productivity in the agriculture.

Inadequate Irrigation Facilities:

Indian agriculture is affected to a large extent by the uncertainties and irregularities in the monsoon and thus productivity is bound to be very low in those areas which are devoid of irrigation facilities and are completely dependent on rains. The irrigated component of total

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cropped area and the progress achieved in intensive cultivation of land are still at very modest levels. It has been observed that about 43.4% of the cultivated land had irrigation facilities in the year 2000-'01. It had increased by a very meagre amount to only 48.3% in the year 2008-'09 and even then those areas which had the irrigation facilities could utilise the benefits of irrigation fully because of improper and defective management. The cost of irrigation have also been increasing and it is quite difficult for the small and marginal famers to avail such a facility.

Other Causes

Weaknesses in Policy Perceptions:

As there are certain compulsions in the economic , social and political front the strategy for agricultural growth in India adopted by the Indian planners and policymakers had been engaged with the goal of achieving quick increases in food-grains production by concentrating on the resources and efforts on the relatively better-endowed areas and strata of cultivators. Hence, this approach did not lead to an optimum allocation of the scarce factors like that of water and fertilisers across crops as well as the group of farmers.

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