

Structure of The Indian Economy

Unit - III

Agriculture

Green Revolution

Since the mid 1960s, the traditional agriculture practices are gradually being replaced by modern tech and farm practices in India & a veritable (real) revolution is taking place in our country. Initially, the new technology was tried in 1960-61 as a pilot project in 7 districts and was called 'Intensive Agriculture District Programme' (IADP). Later the high yielding varieties Programme (HYVP) was also added & the strategy was extended to cover the entire area country. This strategy has been called by various names such as Modern Agriculture Technology, Seed-Fertilizer & Water Technology or simply Green Revolution.

Features

- 1) Revolutionary - It is considered as revolution as it is based on new tech, new ideas, new application of input like HYVs, fertilizers, irrigation, pesticides etc.
- 2) Confined to wheat Revolution -> Green Revolution has been largely confined to wheat & neglecting the other crop.

3) Narrow Spread - The area covered through green revolution was initially very narrow as it was very much confined to punjab, haryana & western Uttar Pradesh only.

4) HYV Seeds → The application of high yielding variety seeds is another important feature of the green revolution.

Cause / Arguments in favour of New Strategy in India on Green revolution:-

The introduction of New Agricultural strategy in India has certain argument in its favour such as:-

- 1) India being a vast ^{agri} country, the adoption of extensive technique is the only way to make a break through in the agriculture sector within the shortest possible time.
- 2) Considering the food crisis for the country the adoption of extensive technique is the only way to make a break like during 1960, it was quite necessary to adopt this new strategy for meeting the growing demand of food.
- 3) The introduction of HYVP has been able to raise the agri productivity significantly. Thus this strategy is economically justified.

- 3
- 4) Increased agriculture production in certain region will produce 2ndry & tertiary effect. For ex, the availability of main food in the country would also decrease our dependence on for import & thereby release some foreign exchange resources for the other sections of the economy.

Achievement of Green Revolution →

- 1) Boost the Production of Cereals → The major achievement of the New strategy is the boost to the production of major cereals viz. wheat & rice. The production of wheat increases from 11 million tonnes in 1960-61 to 85.9 million tonnes in 2010-11. The yield per hectare rises from 850 kg to 2938 kg per hectare during the last 6 decades. Similarly the production of rice increased from 35 million tonnes in 1960-61 to 95.3 million tonnes in 2009-10.

- 2) Increase in production of cash crops → The green revolution did not effect initially the production of cash crops such as sugarcane, cotton, jute, oil seeds etc. This cash crops didnot record any significant improvement initially. However significant improvement in output of sugarcane took place after 1973-74. In 2010-11, the production of oil seeds touched the record production level of 31.1 million tonnes.

3) Boost to agriculture production & Employment

The successful adoption of new Agriculture strategy has led to the continuous increase in total production and ~~product~~ productivity. As result of new agriculture strategy, food grains' output increased ~~sub~~ substantially from 82 million tonnes in 1960-61 to 241.6 million tonnes in 2010-11. The yield per hectare of all food grains which was 710 kgs in 1960-61 to 1921 kgs in 2010-11.

All this result in increasing agricultural employment because of diverse job opportunities created by multiple cropping and shift towards to hired workers

4) Forward & Backward linkage Strengthened

The new tech & modernisation of agri have strengthened the forward linkage of agri since agri supplies many of the input of industry. Similarly agri modernisation has created a larger demand for output produced & supplied by industry to agriculture & thus the backward linkage has also been quite strong. In this way, the linkage betw agri & industry has strengthened.

Data Source - 1) Govt of India, Ministry of Agriculture, Annual Report, 1991-92, 2011-12

2) Economic Survey 2011-12

Limitations of Green Revolution

- 1) As the adoption of H.V. Programmes were very much restricted among the big farmers, necessitating a very heavy amount of investment, the New Age Strategy has led to the growth of capitalist farming in Indian Agriculture.
- 2) The new Age Strategy fails to recognise the need for institutional reforms in Indian age.
- 3) Green Revolution has widened the disparity in income among the rural population.
- 4) New Age strategy along with increase mechanisation of agriculture has created a prob. of lab. labour displacement.
- 5) Green Revolution widened the inter-region disparities in farm production & income.
- 6) It has certain undesirable social consequences arising from incapacitation due to an accident & acute poisoning from the use of pesticides.

Role of agriculture in Indian Economy

A prosperous system of agriculture is pre-requisite of growth of an economy.

A highly productive agriculture system contribute to economic growth in many ways -

- 1) Agriculture is the source of supply of basic food articles. Scarcity of food may produce ~~into~~ imbalances in the economy & slow down eco growth.
- 2) Agriculture supply raw materials to a number of industries. The failure of agriculture crop in any season ~~spreads~~ spells disastrous. Those industries like cotton textile, rubber, jute etc.
- 3) Rising incomes in agriculture stimulate the progress of industry in two ways -
 - a) Rising agricultural incomes create rural purchasing power needed to buy new industrial goods.
 - b) These create rural savings which help to build up financial resources reqd for investment.
- 4) Surplus agricultural production can easily be exported. Thus it may help an economy to achieve eq^u in BOP.

$$\begin{pmatrix} \text{Credit} = \text{Debit} \\ \text{eq}^u \text{ in BOP} \end{pmatrix} \begin{pmatrix} C \neq D \\ C > D \\ D > C \\ \text{dis eq}^u \end{pmatrix}$$

In short, it will be no exaggeration to say that all planning for development must emphasise the growth of agriculture to make this sector of the economy totally self-reliant.

The role/imp of agriculture during the process of development in India can be changed from the following point: Share in national income.

⇒ Although the share of manufacturing industries & service sector in the total national income is increasing. The contribution of agriculture continues to be significant. The share of agri in national income was as high as 51.3% in 1950-51. During 2011-12, it is about 14.7% indicating thereby that agriculture remains a large source of income in India even after about 6 decades of economic planning.

2) Source of Employment - In India according to census of 2001, 56.7% of total labour force were engaged in agri. In other countries like U.K, USA, Russia is 3, 4 & 20% respectively. It implies that occupational structure is very much characteristic of developing economy.

3) Source of Raw materials for industries -

Dependence of no. of industries on agri is evident & by the fact that the failure of agri crop in any season spells disaster for industries. This is more true of industries like cotton textile, rubber, sugar etc.

4) Role of agri in field of international trade.

Agri product - tea, sugar, oil seed constitute an main item of export of India. The contribution of agri to total export was 50% in 1950-51 came down to 9.9% in 2011-12.

5) Dependence of Trade & Transport -

This agency secure most of their business for movement of agri goods. food grains, raw materials & other agri products are transported in bulk from producing region to consuming region. Their movement helps to sustain the vast network of roads & railways.

In short it has been rightly observed that agri is the backbone of the Indian economy. No scheme of programme of economic development of India can afford to ignore the reality of Indian economic situation.

Causes of Low agri productivity in india

Factors which are responsible for the backwardness or low agricultural productivity in indian agriculture can be grouped under 3 broad broad categories.

- 1) Gen factors -
- 2) Institutional factors
- 3) Technological factors.

General factors -

a) Over ^{crowding} ~~counting~~ in agricultural - There is heavy pressure of population. Since the non agricultural sectors of the economy have not been able to expand at a sufficiently rapid pace over the period of last 6 decades, this pressure has continuously increased. In 2001 about 208 million workers were employed in agriculture sector. Over crowding in agriculture land has resulted in gradual subdivision & fragmentation. There has also decline the area of cultivated land per cultivator. All these result in low agricultural productivity.

b) Social economic factors - Various social economic factors like farmers' conservative outlook, ignorance, illiteracy, superstition etc stand in the way of adoption of modern technology. Natural factors

c) Natural factors - The rains are totally uncertain in India. Sometimes rains are insufficient & sometimes too much of rain causing heavy floods both of which cause widespread damage & distraction. Other natural calamities such as hail storm, frost or attack by pests etc always go against Indian farmers in stepping up their agricultural productivity. Lack of

d) Lack of adequate finance - Indian agriculture remains backward due to its inadequate financial provision. Although various sources of agricultural finance i.e. both institutional & non institutional exist but their contribution are almost insignificant in quantity.

Institutional factors -

a) Small size of holdings - The average size of agri holdings in india is very small & uneconomical & also fragmented too. According to the national sample survey 82%. Holdings in 2005-6 has a size of less than 2 hectares

b) Defective patterns of Land Tenure -

Land tenure system in India is totally defective & is standing in the way of its agricultural development. The cultivator has to pay high rent to the land & ~~to~~ ^{subjected to} lords, frequent ejectment. Further there are delay in implementation of land reform & uncertainty of about the rights of farmer on land.

The Technological Factors & Traditional method of cultivation

→ Most of the indian farmers continue to use outdated & agricultural technique. Use of fertilizers & new high yielding varieties of seed is also extremely limited.

b) Inadequate irrigation facilities - Indian agriculture is still suffering from lack of assured & continuous supply

through artificial ~~to~~ irrigation facilities. In 2007-8, only 44.6% of gross crop area has irrigation facilities.

c) Agriculture research in India is still very poor in comparison to its ~~aggr~~ requirement.

Remedial Measure to raise agriculture production & productivity -

The following measure should be adopted for raising agri productivity in India -

- 1) Consolidation of Holdings -> Consolidation of holding should be done immediately enacting proper legislation, forming co-operatives & cooperative farming society.
- 2) Proper steps should be undertaken to overcome previous flood of agri ~~result~~ resulted from natural factors. These include extensive flood control method, supplying adequate quantity of pesticide & insecticides.

13

3) Indian farmer must apply modern technique of cultivation, by utilising modern implements, applying adequate amount of fertilizer, using HYV seeds, by adopting scientific cultivation of crop & careful crop planning.
Moreover agriculture resource should be intensified & (fruits of research should be made available to the Indian farmers.)

4) Economic measures ~~so~~ must be adopted which include the improvement of farm organisation & land management, Provision for adequate credit & marketing facilities, Estb of diff types of agro base industries etc in several areas etc. Moreover the govt must introduced minimum price support policy, guarantee minimum price of agri product of the country & implement crop insurance scheme to cover the various risk in agriculture.

5) The quality of farmers should be improved & they should be imparted with general & technical education. Adequate health measure should also be under taken in the rural areas.

Thus the ager productive in india can be improved with the adaption of aforesaid measure in the agricultural sector in the economy.