Role of Technology in Agricultural Development

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Abstract
The economy of India is the seventh largest in the world by nominal GDP and the third largest by purchasing power parity the agriculture sector is main occupation in India's economy but contributes to a declining share of its GDP, India ranks second worldwide in form output. New technologies are needed to push the field frontiers further, utilize inputs more efficiently and diversity to more sustainable and higher value cropping patterns. Indian agriculture has been changed the very face of this sector. The green revolution, blue revolution and yellow revolution and white revolution have been the important milestones in Indian agriculture. One thing common in all these revolutions was use of technology. The revolutions would not have accrued without relevant technologies.

Keywords : GDP, Green Revolution, Blue Revolution, Yellow Revolution, White Revolution, Technology, Agricultural Development.

Classification-JEL : Q 10, Q 13, Q 16, Q 33

1. INTRODUCTION
Agriculture sector of Indian Economy is on of the most significant part of India.

Agriculture is the only means of living for almost two thirds of the employed class in India. Agriculture has acquiring 18 % of India's GDP in 2006-07 in economic data of financial year. In India agriculture sector occupies almost 43 % of geographical area. Agriculture is the only largest contributor to India's GDP. Agriculture plays a vital role in the growth of socio-economic sector.

2. INSTITUTIONAL STRUCTURE
Indian agriculture is characterized by predominance of small and marginal farmers. Institutional reforms will be so pursued as to channelize their energies for achieving greater productivity and production. Particularly in rural areas land reforms will focus on the following areas.

- Consolidation of holding all over the country on the pattern of north western state.
- Redistribution of clinging surplus lands and waste lands among the landless farmers, Unemployed youth with initial start up capital.
- Tenancy reforms to recognize the rights of the tenants and share croppers .
- Development of lease natural for increasing the size of holdings by making legal provisions for giving private lands on lease.
for cultivation and agri-business
Reorganization of women's rights in land.

3. RESOURCE CONSERVING TECHNOLOGIES

Resources are an important asset for on
country. The indiscriminate use of chemicals for
increasing productivity and disease controls
have polluted water bodies and degraded soils.
Resource conservations technologies aim to
produce more at less cost while at the same
time enhancing the natural resource base and
maintenance of soil quality in fairly good
conditions, the input use efficiency also gets
increased due to the right placement of the
seeds and fertilizers at right time and at right
depth. Sustainable inten of agriculture is a good
alternative to avoid localized chronic food and
nutrition insecurity when between 75 and 90%
of staple foods are produced and consumed
locally.

4. INCENTIVES FOR AGRICULTURE

The government will endeavour to create
a favourable economic environment for
increasing capital formation and farmer's own
investments by removal of distortions in the
incentive regime for agriculture, improving the
terms of trade with manufacture sectors. It will
seek to besto n the agriculture sector in as many
respects as possible benefits similar to these
obtaining in the manufacturing sector such as
availability of credit and other inputs, and
infrastructure facilities for development of agri-
business in industries and development of
effective delivery systems. A favourable
economic environment and supportive public
management system will be created for
promotion of agricultural exports. In order to
protect the interest of formers in contact of
removal of quantitative restrictions continuous
monitoring of international prices will be
undertaken and appropriate tariffs protection
will be provided, Import duties on manufactured
commodities used in agriculture will be
rationalized. The domestic agricultural market
will be liberalized hindering increase in farmers
income will be reviewed and all relished to
ensure that agricultural receive prices
commensurate with their efforts, investment.

5. INVESTMENT IN AGRICULTURE

The agriculture sector has been starved
of capital. There has been decline in the public
sector investment in the agriculture sector.
Public investment for narrowing regional
imbalances, accelerating development of
supportive and transparent pricing of inputs will
be formulated to encreage judicious input use
and to generate resources for agriculture. A
conducive eliminate will be created through a
favourable price and trade regime to promote
farmers own investments as also investment by
industries producing inputs for agriculture and
agro based industries. Rural electrification will
be given a high priority as the prime mover for
agriculture development. The quality and
availability of electricity supply well be
imprisoned and the demand of the agriculture
sector will be met adequately in a reliable and
cost effective manner sources of energy for
irrigation and other agricultural purpose will also
be encouraged. Bridging the gap between
irrigation created and utilized , completion of all
onging projects restoration and modernisation
of irrigation informing and implementing an
integrated plan of augmentation and
management of national water resource will
receive special attention for augmenting the
availability and use of irrigation water.

6. MECHANIZATION

Mechanization is also another important
aspect for enhancing agricultural production.
Unfortunately mechanization is very low in
India. Still today farmers use their traditional
implements which
hamper their performance. Farm
mechanization and use of modern gadgets/
machines/equipments and effective completion
of different operation in agricultural field is one
of the most important factors for maximizing
profitability. Mechanization will help to enhance
the overall productivity and production with the lowest cost of production.

7. **GREEN REVOLUTION**

Manu revolution have occurred and changed human lives. In the mid and late – 20th century a revolution occurred that dramatically changed the field of agriculture and this revolution. The green revolution was a period when the productivity of global agriculture increased drastically as a result of new advance. During this period. New chemical fertilizers and synthetic herbicides and pesticides were created. The chemical fertilizers increase productivity provided they got sufficient level of nutrients they required could not be supplied with the traditional composites because they have too concentration of nutrients contents and required bigger area. The newly developed synthetic herbicides and pesticides controlled weeds and prevented diseases, also resulted in higher productivity.

Various methods were used in green revolution as double or multiple cropping system, Proper irrigation system, HYV seeds use of tractors, harvesters, threshers.

In addition to chemical advance, high yield crops were also developed and introduced. High yield crops are crops that are specifically designed to produce more yield. A method known as multiple cropping was also implemented during the Green Revolution and lead to higher productivity.

Multiple cropping is done when two or more crops were grown. These new farming techniques and advance in agricultural technology were utilized by farmers all over the world.

As a result of Green Revolution and due to adoption of new techniques agricultural productivity increase. The ability to grow more food on the same amount of land was also beneficial to the environment because it meant that less forest or natural land needed to be converted to farmland to produce more food.

8. **MULTIPLE OR DOUBLE CROPPING**

It was a primary feature of the Green Revolution. The idea was only for farmers to have two crop seasons within one year. It means that crop production would be double within one year. This was based primarily on the natural one monsoon per calendar year. For farmers to have to double the crops per season there would have to be one artificial monsoon. These were created from a large irrigation facility. Dams were built in rural areas to collect large volumes of monsoon rainwater. This was a simple irrigation technique that rural farmers adopted. Countries involved in the Green Revolution have subsidies in past with the prices of the fertilizers, pesticides and the production of wheat and rice. In the beginning there was no problem with the Green Revolution until the farmers and government started to see problems arising.

9. **CONCLUSION**

Information technology is expanding rapidly which is touching almost all areas of human activity. Green Revolution brought drastic change in the lives of farmers. Mechanisation also plays a vital role in the field of agriculture sustainable intensification of agriculture is a good alternative to avoid food and nutrition insecurely. Various techniques and method have been adopted to increase agricultural productively.

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References