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An Exciting Bird's-Eye View of the New Agriculture Strategy

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ABSTRACT

The mid 1960s was a landmark in the history of Indian agriculture. It was in 1966 that a New Agricultural Strategy was put into practice to tide over the chronic shortages of food grains in the country. This strategy is called High Yielding Varieties Programme (HYVP), popularly known as Green Revolution. The response to the food crisis of the late 1960s was to promote the green revolution in rice and wheat through the provision of a package providing research and extension services, inputs like improved seeds, fertilizers and irrigation and assured off take through MSP based public procurement. This has been implemented successfully over the past 40 years. However, with mounting food stocks this strategy for agricultural growth has now played itself out.

Keywords: Agriculture, Strategy, Crops, Fertilizers, Green Revolution

I. INTRODUCTION

Since the mid 1960s India has been using a very advanced technology. As a result, there has been a big increase in production and productivity. But all has not been well with this change. We discuss the new agriculture strategy, by taking up its meaning and features, its progress and evaluation of the same.

Meaning: The Green Revolution or the New Agriculture Strategy came on the scene around the middle of the 1960's, beginning with the Kharif crop of 1966. It happened because of certain circumstances like drought conditions which prevailed during 1965-66 and 1966-67. These were also the years when the seeds of high yielding variety became available. Without the loss of time the government enunciated the new agricultural strategy, and put to use these seeds. The earlier strategies of IADP (Intensive Agricultural Distrcit Programme) and IAAP (Intensive Agricultural Area Programme) which concerned with increasing production of the traditional crops based on farm seeds were replaced by the new technology. As before the new strategy was conceived as a package programme to include the required inputs like seeds, fertilizers, implements, water supply etc. However, the new strategy marked a big break from the old strategies in respect of the key inputs bearing on production.

Features of New Agriculture Strategy

The characteristics of New Agriculture Strategy are as under:

- **Revolutionary Character:** The Green Revolution, based on the new technology, derives its name from the fact of a big increase in agricultural production in a short span of time. It was a result of the application of new high-yielding seeds and chemical fertilizers. The core of new technology consists of seeds drown from researchers in laboratories (as against traditionally available seeds on farms), inorganic fertilizers like chemical fertilizers (as against traditional fertilizers like leaves, animal dung etc), adequate and controlled water supply, pesticides etc and their proper combination. Since all this came suddenly, spread quickly, and brought dramatic results, it earned the title of revolution in green agriculture.
- **High-Yielding Varieties of Seeds:** The basic element of this strategy is the application of the high-yielding varieties (HYV) of seeds. Most of these seeds are of the dwarf variety: that is when grown, their plants are of much shorter stature compared to the plants of the seeds of the ordinary variety. These seeds mature into plants in a shorter period of time. These seeds can be usually sown in those places where there are sufficient facilities for drainage and irrigation. To have the highest possible output, these seeds need to be combined with heavy doses of chemical fertilizers. Compared with ordinary seeds, these require four to t en times more of fertilizers.
- **Largely Wheat Revolution:** Another feature of New Agriculture Strategy is that it has mostly been confined to wheat crop. It was first introduced to wheat in areas where water was available in ample quantities, as e.g. in Punjab, Haryana, UP. Its spread in these areas has been equally spectacular. At present as much as over 90 per cent of the land

under wheat benefits from the new technology. Most of the HYV seeds belong to the wheat crop. And so is the case of chemical fertilizers. Most of these are being used for the production of wheat. As a result, the yield of land under wheat has gone up very sharply. The production of wheat too has increased much.

II.SCOPE AND ACHIEVEMENTS OF HYV PROGRAMME

The HYV Programme was initially launched in certain selected districts of the country as, for example, Ludhiana in Punjab, Aligarh in Uttar Pradesh and West Godavari in Andhra Pradesh. Later on, it was extended to many more districts in different States. The HYV Programme concentrated mainly on wheat and paddy, the two significant cereals of the food basket. The HYV Programme consisted of a package which included regular and adequate irrigation facilities, use of fertilizers, better quality seeds and pesticides and insecticides. The need to increase food grains production was so urgent that the HYV Programme was implemented in suitable areas with the help of farmers who could afford the package deal. The results of the adoption of HYV Programme were quick and substantial. Food grains production which had hovered around 50-60 million tons per year since 1950-51 stated increasing at a fast rate. By the mid 1980s it had touched the level of 170 million tones. Food grains production is expected to be 206 million tons in 2004-05 as shown in the table below. The main achievement was in the area of wheat production and therefore many economists called it wheat revolution instead of green revolution.

Food Grains Production and Productivity in India: 1950-51 to 2013-14

Year	Production (Million Ton)	Production per Hectare (Kg)
1950-51	50.8	522
1960-61	82.0	710
1970-71	108.4	872
1980-81	129.6	1023
1990-91	176.4	1380
2000-01	196.8	1626
2006-07	198.2	1756
2007-08	202.4	1860
2008-09	206.4	1909
2009-10	218.1	1798
2010-11	244.5	1930
2011-12	259.3	2078
2012-13	257.1	2128
2013-14	264.8	2101

Source: Govt. of India, Economic Survey 2013-14

Broadly speaking, food grains production has recorded a four-fold increase over a period of half a century. However, the increase in per capita availability of food grains per day has been modest: from 395 grams in 1951 to 494 grams in 2002. This is attributable to the enormous increase in population over the same period. The increase in the food grains production has helped the country to achieve considerable degree of self-sufficiency in terms of food requirements and tide over recurring food shortages reminiscent of the 1960s and 1970s. the breakthrough has been achieved as a result of substantial public investment in irrigation, agricultural research and extension schemes, subsidized inputs, credit facilities and price support programmes. Food grains production will have to be stepped up in the coming years in view of the increasing population.

III. Impact of New Agriculture Strategy on Business

The effect of New Agriculture Strategy on Business has been both qualitative insofar as it has modernized agriculture in India, and quantitative, as it has resulted in sharp increases in the productivity of land and production of food grains. Further, we have seen both a positive impact of green revolution on business as well as a negative impact.

Positive Effects: First of all we will discuss the positive effects of a new agricultural strategy on businesses which are as follows:

- **High Technology Inputs:** one of the significant consequence of the Green Revolution is that in areas which have come under its sway, the traditional agricultural inputs and practices have given way to new and science-based inputs and practices. Instead of the farm seeds, the farmers in these areas are using HYV seeds which have been developed in the science-laboratories. The other inputs are also produced in the factories like chemical fertilizers. The rapid spread of new technologies has increased the business of the firms and also increased their profits. The equipments used for cultivation are also modernized and their demand has grown immensely.
- **Modification in Agricultural Practices:** An associated effect of new technology is the change in the agricultural practices. To facilitate the proper growth of the quick maturing crops, as also to use the opportunity for growing more than one crop, multiple cropping, the various agricultural operations have undergone many changes. The preparation of land, the sowing of seeds, the watering of land, the control of weeds, the use of pesticides, the quick harvesting of crops etc. are now done more scientifically than ever before. This is done by scientific management of water too, as the new technology requires adequate and just right doses of water and on time. It has increased the sale of new equipments.
- **Large Increase in Productivity:** The new technology has brought about a sharp rise in the yield of land in respect of food grains. This gain is of key importance because in view of the scarcity of land, there is practically no scope for extensive cultivation in the country. The gain in the yield was very large in the initial years after the coming of Green Revolution, because the increases took place on the existing very low level of yield of land. There after this phenomenon continued, although at a somewhat slow pace. For the food grains as a whole the improvement, per hectare has increased which make an improvement in the business activity also.
- **Considerable Rise in Production:** Since the Green Revolution has remained confined mostly to land under food grains, in particular wheat, the production of food grains, has raised much. The step up in production has been very sharp in the initial years. Similar has been the case of wheat. Due to increase in production the business activity has influenced a lot because of good sales. It has created a wealth which was circulated in the market. The farmers have more income with them because of large production of crops and after spending and satisfying their needs, they saved a lot which leads to investments. And in return the investments lead to creation of money.

Negative Effects: New Agricultural Strategy also has a negative effect on business which is discussed as follows:

- **Inter-Regional Inequalities:** To ensure that benefits of development planning flow to all parts of the country, regional balanced development has all along been accepted as an important objective of economic planning in India. However, the pattern of agricultural development over the years has not promoted this cherished objective of Five Year Plans. From the very beginning, the HYV programme was directed to those regions which possessed proper irrigation facilities and were not prone to natural calamities such as floods and droughts. These were precisely the regions which were relatively developed and could afford to purchase the inputs included in the package.
- **Inter-Personal Inequalities:** Since the new agricultural strategy required assured irrigation facilities, it remained confined mostly to big farmers. The new technology is beyond the means of the small and marginal farmers. The inter personal inequalities has increased in the rural and backward areas.
- **Inter-Crop Imbalances:** From the beginning, the HYV programme was confined to wheat, rice and coarse cereals like jawar, bajra and maize. Thus, the non food grains crops were excluded from the purview of new agricultural strategy. As a result, the real breakthrough has been achieved in the case of cereal crops, mainly wheat and rice. There has been no corresponding research and effort for similar success in other crops, especially pulses and oil seeds. Consequently, there has been undue pressure on the prices of pulses and dependence on the import of oilseeds.
- **Fluctuating Output:** Agricultural production is marked by annual fluctuations because it is still dependent to a large extent on conditions of uncertain rainfall. Agriculture in India is rightly described as gamble in monsoon. The crops more prone to fluctuations are oilseeds, pulses, cotton, jute and sugarcane. This has adversely affected the capacity utilization of agro-based industries.
- **Neutrality to Scale:** Agricultural scientists say that the return per unit of land is uniform, i.e. the technology is neutral to scale. However, this conclusion is based on certain assumptions which include controlled water supply, selected seeds, right type of fertilizers and timely use of pesticides and insecticides. Thus, if the small and marginal farmers have not gained from new technology it is because they cannot afford it. In other words, the technology as such is neutral as between big and small farms.
- **Economic Effects:** Technical revolution has established the disparities in income of the farmers. Agricultural inputs in particular chemical fertilizers were largely cornered by rich landlords. The poor farmers found themselves handicapped by the small size of resources like credit and inadequate water supplies.
- **Social Costs:** New agriculture technology is responsible for various health hazards for the farm workers. It is unfortunate that many poor workers have lost their limbs or even their lives while operating sub-standard farm machinery like thrashers. There is no well defined provision for quick and adequate compensation to victims of machine accidents. The spray of poisonous chemicals on plants is mainly done by poor workers and it proves very injurious to their health.

The green revolution has accentuated rural class differences. It has given birth to a new acquisitive society in rural areas. The result is moral degradation, social tensions and violence. The new agricultural strategy at best is mixed blessing.

IV. Extending the New Agriculture Strategy

It is stressing the obvious that there is an urgent need to extend the new strategy of increasing agricultural production. This is so for two important reasons. In the first place, the alternative of raising production through extensive cultivation is almost non-existent. Secondly, the new strategy, as now conceived, is based on a correct diagnosis of the problem of raising agricultural production, namely, the application of modern technology. In doing so, however, care need to be taken to ensure that the small and marginal farmers are brought within the ambit of this policy. It is even that we can minimize the harmful consequences of the Green Revolution.

- **Covering More Crops:** One way to extend this revolution is to apply new technology to other crops. To begin with, paddy should be immediately taken up on a priority basis. Of the two important cereals, namely, wheat and rice, the former is more important, being the staple food of an overwhelming majority of the people. Further, as compared t wheat which is sown over 22 per cent of the land under food grains, rice covers over 35 per cent of the land. Besides extending the new technology to all the cereals and pulses, we should also cover non-food grain crops like cotton, oil seeds and jute etc.
- **Enlarging Irrigation:** It goes without saying that an extension of the coverage of Green Revolution necessitates that the required inputs are made available in those areas where the new technology is intended to be applied. Among the inputs, the most important is water. Only if arrangements are made for irrigation, will farmers find it to their advantage to seek more and more of other inputs. This means that the farmers will adopt new technology on their own, instead of government agencies running after them. This will make the strategy demand based, instead of being supply-based as has been the case so far. In this connection the easiest, the quickest and the cheapest course is to go in for small irrigation schemes like deeper wells, tanks etc, on a larger scale.
- **Revolutionizing Small Farming:** Another important thing to do is to introduce intensive cultivation on small farms. These farms constitute a substantial bulk of the total agricultural land. Besides, the number of such farms is much larger than of the large farms. A part from doing justice to small farmers by giving them their due, the application of new technology in these farms will contribute significantly to the increase in agricultural production. Even the production of wheat, the focal point of the new technology has not shown an encouraging trend for a few years.
- **Greening of New Areas:** Another important line of development concerns the rain-fed and dry areas which need a new and second green revolution. These areas, mostly in the eastern regions of the country, account for as much as 70 per cent of the land under cultivation, but which contribute only 42 per cent of food grains. These are handicapped on three counts which need to be set right. One is shortage of irrigation facilities, second is suffering from soil-erosion on a large scale and third is no appropriate cropping technology which suits these areas. In brief, the new green revolution should provide for technologies for moisture conservation, prevention of soil-erosion and improved practices and inputs.
- **Adopting New Technologies:** It is also necessary to go in for the latest in the field of agricultural techniques, which, unlike the present modern technologies based on chemicals are environmental friendly and promise sustainable and substantial increases in production and productivity. One such technique, very easy to adopt in India and which involves little cost, is based on ancient wisdom underlying the traditional farming methods. It involves the use of organic nutrients, which unlike chemical fertilizers, do not exhaust the soil. Such farming practices as rotation of different crops, planting of crops like rye or clove, building of soil with manure and composite etc are non-polluting. Another new technique involves genetic manipulation and bio-engineering. This promises more bountiful crops that are better able to with stand rough weather and pests.

V. SUMMARY

In this paper new agricultural strategy, its meaning, features, evaluation of the strategy has been highlighted in the first section. Later on dependence of new agricultural strategy on business has been discussed. It is concluded that besides going in for the available new techniques, it is necessary also to search for more innovative techniques. This requires a substantial step up in the expenditure on the Research and Development related to agriculture. New Agricultural Strategy is very much necessary for the development of agriculture, and needs to be re-designed to overcome its weaknesses and to facilitate its spread throughout the country.

REFERENCES

[1.] Kapila Uma (2007). India's Economic Development Since 1947. New Delhi-110002. Academic Foundations.
[2.] Datt & Sundharam (2011). Indian Economy. New Delhi-110055. S. Chand & Company Ltd.
[3.] Agrawal A.N. (2007). Indian Economy-Problems of Development and Planning. New Delhi-110002. New Age International (P) Limited.

[4.] Paul Justin (2009). Business Environment-Text and Cases. New Delhi-110008. Tata McGraw Hill Education Private Limited.
[5.] Agrawal Raj (2006). Business Environment. New Delhi-110028. Excel Books.
[6.] Mala P. (2014). Agricultural Economics. New Delhi-110051. Dominant Publishers & Distributors Pvt. Ltd.
[7.] Rane, Deorukhkar (2007). Economics of Agriculture. New Delhi-110002. Atlantic Publishers & Distributors Pvt. Ltd.
[8.] Prasad C.S. (2006). Sixty Years of Indian Agriculture 1947 to 2007. New Delhi-110005. New Century Publications.
[9.] www.economicsdiscussion.net/economic-development/...agriculture...
[10.] www.unep.org/PDF/OurPlanet/OurPlanet_WorldBank_web_en.pdf
[11.] www.jstor.org/stable/1812786