



SEVEN PLUS DECADES' DEVELOPMENT EXPERIENCE OF INDIAN AGRICULTURE: REFLECTIONS ON ITS POLICIES, PROGRAMMES AND PROBLEMS

Dr. C. M. Mathapati

Assistant Professor, Department of Management Studies, Karnataka State Akkamahadevi Women's University, Vijayapura, Karnataka

Abstract:

Agriculture is the backbone of Indian Economy. Our policy makers and planners gave top priority for the development of agriculture in the planned development of the country. Over the last seventy years since independence to the present year (1947-2020), our agriculture has been changed beyond our imagination.

The development experience can be analyzed in three distinct phases: viz: First Phase 1948 – 1965-66; Second Phase 1966-67 – 1996-97 and Third Phase 1996-97 to 2019-20.

Efforts were made during first phase to achieve agricultural development by bringing several institutional / structural changes in Indian agriculture.

During second phase Indian planners started a new strategy in agriculture. They started so called scientific agriculture with the use of hybrid seeds, irrigation water, etc.

Today the present agriculture has been caught into the triangle hold of nature, market and the state. Farmers are shifting away from agriculture.

Introduction

Agriculture is the backbone of Indian Economy. It forms the very foundation of superstructure of national economic development. Our policy makers and planners gave top priority for the development of agriculture in the planned development of the country. Over the last seventy years since independence to the present year (1947-2020), our agriculture has been changed beyond our imagination. Indian agriculture which was the main stay of larger proportion of the people over hundreds of years with greater stability and security began to change during the British rule in India. On the eve of independence our agriculture was most backward, primitive, inefficient and unjust also. Therefore, our national leaders, policy makers dreamt to improve the agriculture and ameliorate the condition of poor peasants. As a result, a series of policies were evolved, programmes formulated and implemented from time to time since the initiation of five year plans in 1951-52.

Indian agriculture has been subjected to lot of experiments over the last seven decades with the sole intension of improving its productivity and make agriculture to grow stronger and richer. But, experience shows that all our experiments of agricultural development proved to be of mixed results. Agricultural development has showed quantitative progress in some aspects but qualitative failures in many respects.

The development experience of Indian agriculture during the last seventy years or so can be analyzed in three distinct phases: viz:

1. First Phase 1948 – 1965-66 with Institutional / Structural changes.
2. Second Phase 1966-67 – 1996-97 with Technological changes and
3. Third Phase 1996-97 to 2019-20 with Trade policy changes.

First Phase of Agricultural Development (1948 – 1965-66):

On the eve of independence our agriculture was more backward. It was subsistence and traditional in nature. Agricultural productivity (land and labour productivity) was very low. Land holdings were divided, sub-divided and fragmented. There was improper tenancy system and wide spread existence of intermediaries like Zamindars, Mahalwars and exploitation of farmers by them, absentee landlordism even in ryotwari system. High rent, usurious rate of interest, farmers indebtedness, tradition bound and superstitious farmers, exploitation in agricultural marketing, over burden of population on agriculture, shortage of food grains, poverty of farmers, etc were the common features of agrarian economy and society at that time. The frequent floods and famines, made the farmers' life more miserable.



Looking at such precarious conditions of rural peasantry, our planners thought to develop agriculture. They wanted to solve first India's food problem. Their immediate concern was to Grow More Food and increase the overall agricultural productivity and production. The major policy thrust during first and second five-year plans was on extensive cultivation by bringing more and more land under cultivation and on bringing institutional / structural improvements in agriculture. Several programmes like: Community Development Programme (CDP), National Extension Scheme (NES), Grow More Food Campaign (GMFC) were started at block level. Efforts were initiated to support and strengthen the Panchayat Raj Institutions (PRI) and Co-operative Societies. In order to bring institutional / structural changes in Indian agriculture land reforms measures were adopted. The series of legislations like: Abolition of Intermediaries, Tenancy Reform, Ceiling on Land Holdings, Consolidation of Land Holdings, Co-operative Farming were passed and brought into force by several provincial / state governments. In addition to the government efforts to provide land to land less, the Bhoodan (land gift) movement was carried by Acharya Vinoda Bhave walking down in several parts of the country, to get a piece of land as gift from the big land owners and redistribute the same to the land-less people in the villages. All these programmes deserve critical examination. Land reforms measures started with thunderous enthusiasm, but their implementation had become timid affair. Co-operative movement has been started with half hearted spirit. The planners had thought that the co-operative has been failed but it must succeed. Similar was the fate of other programme and PRIs.

Anyhow, such programs helped to bring some changes in agrarian economy and society. Farmers were given lot of incentives by way of land ownership, credit, agricultural implements, extension and training, exhibition of successful farmers' products and prizes to them. These programs along with favorable monsoons tended to bring some positive changes in agricultural conditions. As a result, India's food production was jumped from 50.8 mt in 1950-1951 to 63.2 mt in 1955-1956, a bit exceeding the target of first plan. It further increased to 74 mt and 81 mt by the end of second and third plan respectively. Our planners thought that, we are little bit successful in our endeavor to develop agriculture.

The happiness of success in agriculture was not last longer. By the end of third plan period there was a little decline in food production due to severe drought conditions throughout the country. The population of the country has also increased from 33 crore in 1951 to 44 crore in 1961. India faced severe food shortage and it imported food from other countries. India lived on 'ship-to-mouth' level at that time. Our planners began to rethink on our policies to face the food crisis.

Efforts were made during this phase to achieve agricultural development by bringing several institutional / structural changes in Indian agriculture. Emphasis was given to increase the economic efficiency and productivity of agriculture and to bring social equality among the peasant community. The result was positive but very modest.

Second Phase of Agricultural Development (1966-67 to 1996-97):

When India faced severe food shortage during middle sixties, the Government of India invited experts from the Ford Foundation to give suggestions to increase our food production. This team visited India and said instead of spreading our efforts to larger area in the country, it is better to make concentrated efforts in a few potential growth centers. Accordingly, the programmes like Intensive Agricultural Development Programme (IADP), Intensive Agricultural Area Programme (IAAP) were started in highly potential growth centers having fertile land and irrigation facilities. All the energy, credit, efforts were invested only in these selected centers. However, the results were not so very encouraging. Therefore, the expert group recommended for bringing technological changes in agriculture. Accordingly, the Indian Government adopted a new strategy in agriculture. This strategy brought fundamental changes' in technology and methods of agricultural production. In consonance with such new strategy the series of programmes like High Yielding Varieties Programme (HYVP), use of high doze of irrigation water and chemical fertilizers, mechanism of agriculture, Pest Control Programmes (PCP), Multiple Cropping Programme (MCP), etc were introduced in 1966-67 and 1967-68. All the programmes were covered only five major food crops viz: Paddy, Wheat, Maize, Jawar and Bajra. However, later on these programmes were highly focused only on Paddy and Wheat. These programmes brought technological breakthrough in Indian agriculture. The areas under hybrid seeds and irrigation has been increased. The application of more chemical fertilizers, pesticides, and modern agricultural machines, tools, equipments, improved cultural practices like deep sowing, quick harvesting, chemical spraying and changes in irrigation system like sprinkler, drip irrigation, etc have revolutionized the agriculture system in the country. The entire landscape in many parts of the country turned green. As a result of all these programmes the food production in India has reached all time peak of 104 mt in 1970-71, 108 mt in 1971-72. The government and the people at large considered that India has achieved green revolution. Now India is self-sufficient in food grains. Therefore, our planning and policy makers began to extend the green revolution in other areas and in other crops, vegetables, raw materials like: sugarcanes and cotton in the subsequent period. India is now in the second generations of green revolution. Our food production has reached ever higher peaks about 130-135 mt in 1996-97. India turned itself from food deficit to food surplus country; we have more than 35 mt of foodgrains buffer stock. Now it is exporting portion of foodgrains to other countries.



Despite such successes and landmark achievements in our agriculture, it revealed several problems and weaknesses during the early phase of green revolution. Problems like water logging and salinity in irrigated areas, limited scope of HYVP to five major food crops only, growing inequality among farmers community, disproportionate increase in farmers income and agriculture labour wages, the dualism among agrarian society created by green revolution precipitated red revolution or blood sheds in some corners. Besides, big dams proved more disastrous by way of submergence of land, villages, forest and loss of flora-fauna, ecological imbalances. Above all, land productivity began to fall after a decade or so in green revolution belts.

With all these emerging problems of green revolution, our policy makers continue to follow same agricultural strategy, as they thought there are no alternative to produce more food to feed our growing population. However, they began several programmes to benefit directly to the rural poor, who were side-lined by the green revolution. For example, SFDA, MFAL, FWP, NREP, RLEGP, TRYSEM, IRDP, DWACRA, Antyodaya, etc were a few such programmes implemented to alleviate rural poverty. But, these programmes were sporadic in nature and ineffective in achieving the targeted goals.

During this phase Indian planners started a new strategy in agriculture. They started so called scientific agriculture with the use of hybrid seeds, irrigation water, chemical fertilizers, pesticides and mechanization of agricultural operations. Really it was a breakthrough in our agriculture. There was a spectacular progress in productivity and food production. As the landscape in such area has been turned greenery, it was popularly called the Green Revolution. However, after one and half decades, planners began to realize the weakness and limitations of the green revolution.

Third Phase of Agricultural Development (1996-97 to 2019-20):

The technological changes introduced in five major crops during green revolution period have been extended to other crops during the third phase. The hybrid seeds, water, chemical fertilizers and pesticides were widely used in cotton, sugarcane, pulses, fruits and vegetables. Besides agricultural development took place in globalized era and WTO regime in this phase.

The green revolution and the resultant steady increase in food production made our planners and policy makers, agricultural scientists, government and the progressive farmers at large to believe that Indian agriculture is very strong and it can effectively compete in the global market for its exports. The rich countries were successful in convincing the developing countries like India that they could benefit by globalization and WTO regime especially in agriculture and other primary products.

India being one of the original members of WTO, it began to follow all agricultural policies and strategies as envisaged in Agreement on Agriculture (AOA rules). Providing market access to at least 3 to 5% of average domestic consumption of agricultural goods, removal of all non-tariff barriers in agricultural trade, reduction of 24% base level tariffs on agriculture trade, reduction of export subsidy at 24% of value, reduction of all other domestic support measures (AMS) by 10%, reduction by 13% of trade distorting subsidies put under Amber box, provision of sanitary and physo-sanitary measures to protect human, animal and plant life. Patent rights for seed and plant varieties, labour standards, anti-dumping, environmental protection, permission for corporate agriculture and contract farming, etc are the policy rules embodied in AOA - an Act of WTO to which India agreed and made suitable policy changes at home in concomitant to WTO rules.

As a result of such changes policy environment the second stage of green revolution in India continued. Further, the food production rose to all time peak of 257 mt in 2015-16, getting second and third rank in world in production of rice and wheat respectively. Similarly, there is considerable increase in the production of sugarcane, cotton, vegetables and fruits, and the traditional agricultural products like jute, tobacco, tea, coffee, spices, meat and fish. Many people believe that Indian agriculture has become very strong, competitive and vibrant industry.

Despite these positive changes in Indian agriculture in the third phase there are some emerging problems and threats that we are facing and struggling for revival of agriculture. The serious challenges emerged in third phase of agricultural development are: shortage of food especially nutritious food, pulses, millets, oilseeds, decline in growth rate of food grains production from 2.0% in 1990s to 1.6% in the last one decade. Decline in investment in agriculture, more volatile and fluctuating prices of agricultural goods in world market and its adverse effect on Indian farmers especially potato, tomato, onions, chillies growers, the spate of farmers suicide especially of modern farmers who are caught into debt trap.

Further, there is a great threat to seed securities under WTO regime. Various foreign seed companies like Monsanto, Cargil, Pioneers, Overseas, etc entered in India with main intension to gain full control over hybrid seeds. These MNCs have followed 'Terminator Technology' that makes plants to produce sterile seeds. The MNCs will use genetically engineered plants for a large single crops making entire rural landscape with same uniform varieties of crops, which offers a great threat to bio-diversity. Another problem of post reform period agriculture is that MNCs are getting patent rights on seeds and plants, which have been used by Indian farmers



since generations. They are denied to use their own conventional agricultural knowledge or they have to buy it by paying huge royalty to the patent holders.

The greatest problem of post WTO regime agricultural development is the environmental degradation caused by modern agricultural practices. By increased use of water our land becomes highly salty. Increased use of chemical fertilizers and pesticides made many micro germs and organisms in soil to die and hence, our soil has become dead and infertile. Similarly, increasing use of modern machinery, tools and equipments in every stage of agricultural operation has reduced the use of labour in agriculture and increased incidence of rural unemployment. Due to change in their attitude the rural folk have become idle and many agricultural activities requiring human labour are hampered by non-availability of labours. Thus agriculture is facing a paradoxical problem of unemployment of agriculture labours and their unwillingness to work even at higher wages prevailing the market.

Several special programmes for employment generation and poverty alleviation of rural poor have been implemented during this phase also. The JRY, SJSRY, MGREGP, etc. were implemented to ensure minimum employment, food security, employment guarantee, and livelihood security to the poor. However, the impact of such programmes was marginal.

Totally the present agriculture has been caught into the triangle hold of nature, market and the state. Farmers are shifting away from agriculture.

Future Strategies for Agricultural Development (After 2020):

In order to mitigate the hardships of the Indian farmers and protect the agriculture against the vagaries of nature, inhuman market mechanism and irrational government policies, some policy shifts are desired. Many progressive farmers have been using such strategies and some state governments are also helping such farmers and their organizations. Some of such new strategies are as below:

- a. **Organic farming:** In order to make sustainable agriculture development many farmers are resorting to organic farming. It is a natural farming without using chemical fertilizers, pesticides. This organic farming protects the health of the plants and the soil. The foodgrains produced in organic farming area are tasty and healthy. Many agricultural universities and state governments are encouraging the organic farming.
- b. **Growth of Millets:** The green revolution has touched only major food crops like paddy, wheat and maize. It has totally sidelined millets, pulses and oilseeds. Now there is a greater consensus among progressive farmers and nationally oriented scientists that millets or small food grains like Ragi, Navani, Barag, Bajra, Korark, etc have great nutrition value. They can be easily grown in any climate and soil conditions. They are rain fed crops and disease resistant. Now Karnataka, Tamil Nadu and Andra Pradesh are extending lot of financial and marketing support to such small crop growers. For marketing and good health of people there should be a shift in food habit away from rice and wheat to the millets.
- c. **Better water management:** Today's need is not more water by building big dams and network of canals. The need is to make better use of available water. Therefore, emphasis should be shifted from big dams to small check dams, barrages, tanks, agriculture ponds, rain harvesting, sprinkler and drip irrigation. More reliance should be on surface water rather than the ground water. Change in the cropping pattern and use of dry farming techniques. Again there is much opposition for cloud sowing as it hampers our ecosystem and highly expensive.
- d. **Crop Insurance:** There is an increasing trend towards crop insurance. Farmers are motivated to get their crops insured and insurance companies should give adequate insurance against the loss and risk of crops by nature or by market fluctuations. Recently Government of India has ushered a novel scheme of insurance called Pradhan Manthri Fasal Bima Yojana to insure against individual or group farmers risk and loss with minimum premium.
- e. **Diversification of Agriculture:** Farmers are encouraged to take diversified agricultural activities. Crop rotation, diversified cropping pattern including food and non food crops and undertake allied activities like goat rearing, dairy, poultry, horticulture, floriculture, bee keeping, rabbit and mushroom growing. Many graduates from technical, management and professional institutions are coming back to agriculture to pursue an avocation of their interest on scientific lines.

Conclusion:

To sum up, quantitatively the food and non-food production has been increased by 3 and 5 times respectively over the last seventy years. India has become world food basket. But qualitatively has become very weak and disastrous. The farmers have lost their confidence in doing agriculture and they are moving away from it. The spade of farmers' suicide in last two decades is the negative side of agricultural development.



If our agricultural has to reach sustainable development and if our farmers are to survive there is a need to follow above strategies on a wider scale. Our future agricultural development should be pro natural and environment friendly. Future of India lies in the future of agriculture. We have to protect agriculture to protect ourselves.

References:

1. Ashok Gulati and Tim Kelley: Trade Liberalization and Indian Agriculture, New Delhi 1999.
2. Bimal Jalen (ed): The Indian Economy : Problems and Prospects, New Delhi 1992.
3. G. S. Bhalla: Indian Agriculture Since Independence, New Delhi 2007.
4. Government of India Planning Commission Eleventh Five Year Plan 2007-12, New Delhi 2008.
5. Government of India Planning Commission Seventh Five Year Plan 1985-90. Vol. I and II.
6. Government of India Planning Commission Tenth Five Year Plan 2002-07, New Delhi 2003. Vol. I and II.
7. Government of India Planning Commission Twelfth Five Year Plan 2012-17, New Delhi 2012. Vol. I and II.
8. Puri and Misra S. K.: Indian Economy, Himalaya Publishing House, Mumbai 2017.
9. Sundharam and Ruddara Datta: Indian Economy, S. Chand and Co., New Delhi 2006.
10. V. S. Vyas: India's Agrarian Structure: Economic Policies and Sustainable Development, New Delhi, 2003.