

ISSN : 2321-9602



Indo-American Journal of Agricultural and Veterinary Sciences



editor@iajav.com
iajav.editor@gmail.com



SUSTAINABLE DEVELOPMENT AND THE PROBLEMS FACING THE AGRICULTURE SECTOR

Sushant kumar¹, Charan²

ABSTRACT

In recent years, India's economy and infrastructure have advanced at a dizzying rate. The phrase "sustainable development" has been more popular among experts in recent years. Despite brisk expansion in several areas, India's agricultural industry remains the country's primary economic driver. Sustainable agricultural development in India is the subject of this study, which aims to both address and investigate the topic.

Keywords: *Sustainable Development, Agriculture, Ecological Sustainability, Economic Sustainability, Social sustainability.*

INTRODUCTION

The agricultural sector is the backbone of India's economy. The importance of India's agricultural industry is shown by the sector's share of GDP and the number of people it directly employs. There are substantial contributions from this industry to the country's long-term economic health. A country's ability to grow its agriculture in a sustainable manner is directly tied to the skillful use of its innate assets. Increasing the acreage farmed, the number of crops grown, and the yield per acre are all important factors in achieving the sector's overall growth goal. However, in a nation

like India, raising productivity is the top priority. This is a direct result of the country's limited geographical area and its rapid urbanization and industrialisation.

-
1. Assistant professor, Department of Pharmaceutical Analysis, Sri Venkateswara College of Pharmacy, Vishakapatnam.
 2. Assistant professor, Department of Pharmacology, Sri Venkateswara College of pharmacy, Vishakapatnam.
-



The productivity can be increased by two ways. First, increasing output by efficient utilization of available resources. Second, increasing output by variation of input. The first system is better with respect to productivity and sustainability. But due to increasing population, this system cannot provide a permanent solution. Thus, we can go for the second system which may potentially cause environmental degradation in the economy and affect its sustainability. Therefore, there is requiring tackling the issues related to sustainable agriculture development.

SUSTAINABLE AGRICULTURE DEVELOPMENT

The issues of sustainable development can be discussing under three broad types of farming systems viz. traditional production method, modern agriculture method and sustainable agriculture system. Further we can evaluate them across three dimensions, ecological, economic and social sustainability.

Ecological Sustainability

Most of the traditional and conventional farm practices are not ecologically sustainable. They abuse natural resources, reducing soil fertility causing soil erosion and contributing to global climatic change. But sustainable agriculture has some major advantages over traditional practices:

Soil Fertility

Continuous fall in soil fertility is one of the main problems in many parts of India. Sustainable agriculture improves fertility and

soil structure.

Water

Irrigation is the largest consumer of fresh water, and fertilizer and pesticides contaminate both surface and ground water. Sustainable agriculture raises the organic matter content of the top soil, thus raising its ability to maintain and store water that falls as rain.

Biodiversity

Sustainable agriculture practices involve mixed cropping, thus increasing the diversity of crops produced and raise the diversity of insects and other animals and plants in and around the fields.

Health & Pollution

Chemicals, pesticides and fertilizers faultily affect the local ecology as well as the population. Indiscriminate utilize of pesticides, improper storage etc. may lead to health problems. Sustainable agriculture reduces the use of hazardous chemical and control pests.

Climate

Conventional agriculture contributes to the production of greenhouse gases in various ways like reducing the amount of carbon stored in the soil and in vegetation, during the production of Methane in irrigated field and production of artificial fertilizers etc. By adopt sustainable agriculture system, one can easily overcome this problem.



Economic Sustainability

For agriculture to be sustainable it must be economically viable over the long term. Conventional agriculture involves new economic risk than sustainable agriculture in the long term. At times governments are inclined to view export-oriented production systems as more important than supply domestic demands. This is not right. Focus on exports alone involves hidden costs: in transport, in assuring local food security, etc. Policies must treat domestic demand and in particular food security as equally important to the in-evidence trade balance. But market production implies certain risks as markets are fickle and change quickly. Cheap foreign food may sweep into the national market, leaving Indian farmers without a market. The main source of employment for rural people is farming. Trends to specialization and mechanization can increase narrowly measured "efficiency", but they decrease employment on the land. The welfare costs of unemployment must be taken into account when designing national agricultural support programs. Sustainable agriculture, with its emphasis on small scale, labour-intensive performance, helps overcome these problems.

Social Sustainability

Social sustainability in farming techniques is related to the data of social acceptability and justice. Development cannot be sustainable unless it reduces poverty. The government should find ways to enable the rural poor to profit from agriculture development. Social injustice is where several sections of the society is neglected from development opportunities. But having robust method of social sustainability can bridge the gap between "haves" and „have-nots". Many new technologies fail to become applicable in agriculture sector due to lack of acceptability by the local society. Sustainable agriculture practices are useful because it is based on local social customs, traditions and norms etc. Because of person familiar the local people are other likely to accept and adopt them. Moreover, sustainable agriculture practices are based on traditional know-how and local innovation. Local people cover the knowledge about their environment

crops and livestock. Traditional agriculture is additional gender oriented, where woman bear the heaviest burden in terms of labour. Sustainable agriculture ensures that the load and benefits are shared equitably between man and woman. While conventional farming focus on a few commodities, sustainable agriculture improves food security by improving quality and nutritional value of food, and also by producing better range of products throughout the years. Traditional farming was too driven by the caste and wealth-oriented people. The rich and higher castes benefitted extra, while the poor and lower castes are left out. Sustainable agriculture attempts to ensure equal participation which recognizes the voice and speech of every people.

INDIAN AGRICULTURE SECTOR

Agriculture is one of the most preeminent sectors of the Indian economy. It is the source of livelihood for approximately two third of the rural population workforce in the country residing in rural areas. Indian agriculture provides employment to 65% of the labour force, accounts for about 27% of GDP, contributes 21% of total exports and raw material to some industries. The livestock sector contributes an estimated 8.4% to the country GDP and 35.85% of the agriculture output. In India about 75% people are living in rural areas and are still dependent on agriculture, about 43% of India's geographical area is used for agriculture activities. The estimated food grain production is about 255.36 metric tons in the country.

AGRICULTURAL PRODUCTION IN INDIA

Indian Agriculture production in mainly part of the country is closely related to the optimum use of available natural and human resources of the country. The country is a leading producer of coconuts, mangoes, milk, bananas, dairy products, ginger, turmeric, cashew nut, pulses and black pepper. It is also the second major producer of rice, wheat, sugar, cotton, fruit

and vegetables. Indian agriculture production is closely connected to sufficient



and wise water management practices.

months. During the monsoon season, India is generally endowed with generous rainfall; although not infrequently, this bountiful monsoon turns into terror, causing uncontrollable floods in different parts of the country and finally affecting agriculture production.

MILE STONES IN INDIAN AGRICULTURE

Policy makers and planners, concerned on national independence, security and

political stability realized that self-sufficiency in food production was an absolute pre requisite for sustainable agriculture development. The policies considered to be real a mile stone in agriculture development of the country are:

- ❖ Green Revolution (1968): This revolution includes packages of programs like, Intensive Agriculture District Program (IADP) which eventually lead to the Green Revolution. The National Bank for Agriculture Development (NABARD) was set up. The emphasis was on high yielding varieties along with other modern inputs like chemicals, fertilizers, pesticides and mechanization and also on how productivity could be raised in agriculture sector without have substantial influences on rising area under cultivation.
- ❖ Ever Green Revolution (1996): Father of India's green revolution, Prof. M.S. Swaminathan claims to be pro-woman, pro-nature and pro-poor. The conservation of biodiversity, maintaining soil fertility, increasing the climate resistance of food crops combined by better and extra education and technological innovation are the key to the ever-green revolution. The main aim of this revolution is to produce more using less land, less water and less fertilizer.
- ❖ White and Yellow Revolution: The Green Revolution generated a mood of person

Most of the agriculture practices in India confined to a few monsoon

confidence in our agriculture capability, which led to the next phase characterized by the Technology Mission. Under this approach, the focus was on conservation, consumption, and commerce. An end-to-end approach was introduced involving attention to all links in the production-consumption chain, due to which progress was steady and sometimes striking as in the case of milk and egg production

- ❖ . 4. Blue Revolution (Water, Fish): It has been brought about in part by a trend towards healthier eating which have increased the consumption of Fish. Additionally, the supply of wild fish is failing. This revolution could give landless labourers and women a great opportunity for employment which empowered them

IMPACT OF ECONOMIC REFORM ON INDIAN AGRICULTURE

The Indian agriculture sectors have been undergoing economic reform since 1990s in a move to liberalize the economy to advantage from globalization. India, which is one of the largest agriculture-based economies, remain closed until the early 1990s. In 1991, the new economic policies stressed both external sector reforms in the exchange rate, trade and foreign investment policies and internal reform in areas such as industrial policies, price and distribution controls, and fiscal reformation in the financial and public sector. India's economic reforms be initiated in June 1991. agriculture continues to be a tradable sector; this economic liberalization and reform policy have a far-reaching effect on

- ❖ Agricultural exports and imports
- ❖ Investment in new technologies
- ❖ Pattern of agricultural growth
- ❖ Agricultural income and employment
- ❖ Agricultural price
- ❖ Food security



Reduction in Commercial Bank credit to agriculture, in lieu of this reforms process and recommendations of Khusro Committee and Narasimham Committee resulted in decrease in farm investment and impaired growth. Liberalization of agriculture and open market operations enhance competition in “resource use” and “marketing of agriculture production”, which forces the little and marginal farmers to resort to “distress sale” and seek off farm employment for supplementing income.

ISSUES & CHALLENGES

The central issue in agricultural development is the necessity to improve productivity, generate employment and provide a source of income to the poor segments of population. The pace of acceptance of modern technology in India is slow and the farming practices are too haphazard and unscientific. Some of the basic issues for development of Indian agriculture sector are revitalization of cooperative institutions, improving rural credits, research, human resource development, trade and export promotion, land reforms and education.

FUTURE PROSPECTS AND SOLUTION FOR INDIA

Sustainable agricultural production depends upon the efficient make use of soil, water, livestock, plant genetics, forest, climate, rainfall and topology. Indian agriculture face resource constraints, infrastructural constraints, institutional constraints, technological constraints and policy induced limitations. Sustainable development is the management and conservation of the natural resource base and the direction of technological and institutional modify in such a manner as to ensure the attainment and continued satisfaction of human wants for the present and future generations. Such sustainable development

(in the agriculture, forestry and fisheries sector) conserves land, water, plant and animal genetic resources, is environmentally non-degrading, technically appropriate, economically viable and socially acceptable. So, to complete sustainable agriculture development the optimum use of natural resources, human resources, capital resources and technical resources are required. The sustainable development in India can also be achieved by full utilization of human resources

The large part of poor population of the country is engaged in agriculture, unless we raise their living standard, overall growth of this country is not possible. If we keep ignoring the poor, this disparity force keeps on increasing between classes. Debt traps in country are forcing farmers to commit suicides. People are migrating towards city with the expect of better livelihood but it is also increasing the slum population in cities. Therefore, rural population should be given employment in their areas and a chance to prosper. India have been carrying the tag of “developing” country for quite long now; for making the move towards “developed” countries we should shed this huge dependence on agriculture sector.

CONCLUSION

The agricultural technology needs to move from production oriented towards profit oriented sustainable farming. The conditions for development of sustainable agriculture are becoming more and more favourable. New opportunities are opening the eyes of farmers, development workers; researchers and policy makers like agree related businesses, dairy farming, poultry farming, cattle farming and fisheries. To conclude, a small-farm management to improve productivity, profitability and sustainability of the farming system will go a long way to ensure all round sustainability.



REFERENCES

1. Braun JV, Gulati A, Hazell P, Rosegrant MW, Ruel M. Indian Agriculture and Rural Development- Strategic Issues and Reform Options, 2005.
2. Dev, Mahendra S. Inclusive Growth in India, Agriculture, Poverty and Human Development, Oxford University Press, New Delhi, 2008.
3. Evenson RE, Pray C, Rosegrant MW. Agricultural Research and Productivity Growth in India. Research Report No 109. International Food Policy Research Institute, Washington, D.C, 1999.
4. GOI. Agricultural Strategy for the Eleventh Plan: Concerns and Way ahead, Yojana Bhavan, New Delhi National Centre for Agricultural Economics and Policy Research, New Delhi, 2007.
5. International Journal of Management Research and Technology. Productivity and Sustainability in Agriculture: An Application of LPP Model. 2008; 2(2).
6. Kushwaha N. Environment, Sustainable Development and Rural Poverty in India. Ph.D. Thesis, M.J.P. Rohilkhand University, Bareilly, 2003; Ch. 4.
7. Mishra VN, Rao G. Trade Policy, Agricultural Growth and Rural Poor: Indian Experience, 1978-79 to 1999-00, Economic and Political Weekly, October 25, 2003.

