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TOWARDS A FOOD SECURE INDIA

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ABSTRACT

Malnutrition is nothing new for many Indians. According to the International Food Policy Research Institute's 2011 Global Hunger Index, the upshot of this perennial problem is that about 60 million children in India are underweight and malnourished, while 21 percent of the population as a whole general is malnourished. Unfortunately, this problem is unlikely to change anytime soon, with the recent introduction of the National Food Security Bill threatening to continue market inefficiencies in food supply and extend the problem of malnutrition far into the future.

On a more positive note, India is expected to remain self-sufficient in the production of food staples until at least 2025. However, inefficiencies in the downstream segments of the food supply chain are still rampant, and threaten to undermine self-sufficiency and perpetuate malnutrition. For example, inefficiency in the tomato business, according to the editor of the Wall Street 20 percent of tomatoes rotting in transit, while the price for consumers is marked up by as much as 60 percent.

Food security both at the national and household levels has been the focus of agricultural development in India ever since the mid-sixties when import dependence for cereals had gone upto 16 per cent and the country faced severe drought continuously for two years. The new approach intended at maximising the production of cereals and involved building a foundation of food security on three key elements, namely, provision of an improved agricultural technology package for the farmers, delivery of modern farm inputs, technical know-how and institutional credit to the farmer. For achieving these objectives, several policy instruments were used that influenced the production potential.

Ever since independence in 1947, agricultural development policies in India have aimed at reducing hunger, food insecurity, malnourishment and poverty at a rapid rate. Keeping this overarching goal in mind, the emphasis which was initially on keeping food prices low, shifted to macro food security and subsequently to household and individual food security. Later, the food security of vulnerable, sustainable use of natural resources, and equity between rural and urban or farm and non-farm population became the issues of dominant discourse related to agricultural development. Several new initiatives have been taken during the last few years to tackle the situation and to bring back farmers' confidence in farming in general and cereal production in particular.

Indices for economic and social status are composite indicators of the economic and social well-being at the community, state and national levels. These social indicators are used to monitor the social system and help in the identification of problem areas that need policy planning and require intervention to alter the course of social change.

If the existing trends in high population growth, low agricultural development,wide disparities in income, huge environmental degradation, and high incidence poverty continues, India's food, agriculture, environment, and quality of human life will be seriously threatened in the coming years. Poverty and malnutrition are likely to remain as major problems. Pressure to produce more food from less land, use of more natural resources, enormous growth in the population and unequal distribution of income will harm the environment in the years to come.

KEYWORDS: Food Security, Education, Integrated Nutrition Management, Targeted Programmes

INTRODUCTION

Malnutrition is nothing new for many Indians. According to the International Food Policy Research Institute's 2011 Global Hunger Index, the upshot of this perennial problem is that about 60 million children in India are underweight and malnourished, while 21 percent of the population as a whole general is malnourished. Unfortunately, this problem is unlikely to change anytime soon, with the recent introduction of the National Food Security Bill threatening to continue market inefficiencies in food supply and extend the problem of malnutrition far into the future.

The developmental repercussions of this situation are dramatic, not only for individuals who suffer numerous health issues resulting from malnutrition, but also for the economy at large. Malnutrition results in a loss of productivity, indirect losses from impaired cognitive development, and losses from increased longterm healthcare costs.

According to a report by the World Bank, productivity losses in India due to stunted growth, iodine deficiencies, and iron deficiencies are equivalent to almost 3 percent of GDP. While during the colonial era famine was the primary result of "food insecurity," malnutrition has replaced it as the chief concern of legislators and economists.

The last great famine in India occurred in 1943, and served as a case study for Amartya Sen, the Nobel Prize winning Indian economist, in his groundbreaking work Poverty and Famines, in which he showed that famine was rarely the result of a lack of food, but rather the result of intervening economic factors, such as unemployment, declining wages, and, as is often the case in India, poor food distribution systems. The current problem in India is of that nature: it's not so much a lack of nutrient-rich food, but rather a weakness in the food supply chain.

On a more positive note, India is expected to remain self-sufficient in the production of food staples until at least 2025. However, inefficiencies in the downstream segments of the food supply chain are still rampant, and threaten to undermine self-sufficiency and perpetuate malnutrition. For example, inefficiency in the tomato business, according to the editor of the Wall Street Journal Asia, results in as much as 20 percent of tomatoes rotting in transit, while the price for consumers is marked up by as much as 60 percent.

India's Food Security

Food security both at the national and household levels has been the focus of agricultural development in India ever since the mid-sixties when import dependence for cereals had gone upto 16 per cent and the country faced severe drought continuously for two years. The new approach intended at maximising the production of cereals and involved building a foundation of food security on three key elements, namely, provision of an improved agricultural technology package for the farmers, delivery of modern farm inputs, technical know-how and institutional credit to the farmer. For achieving these objectives, several policy instruments were used that influenced the production potential.

Current Agricultural Scenario

It is generally believed that India has maintained a satisfactory level of food production in the 1980s. Food grain production in India has witnessed a steady increasing growth rate during the 1970s and 1980s from the rate of the previous decades, but the 1990s has witnessed a sharp fall in the growth rate. In fact, the growth rate of food grain production during the 1990s has been close to the annual population growth rate, which implies a stagnant per capita production level (Rao, 1997; Sawant, 1997). A comprehensive analysis of agricultural performance and productivity of Indian agriculture by Kumar (2001) has revealed that the changes in cropping pattern have been taking place as a result of substitution of low

productivity crops by those which have shown impressive performance in productivity growth. Some of these crops are paddy, wheat, maize, groundnut, rapeseed and mustard and sugarcane. Coarse cereal and pulses have shown a steady decline in their area. Changes in the cropping pattern had contributed to output growth considerably. Future source of food supply would be the enhancement of yield through technological change (Kumar, 2001).

However, sustaining a steady growth rate of yield would require efficient and optimal resource use of land, surface and ground water, and genetic resources, greater attention to cropping systems than individual crops, revamping the research and extension systems towards varietal improvement for dry land crops, strengthening adaptive local research, emphasis on biodiversity and ecological balances, improving rural infrastructure including processing, marketing and storage, education and access to mass media, and development of rural financial markets (Vaidyanathan, 1994).

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If the existing trends in high population growth, low agricultural development, wide disparities in income, huge environmental degradation, and high incidence poverty continues, India's food, agriculture, environment, and quality of human life will be seriously threatened in the coming years. Poverty and malnutrition are likely to remain as major problems. Pressure to produce more food from less land, use of more natural resources, enormous growth in the population and unequal distribution of income will harm the environment in the years to come.

Agriculture sector reforms should be initiated on a war-footing, to bring together all the best that is available and make agriculture an organized unit to give farmers the maximum benefits. Turning agriculture into an organised business with the farmer as the entrepreneur should be the key to the second green revolution and for the much desired evergreen revolution in India. Farming should be taken up with the motive of profit making rather than just making a subsistence living. With huge diversity in the number and variety of crops that we produce, variations in agro-climatic conditions, soil type, prevailing inequalities in the state growth levels, it is most essential to implement the development plans through micro level initiatives and proper coordination between all the stakeholders. These issues need to be considered to meet the targets laid out in the Eleventh Plan strategy to raise agricultural output.

Therefore, the prevailing policy instruments need to be re-looked at, redefined and efficiently implemented to enhance agriculture productivity and especially dry land farming. There is an urgent need to reduce the regional disparity through appropriate policy planning for a balanced development of the country. There is a need to motivate more private investment into the agriculture sector and incentives like tax concessions or benefits can be proposed to them. There is also a strong need for public-private partnership, not only to start new projects but also to support and maintain the existing public structure.

The following are suggested for not only improving productivity but also for ensuring food security.

- **Education and Literacy:** Role of education in improving farm efficiency and technology adoption has to be well established (Lockheed et al, 1980; Feder et al, 1985; Phillips, 1994). As agriculture transformed from subsistence to commercial level, farmers seek information on a wide range of issues to acquire knowledge or upgrade their skills and entrepreneurial ability.

  Literacy emerged as an important source of growth on adoption of improved technology components and production. The role of literacy is more pronounced during the liberalisation era than the pre -1990 period, where knowledge based decisions influence input use efficiency and productivity. Literacy emerges as an important source of growth in adoption of technology, and use of modern inputs like machines and fertilisers. Recognising that in the liberalised economic environment, efficiency and growth orientation will attract maximum attention, literacy will play a far more important role in the globalised world than it did in the past. An educated work force makes it easier to train and acquire new skills and technologies required for productivity growth. Thus, contribution of literacy will be substantial on yield growth and domestic supply of food (Mittal and Kumar, 2000).

- **Integrated Nutrient Management:** Attention should be given to balanced use of nutrients. Phosphorus deficiency is the most widespread soil fertility problem in both irrigated and un-irrigated areas. To improve the efficiency of fertiliser- use, what is really needed is enhanced location-specific research on efficient fertilizer practices, improvement in soil testing services, development of improved fertiliser supply and distribution systems and development of physical and institutional infrastructure (Kumar and Desai, 1995).

- **Water for Sustainable Food Security:** India, being crop - based, needs to produce more and more from less and less of land and water resources. Alarming rates of ground water depletions and increasing environmental and social problems pose acute threats to humankind. Improved management of irrigation water is essential in enhancing production and productivity, food security, poverty alleviation. In India, water availability per capita was over 5000 cubic metres per annum in 1950. It stood at around 2000 cubic metres during 2001 and was projected to decline to 1500 cubic metres by 2005. Further, the quality of available water is deteriorating faster (Kumar, 2001). Agriculture is the biggest user of water accounting for about 80 per cent of the water withdrawals.

- **Enhancing Yield of Major Commodities:** The yield of major crops and livestock commodities must be increased. There is a need to strengthen adaptive research and technology, assessment and refinement capabilities of the country so that the existing gaps in technology can be bridged. For this, an appropriate network of extension service will have to be created to stimulate and encourage both top-down and bottom-up flow of information among farmers, extension workers and researchers. The agronomic and soil research need to be intensified to deal with the area-specific problems as decelerating productivity growth in the major production systems. Research on coarse grains, pulses and oil seeds must achieve a production breakthrough. Hybrid rice, single cross hybrids of maize and pigeon pea hybrids offer new opportunities. Soybean, sunflower and oil palm will help in meeting the future oil demands successfully. Forest cover must be preserved to keep off climatic disturbances and provide adequate fuel and fodder. Milk, meat and draught capacity of our animals need to be improved through management practices.

- **Increase in Productivity:** It is imperative for India to maintain a steady growth rate in productivity. As productivity increases, the cost of production decreases and the prices also decrease and stabilises. Both producer and consumer share the benefits. The fall in food prices will benefit the urban and rural poor more than upper

income groups, because the former spends a much larger proportion of their income on cereals than the latter. All the efforts need to be concentrated on accelerating growth in productivity, whilst conserving natural resources and promoting ecological integrity of agricultural system. More than half of the required growth in yield to meet the target of demand must be met from research efforts by developing area-specific and low input use technologies with emphasis on the regions where the current yields are below the national average yield.

- **Making Dry Areas as Green:** Resource - poor farmers in the rainfed ecosystems practise less intensive agriculture; they depend on local agriculture for their livelihood and benefit little from increased food production in the irrigated areas. To help them, efforts must be increased to disseminate the available dry land technologies and to generate new ones. Farming system research to develop location-specific technologies must be intensified in the rain fedareas. (Singh et al, 2002). The Government of India has already extended high priority to watershed development programmes in rain-fed areas.

- **Emphasis on Empowering Small Farmers:** Contribution of small farm holders in securing food for the growing population has increased considerably even though they are the most insecure and vulnerable group in the society. Some definite human resource and skill development programme will make them better decisionmakers and highly productive. Human resource development for increasing productivity of these small farm holders should be given high priority. Thus, awareness generation and skill development of rural people in both agriculture and non agriculture are essential for achieving economic and social goals.

- **Targeted Programmes:** Raising agricultural productivity requires continuing investment in human resource development, agricultural research and development, improved access to information, better extension services and infrastructural development. Identification of need-based productive programmes are very critical. There is a need to develop demand-driven and area-specific programmes to meet the requirements of food and nutritional security of vulnerable population in the rural areas

- **Safety Net to Small Farmers and the Poor:** With the advent of globalisation and liberalisation reform and the WTO regime, the small farmers are liable to be more vulnerable and disadvantaged by the sheer scale of economy. Necessary safety nets need to be built in the structural adjustment processes. The policy of minimum guarantee prices, subsidy on food and some degree of subsidization in modern inputs need to be guaranteed for small farmers and the rural poor.

- **Support for Risk Management:** Small farmers not only have few resources to invest, but also face higher level of risk in any capital investment, as compared to wealthy farmers. The small farmers can be prevented to take extreme steps by creating the necessary policy environment to reduce risk, like diversification, generation of new livelihoods, off-farm income, institutional support, access to information, technology, inputs, credit and crop insurance.

CONCLUSIONS

Indian agriculture is facing a policy paradox. In order to be effective, the food security policy must evolve as a basic element of a social security policy with proper coordination among the various government departments, private sector and non-government organisations.

Centralised and state-level anti-poverty schemes should give way to local initiative and local participation based on the principles of efficiency, equity and environmental conservation. India is the major producer and consumer of food in

the South Asian region and possesses huge potential that remains highly under-realised. Therefore, India has to play a major role not only to maintain its own self-sufficiency in food production but also to meet the additional requirement of its neighbouring countries. The right research priorities and production strategies will promote future growth in agriculture and ensure sustainable food and nutritional security.

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