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AGRICULTURAL POLICY EVOLUTION: FOOD SECURITY AND SUSTAINABILITY IN INDIA

Arzaan Singh

Grade 12 student at The British School, New Delhi.

ABSTRACT

India is expected to become the most populous country in the world by 2024, and its population is expected to rise until 2050 (Singh, 2019). Generating agricultural produce to feed a population of more than a billion people in a way that the process is environmentally sustainable remains a challenge to policymakers. Agricultural policy overlooks the practices and structure of the agricultural system of a country. Even though there has been a gradual improvement in the agricultural output since Independence that has turned India into a nation that enjoys a surplus in agricultural trade, increased rates of output have come at the cost of environmental degradation that reduces the productivity of land in the long run. Moreover, the rate of agricultural output has been severely dependent on the monsoon rains and falls dramatically during the time of draughts, most recently in 2016 (Himanshu, 2016). This paper has explored the challenge of satisfying the need for food security in a sustainable manner through agricultural policy. Improving present conditions requires higher levels of transparency and accountability from officials employed in the state machinery of the agricultural sector, increased investment in research that is aimed at developing sustainable technologies and ensuring implementation of policy and findings of research through the creation of adequate links in the agricultural industry.

Keywords: Agricultural Policy, Food Security, Sustainable Agriculture, Food Production

INTRODUCTION

Food Security is defined as the availability of food to individuals and includes the accessibility of food to individuals. A report by the World Food Conference in 1996 stated that Food Security exists when all people, at all times, have physical and economic access to sufficient safe and nutritious food to meet their dietary needs and food preferences to lead an active and healthy life (Patel, 2013) Food Security also measures the ability to counter potential disruptions to the supply of food that might occur due to famines, wars, droughts, and economic depression (Boeing, G.). Food Security is considered to be not only a basic Human right but also a medium

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for achieving all other human rights (FAO Agricultural and Development Economics Division, 2006). Food security is based on the access, availability, utilization, and stability of healthy and nutritious food.

Sustainability in the context of agriculture is the process of fulfilling the need for food in the present in a way that does not compromise on the ability of society to fulfill the need for food in the future. It stands on the pillars of economic profit, environmental protection, and social responsibility. The traditional approach to agriculture revolves around the need of generating profits and supplying food to satisfy present needs. The sustainable approach, on the other hand, focuses on the long term and holistic goals that extend beyond the generation of profit (Ontario Ministry of Agriculture, Food and Rural Affairs 2016). Sustainable policies reject traditional approaches that compromise on the ability of future generations to satisfy their demand for nutrition by degrading environmental and social resources that are imperative to produce food.

Historically, food security has been a major concern for India. Famine has been a recurrent event in the Indian subcontinent. It has resulted in the death of over 60 million people over the past three centuries (Lancaster, 1990). There are two central causes of this. Firstly, the output of the Indian Agricultural Sector has been dependent on climate. Favorable summer monsoons are imperative for the growth of crops. Successive draughts often lead to famines.

Secondly, state policy has been inadequate to deal with the problem of agricultural production and food security. According to the United Nations, India is home to 195 million undernourished people, which equals 25% of the world's undernourished population. Four out of ten children in India are acutely undernourished (UN India, 2018). Chronic undernutrition, also known as stunting leads to diminished learning capacity, low rates of productivity and increased vulnerability to chronic diseases amongst children. Rates of stunting amongst children have decreased from 48% to 38% over a period of five years, from 2006 to 2016. However, the conditions of the lowest strata of the Indian Society with respect to food insecurity have not shown significant instrument, despite India becoming a net food exporter by 2015.

The roots of this problem lie in the harsh policies of the British government in India prior to India's Independence. India experienced its worst famine from 1943 to 1945 where over 2 million Indians lost their lives in the state of Bengal (Nafziger, 2012). This was a result of poor policies and harsh governance because the rate and duration of famines fell soon after independence, without there being a rise in food production (Iqbal & You, 2012). There has not been a major famine in India since 1943 despite serious threats in 1967, 1973, 1979 and 1987 in Bihar, Maharashtra, West Bengal, and Gujarat respectively. This has been a result of government intervention. Despite the government solving the problem of availability of food, access to food

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continues to irregular and insufficient for those existing at the bottom of the economic and social pyramid.

BACKGROUND

Agricultural Policy refers to a set of laws that are concerned with domestic agriculture and the import of foreign agricultural products. These policies are implemented to achieve specific outcomes in the agricultural market including price stability, maintaining a level of supply, product quality, employment generation and the use of land. According to the Sustainable Approach, food security in the long term should be one of the most important goals of agricultural policies. There has been an increase in the per capita availability of food in the second half of the twentieth century. This has largely occurred due to the expansion of agricultural land and an increase in agricultural productivity. However, because of land being a limited resource, the volume of food that will be produced in the future will be a derivative of the efficiency in agricultural practices which are controlled, moderated and guided by agricultural policy (Rola-Rubzen, Hardaker, 2000).

Governments usually adopt two sets of policies to influence food production to solve the problem of food insecurity. Supply-side mechanisms directly influence agricultural production and agricultural supply whereas the consumption-side policies tackle the problem of access to food for consumers. In India, agricultural policy has been the determinant of food security and the level to which people are affected by potential famines. Ignorant and harsh policies implemented by the British were the most important cause behind the deadliest famines that have plagued India. Post independence, agricultural policy has been the main reason through which governments in India have prevented famines and situations of widespread food insecurity in the country. Agricultural policy is judged on the basis of a few guiding principles. Firstly, there should be linearity between the choice of policy instrument and the goal that the instrument seeks to achieve. The scope of distortion in resource allocation and corruption must be minimized. Thirdly, the state must have the administrative capacity to implement such policies. Lastly, instruments must always be under the command and control of the state (Ontario Ministry of Agriculture, 2016).

Input subsidies refer to the subsidy that the government provides to farmers on various agricultural inputs such as fertilizers and technology. They also come in the form of tax cuts and preferential interest rates on loans. These subsidies lead to a higher level of production and profits and also create an incentive for producers to enter the market. However, subsidizing inputs disrupts the allocation of resources in the agricultural system. Subsidies are also unsustainable in the long run because of the high pressure they put on the government budget.

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Buffer stock refers to the stock purchased by the government during times of low demand with the intent of releasing it back into the market when the demand increases. Buffer stocks, in India, have been correlated to poor policy planning and corruption within government agencies that often lead to spoilage and misuse of stored agricultural produce. Moreover, even in the best case, buffer stocks are only feasible for commodities that can be stored such as wheat and rice. Other policy instruments including fixing of a price floor and income support to farmers are also measures that are effective only in the short term and do not solve the problem of food insecurity and production in the long run.

There has been a fivefold increase in food grain production in India from 50 million tonnes in 1950-51 to about 250 million tonnes in 2014-15 (UN India, 2018). India has managed to become not only a self-sufficient nation but has also emerged as a food exporter despite having the second largest population in the world. The government has introduced programs including the National Food Security Mission, Rashtriya Krishi Vikas Yojana (RKVY), Integrated Schemes on Oilseeds, Pulses, Palm oil and Maize (ISOPOM) and the Pradhan Mantri Fasal Bima Yojana. These seek to enhance agricultural productivity and double the income of farmers by 2022. The government has also introduced an e-marketplace for agricultural goods. To deal with uneven rainfall during the monsoon season, and irrigation and water harvesting program has been initiated to increase the country's gross irrigated region from 90 million hectares to 103 million hectares by 2017 (UN-India, 2018).

DISCUSSION

Since independence, agriculture has been a highly regulated sector in India and the sector has operated under the influence of multiple government agencies. Though state governments retain the constitutional authority over the agricultural sector, controls are often imposed by the central government. After independence, India pursued a policy that aimed at achieving self-sufficiency in staple foods — rice and wheat. The policies were initially focused on the expansion of the cultivated area, the introduction of land reforms, community development, and restructuring of rural credit institutions. Foreign Trade in agricultural commodities was strictly regulated through quota restrictions and high tariff rates. The government abolished the historic *Zamindari* system to ensure that the agricultural output is distributed evenly amongst those engaged in production and not hegemonized by the economically affluent *Zamindars* or landlords. The 'Green Revolution' started in India under the leadership of Dr. M.S. Swaminathan in 1965. The Government adopted improved crop technologies and seed varieties to increase agricultural productivity during this period. The use of high yielding varieties (HYVs) of wheat and rice for cultivation was accompanied by the increase in the use of fertilizers, agrochemicals, and expansion in irrigation facilities. The nationalization of banks led to an increase in the flow of

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credit to farmers, which enhanced agricultural output. The green revolution expanded to other crops including pulses, oilseeds and coarse grains since the 1980s. The macroeconomic impacts of India's Liberalization Policy of 1991 led to the increase in per-capita income and the purchasing power of Indian consumers and strengthened domestic demand. This was accompanied by the liberalization of trade and the gradual removal of import and export barriers in agricultural goods (Arora, 2013).

The Indian agricultural sector's growth took off since the 1950s and increased at a rate faster than the growth of the population. Between 1951 and 1971, foodgrain production increased from 55.0 million tonnes to 108.4 million, or at the annual rate of 2.7 percent (Dantawala, 1976). Due to the green revolution and intensification of agricultural practices, India gradually reduced its reliance on imports and became a net agricultural exporter.

However, growth in the agricultural sector in India during the 1990s and 2000s slowed down, averaging about 3.5% per annum. Cereal yields, particularly have increased by only 1.4% per annum in the 2000s. India's rice yields are one-third of China's and about half of those in Vietnam and Indonesia. This gradual slowdown in production creates a potential threat of food insecurity in the country (World Bank, 2012). India is expected to become the most populated country in the world by 2024 (Singh, 2019). Domestic food production must keep up with this rising population to prevent a basic necessity such as food from becoming a classist commodity. Agriculture Policy must aim at raising the productivity of land without using techniques that decrease its productivity like the use of harmful chemical pesticides, slash and burn cultivation, etc.

There are a number of challenges that the Indian agricultural sector continues to face.

This includes a significant level of dependence of agriculture output on vagaries of nature, inconsistency, and unpredictability of the monsoon rains, the division of agricultural land into small and fragmented holdings, ineffective implementation of equitable land reforms; lack of adequate infrastructure for the storage and marketing of perishable commodities (fruits and vegetables) , rising costs of inputs used in agriculture (hybrid seeds, agro-chemicals, etc), and most importantly, inadequate and inconsistent government support. The inability of the government to deal with these challenges has caused low and stagnating returns per unit area of land and has added to the fluctuations in the market for agricultural produce, thereby creating the risk of food security in the country.

POLICY RECOMMENDATIONS

It has been established that agricultural productivity must be enhanced to satisfy the need for

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food security of a rapidly growing population. This can be brought about by the promotion of new technology, improved agricultural research and higher levels of investment. Chronic underfunding has led to a decline in the availability of services and infrastructure to farmers.

There is a lack of fresh attempts on agricultural research which has stagnated the level of technology used in this sector. The information that is disseminated through to farmers is, therefore, largely redundant. Moreover, public extension services have been inaccessible to farmers. The connection between farmers and the private sector, where there is a higher scope for investment and research, has been lacking. Therefore, the state must actively fund research on developing economic and sustainable agricultural inputs such as fertilizers, pesticides, and seeds; and methods of irrigation. It is equally important to establish a link between research and implementation of the same. Local governments must take the responsibility to educate farmers about the importance of sustainable agriculture and the prioritization of long term productivity over short term convenience. The government should also ensure that the findings and discoveries made after research, public or private, trickle down to the farmers, who understand and implement.

Sustainability and food security have been a priority for Agriculture Policymakers in India for the past two decades. To achieve this, farmers need to be provided with multiple ancillary services including marketing, hoarding, storage, transportation, etc. Governments repeatedly promise to ensure the provision of these services but, the implementation of schemes that aim to provide those services have been plagued by corruption and red-tapism. All Government offered schemes and benefits intended to reach the farmers are routed through a series of village and block officials that include the Sarpanch, Gram Pradhan, Block Divisional Officer, Secretary and many more (Sarda, 2011). These officials have the power to grant or deny facilities at all points in time. This gives them the ability to choose who gets state welfare and support and who does not. In rural India, caste-based discrimination is pervasive which leads to the exclusion of those who lie at the bottom of the caste hierarchy from state support in their agricultural ventures. Millions spent by Government are siphoned off by officials through the administrative chain of command (Sarda, 2011). Thus it is imperative for the state machinery to keep a stricter watch and check on its officials to not only ensure support to poor farmers but also achieve the goals of sustainability and food security.

Lastly, there needs to be a stronger prioritization of environmental protection in the agricultural policy. In parts of India over-pumping of water for agriculture has led to falling groundwater levels. Waterlogging has also lead to salinization which renders land to be unproductive for several seasons in the future. Agricultural practices that erode soil lead to a reduction in the absorption of rainfall. State and central governments must pass laws that ban activities that cause

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long term and permanent damage to natural resources. The state should encourage the development of watershed management programs in small communities of farmers, as such localized sustainable models are not only effective ways of promoting sustainability but also the most feasible to implement.

CONCLUSION

The need of the hour in the twenty-first century for a country like India is to have a sustainable model that guarantees food security to its citizens. Agricultural Policy must be formed in a way that one goal is not satisfied at the cost of the other. Continuous prioritization of short term economic benefits over environmental protection and social responsibility creates new and bigger threats to food security in the future. A sustainable model will not only provide immediate support to farmers during irregular monsoons but also provide institutional support to the entire agricultural sector. The neglect of agricultural universities, extension services, and cooperative institutions has led to a collapse of the enabling institutional structure critical to the development of sustainable agriculture which supports small and marginal farmers. This must be revived not only through state policy and action but also through stimulating private investment in the agricultural sector.

India has proven that it has the natural resources and manpower to not only feed its population of over a billion citizens but also emerge as a food exporter. However, Indian policymakers must ensure that agricultural policies are formulated and implemented in such a way that the structure is able to sustain short term shocks (irregular monsoons, fluctuations of prices in the international market), the most underprivileged sections of society are given access to state welfare (subsidies under the National Food Security Act, 2013 and other acts) and most importantly, that the long term availability of natural resources needed for agriculture is not affected by environmental pollution and degradation.

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