

The Impact of Government Programmes on: Agricultural Sector

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Abstract: India is an agrarian country with around 70% of its people depending directly or indirectly upon agriculture. Farmer suicides account for 11.2% of all suicides in India. Activists and scholars have offered a number of conflicting reasons for farmer suicides, such as monsoon failure, high debt burdens, government policies, public mental health, personal issues and family problems. The government has taken a number of initiatives for the development of agriculture sector, remunerative returns for farmers' produce and reducing the cost of production. These efforts have resulted in significant transformation in their lives. In 2006, the Government of India identified 31 districts in the four states of Andhra Pradesh, Maharashtra, Karnataka, and Kerala with high relative incidence of farmer's suicides. A special rehabilitation package was launched to mitigate the distress of these farmers. The package provided debt relief to farmers, improved supply of institutional credit, improved irrigation facilities, employed experts and social service personnel to provide farming support services, and introduced subsidiary income opportunities through horticulture, livestock, dairy and fisheries. This study is going to discuss To Study the Government Programmes on Agriculture Sector. To analyse The Impact of Government programmes on Primary Sector in this paper is based on Secondary data. The Government of India also announced an ex-gratia cash assistance from Prime Ministers National Relief Fund to the farmers. Additionally, among other things, the Government of India announced: In pursuance of this vision, the Ministry of Agriculture and Farmers' Welfare will adopt a concrete strategy, based on the recommendations of the constituted committee to achieve the goal of doubling the income of farmers till August 2022 when our country will be celebrating 75th Independence Day. The outcomes are also being visible.

Keywords: Agricultural, Rural, Development, Farmers, Government.

INTRODUCTION

Agriculture is the backbone of the country with about 48 per cent of the population dependent upon it and more than 65 to 70 per cent of the citizens living in rural India. It is the source of food, feed, fibre, fuel and the livelihood of Indian people. Increasing agricultural productivity is a key

challenge for in realising higher output and farmers' income. The green revolution endowed India with a greater genetic diversity, and supported by enhanced institutional capacity, led to produce more crops. Agriculture is the cultivation of land and breeding of animals and plants to provide food, fiber, medicinal plants and other products to sustain and enhance life. Agriculture was the key development in the rise of sedentary human civilization, whereby farming of domesticated species created food surpluses that enabled people to live in cities. The study of agriculture is known as agricultural science. The history of agriculture dates back thousands of years; people gathered wild grains at least 105,000 years ago and began to plant them around 11,500 years ago before they became domesticated. Pigs, sheep, and cattle were domesticated over 10,000 years ago. Crops originate from at least 11 regions of the world. Industrial agriculture based on large-scale monoculture has in the past century come to dominate agricultural output, though about 2 billion people worldwide still depend on subsistence agriculture.

Modern agronomy, plant breeding, and agrochemicals such as pesticides and fertilizers, and technological developments have sharply increased yields from cultivation, but at the same time have caused widespread ecological and environmental damage. Selective breeding and modern practices in animal husbandry have similarly increased the output of meat, but have raised concerns about animal welfare and environmental damage through contributions to global warming depletion of aquifers, deforestation, antibiotic resistance, and growth hormones in industrially produced meat. Genetically modified organisms are widely used, although they are banned in several countries.

The major agricultural products can be broadly grouped into foods, fibers, fuels, and raw materials (such as rubber). Classes of foods include cereals (grains), vegetables, fruits, oils, meat, milk, fungi and eggs. Over one-third of the world's workers are employed in agriculture, second only to the service sector, although the number of agricultural workers in developed countries has decreased significantly over the past several centuries.

AGRICULTURE POLICY

Agricultural policy is the set of government decisions and actions relating to domestic agriculture and imports of foreign agricultural products. Governments usually implement agricultural policies with the goal of achieving a specific outcome in the domestic agricultural product markets. Some overarching themes include risk management and adjustment

(including policies related to climate change, food safety and natural disasters), economic stability (including policies related to taxes), natural resources and environmental sustainability (especially water policy), research and development, and market access for domestic commodities (including relations with global organizations and agreements with other countries). Agricultural policy can also touch on food quality, ensuring that the food supply is of a consistent and known quality, food security, ensuring that the food supply meets the population's needs, and conservation. Policy programs can range from financial programs, such as subsidies, to encouraging producers to enrol in voluntary quality assurance programs.

There are many influences on the creation of agricultural policy, including consumers, agribusiness, trade lobbies and other groups. Agribusiness interests hold a large amount of influence over policy making, in the form of lobbying and campaign contributions. Political action groups, including those interested in environmental issues and labour unions, also provide influence, as do lobbying organizations representing individual agricultural commodities. The Food and Agriculture Organization of the United Nations (FAO) leads international efforts to defeat hunger and provides a forum for the negotiation of global agricultural regulations and agreements. Dr. Samuel Jutzi, director of FAO's animal production and health division, states that lobbying by large corporations has stopped reforms that would improve human health and the environment. For example, proposals in 2010 for a voluntary code of conduct for the livestock industry that would have provided incentives for improving standards for health, and environmental regulations, such as the number of animals an area of land can support without long-term damage, were successfully defeated due to large food company pressure.

REVIEW OF LITERATURE

Alston, Craig, and Pardey (1998) constructed another state level productivity data set for 48 states, 1949-1991, and they have examined the impacts of a single combined public agricultural research and extension variable on TFP. **Rausser (1992)** classifies agricultural policies into two groups: those that correct for market failures, lower transaction costs, or enhance productivity, and other policies that result from manipulation by special interest groups. **GoI, 2011** Agriculture sector is vital for India in view of the food and nutritional security of the nation as well as the fact that the sector remains the principal source of livelihood for more than 58% of the population though its contribute on to the national Gross Domestic Product (GDP) has declined over the past years and has reached 14.2% in 2010-11 due to higher growth experienced in industries and services sectors.

Alpuerto et al, 2009 Rural farmers that constitute about 80% of the farming population in the country lack access to credit facilities and inability to procure improved seeds, fertilizers, herbicides and cannot buy or rent mechanised farming machineries like tractors. **Oriola, 2009** Despite numerous laudable agricultural programmes like Agricultural Credit Support Scheme of 2006; FADAMA Development Programmes; Agricultural Credit Guarantee Scheme Fund among others, productivity has not improved.

OBJECTIVES OF THE STUDY

1. To Study the Government Programmes on Agriculture Sector.
2. To analyse The Impact of Government programmes on Primary Sector.

RESEARCH METHODOLOGY

The present study is based on secondary data were collected from various Government of India Report (Census data), National Food and Agriculture Organisation, New Delhi, Indian Agricultural Reports, Ministry of Agriculture in India, etc. The study was used simple average, percentage, growth rates as analytical tool for analysis and comparison.

RESULTS AND DISCUSSION

Important Government Schemes & Programmes in Agriculture

Government of India is giving more priority for welfare of the farmers. In this regard it is implementing several farmers welfare schemes to revitalize agriculture sector and to improve their economic conditions. Therefore, the government has rolled out new initiatives, schemes, programmes and plans to benefit all the farmers.

1. **Soil Health Card Scheme:** Launched in 2015, the scheme has been introduced to assist State Governments to issue Soil Health Cards to all farmers in the country./ The Soil Health Cards provide information to farmers on nutrient status of their soil along with recommendation on appropriate dosage of nutrients to be applied for improving soil health and its fertility.
2. **National Mission for Sustainable Agriculture (NMSA):** NMSA is one of the eight Missions under National Action Plan on Climate Change (NAPCC). It aims at promoting Sustainable Agriculture through climate change adaptation measures, enhancing agriculture productivity especially in rainfed areas focusing on integrated

farming, soil health management, and synergizing resource conservation.

NMSA as a programmatic intervention caters to Mission Deliverables that focuses mainly on conservation agriculture to make farm sector more productive, sustainable, remunerative and climate resilient by promoting location specific integrated/composite farming systems.

Schemes under NMSA

- Rainfed Area Development (RAD): RAD is being implemented by RFS Division.
 - Soil Health Management (SHM): SHM is being implemented by INM Division
 - Sub Mission on Agro Forestry (SMAF): SMAF is being implemented by NRM Division
 - Paramparagat Krishi Vikas Yojana (PKVY): PKVY is being implemented by INM Division
 - Soil and Land Use Survey of India (SLUSI): Being implemented by RFS Division
 - National Rainfed Area Authority (NRAA): Being implemented by RFS Division
 - Mission Organic Value Chain Development in North Eastern Region (MOVCDNER): Being implemented by INM Division
 - National Centre of Organic Farming (NCOF): Being implemented by INM Division
 - Central Fertilizer Quality Control and Training Institute (CFQC&TI): implemented by INM Division
3. **Neem Coated Urea (NCU):** This scheme is initiated to regulate use of urea, enhance availability of nitrogen to the crop and reduce cost of fertilizer application./ NCU slows down the release of fertilizer and makes it available to the crop in an effective manner. The entire quantity of domestically manufactured and imported urea is now neem coated. It reduces the cost of cultivation and improves soil health management.
 4. **Pradhan Mantri Krishi Sinchai Yojana (PMKSY):** It was launched on 1st July, 2015 with the motto of 'Har Khet Ko Paani' for providing end-to-end solutions in irrigation supply chain, viz. water sources, distribution network and farm level applications. PMKSY not only

focuses on creating sources for assured irrigation, but also creating protective irrigation by harnessing rain water at micro level through 'Jal Sanchay' and 'Jal Sinchan'.

Micro irrigation is to be popularised to ensure 'Per drop-More crop'. PMKSY adopts State level planning and projectised execution that allows States to draw up their own irrigation development based on District Irrigation Plans and State Irrigation Plans.

COMPONENTS

- ✓ Accelerated Irrigation Benefit Programme(AIBP): implemented by Ministry of Water Resources, RD & GR.
 - ✓ PMKSY (Har Khet ko Pani): implemented by Ministry of Water Resources, RD & GR
 - ✓ PMKSY (Watershed): implemented by Department of Land Resources.
 - ✓ PMKSY(Per Drop More Crop - PDMC)
5. **Paramparagat Krishi Vikas Yojana (PKVY):** It is implemented with a view to promote organic farming in the country./ To improve soil health and organic matter content and increase net income of the farmer so as to realise premium prices. Under this scheme, an area of 5 lakh acre is targeted to be covered through 10,000 clusters of 50 acre each, from the year 2015-16 to 2017-18.
 6. **National Agriculture Market (e-NAM):** It provides e-marketing platform at national level and support creation of infrastructure to enable e-marketing. This innovative market process is revolutionizing agriculture markets by ensuring better price discovery. It brings in transparency and competition to enable farmers to get improved remuneration for their produce moving towards 'One Nation One Market'.
 7. **Micro Irrigation Fund (MIF):** A dedicated MIF created with NABARD has been approved with an initial corpus of Rs. 5000 crore (Rs. 2000 crore for 2018-19 & Rs. 3000 crore for 2019-20) for encouraging public and private investments in Micro irrigation. The main objective of the fund is to facilitate the States in mobilizing the resources for expanding coverage of Micro Irrigation.
 8. **Agriculture Contingency Plan:** Central Research Institute for Dryland Agriculture (CRIDA), ICAR has prepared district level Agriculture Contingency Plans in collaboration with state

agricultural universities using a standard template to tackle aberrant monsoon situations leading to drought and floods, extreme events (heat waves, cold waves, frost, hailstorms, cyclone) adversely affecting crops, livestock and fisheries (including horticulture).

Total 614 district agriculture contingency plans are placed in the 'farmer portal' of the

9. **Rainfed Area Development Programme (RADP):** Rainfed Area Development Programme (RADP) was implemented as a sub-scheme under Rashtriya Krishi Vikas Yojana (RKVY).

AIM

- To improve quality of life of farmers' especially, small and marginal farmers by offering a complete package of activities to maximize farm returns.
 - Increasing agricultural productivity of rainfed areas in a sustainable manner by adopting appropriate farming system based approaches.
 - To minimise the adverse impact of possible crop failure due to drought, flood or un-even rainfall distribution through diversified and composite farming system.
 - Restoration of confidence in rainfed agriculture by creating sustained employment opportunities through improved on-farm technologies and cultivation practices
 - Enhancement of farmer's income and livelihood support for reduction of poverty in rainfed areas and
10. **National Watershed Development Project for Rainfed Areas (NWDPRA):** The scheme of National Watershed Development Project for Rainfed Areas (NWDPRA) was launched in 1990-91 based on twin concepts of integrated watershed management and sustainable farming systems.

AIM

- Conservation, development and sustainable management of natural resources.
- Enhancement of agricultural production and productivity in a sustainable manner.
- Restoration of ecological balance in the degraded and fragile rainfed eco-systems by greening these areas through appropriate mix of trees, shrubs and grasses.

- Reduction in regional disparity between irrigated and rainfed areas and;
 - Creation of sustained employment opportunities for the rural community including the landless.
11. **Pradhan Mantri Fasal Bima Yojana (PMFBY):** PMFBY is an actuarial premium based scheme under which farmer has to pay maximum premium of 2% for Kharif, 1.5% for Rabi food & oilseed crops and 5% for annual commercial/horticultural crops and remaining part of the actuarial/bidded premium is shared equally by the Centre and State Government. One of the objectives of the scheme is to facilitate prompt claims settlement. The claims must be settled within two months of harvest subject to timely provision of both yield data and share of premium subsidy by the State Government.
 12. **Livestock insurance Scheme:** It aims to provide protection mechanism to the farmers and cattle rearers against any eventual loss of animals due to death. The scheme also demonstrates the benefit of the insurance of livestock to the people and popularizes it with the ultimate goal of attaining qualitative improvement in livestock and their products.
 13. **National Scheme on Welfare of Fishermen:** This scheme was launched to provide financial assistance to fishers for construction of house, community hall for recreation and common working place. It also aims to install tube-wells for drinking water and assistance during lean period through saving cum relief component.
 14. **Scheme on Fisheries Training and Extension:** It was launched to provide training for fishery sector so as to assist in undertaking fisheries extension programmes effectively.
 15. **Gramin Bhandaran Yojna:**

Objective of this Scheme

- Create scientific storage capacity with allied facilities in rural areas.
- To meet the requirements of farmers for storing farm produce, processed farm produce and agricultural inputs.
- Promotion of grading, standardization and quality control of agricultural produce to improve their marketability.
- Prevent distress sale immediately after harvest by providing the facility of pledge financing and marketing credit by strengthening agricultural marketing infrastructure in the country.

IMPACT OF GOVERNMENT PROGRAMMES ON PRIMARY SECTOR

The introduction of high yielding varieties, additional irrigation facilities, a great input flow through fertilizers and pesticides, farm mechanization, credit facilities, buttressed by price support, and other rural infrastructure facilities ushered in the green revolution. It stimulated infrastructure and rural development, increased prosperity of villages, and improved the quality of life. The radical change in land use and agricultural production transcended India from a food importing country to a self-sufficient and even to a food-exporting nation. There is lot of improvement in the agricultural production and productivity *per se* in India after the green revolution (Table 1.1).

Table 1.1: Increase in productivity (kg/ha) of food grains in India

<i>Year</i>	<i>Food grain production (million tonnes)</i>	<i>Food grain productivity (kg/ha)</i>
1960-61	82.02	710
1970-71	108.42	872
1980-81	129.59	1023
1990-91	176.39	1380
2000-01	196.81	1626
2010-11	244.49	1930
2015-16	251.57	2042
2016-17	275.11	2129

There has been a quantum jump in production of various agricultural commodities. By 2017 food grains sector has increased by 5 times, horticultural crops by 9.5 times, fish by 12.5 times, milk 7.8 times and eggs 39 times since 1951. This has created a sizeable buffer stock, despite high increase in population. Grain crops registered about 127 m ha (59 per cent) of the gross cropped area (GCA) of the country. Rice and wheat occupied 22 per cent and 15 per cent of the net cultivable area in India respectively. Relative to cropping patterns, rice occupies the largest cultivable area during kharif (June to October) season, whereas wheat occupies largest cultivable area during rabi (November to March) season. Pearl millet (bajra), maize and sorghum occupied about 5 per cent, 4 per cent and 4 per cent of total cropland area in India respectively during 2009-10. Though the area under maize exhibited an increase from 3 per cent in 1990-91 to 4 per cent in 2009-10, the area under pearl millet and sorghum declined significantly during the same period, from 6 per cent to 5 per cent (sorghum) and 8 per cent to 4 per cent (pearl millet). The data for the year 2016-17 shows the status in terms of percentage of GCA and annual total output as: (pearl millet 3.84%;

9.73 million tonnes), maize (4.95%; 25.90 million tonnes), and sorghum (2.89%; 4.57 million tonnes).

In addition to growth in total output, agriculture in India has shown an increase in average agricultural output per hectare in last 60 years. The **Table 1.2** presents average farm productivity in India over three farming years for some crops. Improving road and power generation infrastructure, knowledge gains and reforms has allowed India to increase farm productivity between 40% to 500% over 40 years. India's recent accomplishments in crop yields while being impressive, are still just 30% to 60% of the best crop yields achievable in the farms of developed as well as other developing countries. Additionally, despite these gains in farm productivity, losses after harvest due to poor infrastructure and unorganised retail cause India to experience some of the highest food losses in the world.

Table 1.2: Agriculture productivity in India, growth in average yields from 1970 to 2010-11

<i>Crop</i>	<i>Average YIELD, 1970-1971 kilogram per hectare</i>	<i>Average YIELD, 1990-1991 kilogram per hectare</i>	<i>Average YIELD, 2010-2011 kilogram per hectare</i>
Rice	1123	1740	2240
Wheat	1307	2281	2938
Pulses	524	578	689
Oilseeds	579	771	1325
Sugarcane	48322	65395	68596
Tea	1182	1652	1669
Cotton	106	225	510

India and China are competing to establish the world record on rice yields. Yuan Longping of China National Hybrid Rice Research and Development Centre set a world record for rice yield in 2010 at 19 tonnes per hectare in a demonstration plot. In 2011, this record was surpassed by an Indian farmer, Sumant Kumar, with 22.4 tonnes per hectare in Bihar, also in a demonstration plot. These farmers claim to have employed newly developed rice breeds and system of rice intensification (SRI), a recent innovation in farming. The claimed Chinese and Indian yields have yet to be demonstrated on 7 hectare farm lots and that these are reproducible over two consecutive years on the same farm.

SUGGESTION AND CONCLUSION

In 2006, the Government of India identified 31 districts in the four states of Andhra Pradesh, Maharashtra, Karnataka, and Kerala with high relative

incidence of farmer's suicides. A special rehabilitation package was launched to mitigate the distress of these farmers. The package provided debt relief to farmers, improved supply of institutional credit, improved irrigation facilities, employed experts and social service personnel to provide farming support services, and introduced subsidiary income opportunities through horticulture, livestock, dairy and fisheries. The Government of India also announced an ex-gratia cash assistance from Prime Ministers National Relief Fund to the farmers. Additionally, among other things, the Government of India announced.

The sustainable agro-ecological intensification may lead to increased productivity and profitability, enhanced use of local resources, maximized returns from external inputs, improved stability and diversity of yields, reduced greenhouse gas emissions, enhanced ecological resilience and environmental service provision. There exist large yield gaps in different regions of the country that can be bridged through simple interventions such as better seed, nutrients, and water management. However, it is generally necessary to move towards more knowledge-intensive forms of agriculture – embellished further with technologies and incentives that make it viable for farmers to adopt and adapt them. In crop production, agro-ecological intensification primarily implies adoption of good agronomic management principles in a local context, which includes the following:

- Profitable and sustainable crop rotations
- Quality seed of a well-adapted high-yielding variety or hybrid that also meets market demands
- planting at the right time to maximize the attainable yield by capturing water and nutrients
- Maximization of water harvesting and efficient utilisation of available water
- Integrated soil and nutrient management, including conservation agriculture, balanced and more efficient use of fertilizers
- Integrated pest management, including biological control and the judicious use of pesticides
- Optimized recycling and use of bio-mass and agricultural bi-products
- enhancing suitable crop-tree-livestock interactions

The government seems to be moving in a populist direction on this issue. It is concerned mainly with doubling farm incomes by 2022. In agriculture, when farmers are utilising all of these above schemes, there is no doubt that farmers' income doubles.

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