

# An Analytical Study on Behavioral Progress and Sustainability of Agricultural Development in Indian Economy

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## Abstract

This paper deals with the agricultural development policies and their implementation in agriculture. Agriculture in India plays a vital role in the economy of India as well as in employment section. Agriculture provides food for the nation, contributes the industrial goods and plays a part in the stock trading. Today India's about 50% population is engaged in agriculture whereas in 1950s there were 72.5% around population engaged in agriculture. The graph of agricultural development is not getting a good proportion at all after every kind of policy and strategy implementation by the government. In this paper the agricultural problems are focused and the different initiatives were taken to accommodate the agricultural growth. But since independence, growth pattern in agriculture is decelerating not including the Green Revolution era in agriculture. So that we will focus on the growth pattern of agriculture in spite of all the problems and how is the sustainability of the progress is maintained.

## Keywords-

Agricultural development, KCC scheme, Farmers suicide, Food security.

## Introduction

The economy of India is a very fast developing mixed economy. The history of agriculture in Indian economy is very old which belongs to the Indus valley civilization and more on that it is found in very ancient time in southern India also. India is ranked on the second place in agricultural output in all over the world. As the survey conducted in 2018 the total of the work force around 50% people of India is involved in the agricultural activities or employed in agriculture and it contributes a lot to the GDP as 17-18%. It provides the raw materials to different industries like cotton textile, jute industry, vanaspati industry those are having a great role to our Indian economy. If we talk more about the Agricultural progress in India in 2016, it was only 15.4% from Agriculture and its associated sectors (for example- Fisheries, forestry and animal husbandry). In the year 2014 only 31% workforce was involved in agricultural activities. The world's biggest producer of pulses, rice, wheat and spices is none other than is only India. India is ranked on the second place in the world as the main producing body of fruits and vegetables. Now if we talk about the data which is provided by the Department of Economics and Statistics, the production of grains for the year 2013-14 is 264 million tons which was increased as compared to the last year data of 2012-13 which was 257 million tons. As we talk about the net cropping area of India, India ranks first all over the world as it has the highest net cropping area after USA and China. As the economic growth of India is increasing day by day but it is not giving momentum to the agriculture in India. Instead of that Agriculture is a broad based economic sector which plays a very important role in providing employment to the workforce who is not capable to get jobs after all effort of the government.

On the other hand Indian agriculture is facing some issues like –availability of credit, no information available as required for the healthy farming, not proper arrangement and awareness among farmers for different government schemes launched in every budget.

### **Indian economy and agriculture-**

As we know that India is an agriculture based country and more than 50% of the population is dependent on Agriculture . Agriculture is the main source of income in India's maximum household. India is having a very large agricultural sector as it is providing a great volatility in Indian GDP. In past 30 years it has shrieked to 15 percent of the total GDP, as it is gaining momentum but it is not satisfactory after taking the advantage of the different government policies concerning specially for the agricultural development. India has the second largest area in the world in form agricultural land and having the privilege of highest producer of different crops (Table 1.1) . In recent study India has overtake USA in the production of Milk , pulses ,chickpeas and lentils which are the highest source of proteins.

India has touched the New High in the year 2017-18 (july – june) crop year in foodgrain production 284.83 million tones-

2012-13	257.13	Million tones
2013-14	265.04	Million tones
2014-15	252.02	Million tones
2015-16	251.57	Million tones
2016-17	275.11	Million tones (previous record)
2017-18	284.83	Million tones (4 <sup>th</sup> estimate)

2014- 15 and 2015-16 were considered as the drought years (Table-1)

( A short rainfall of around 10% or more during June –Sept is considered as drought year)

Source- As government estimates provided

If we look back to the history our agricultural growth was a little bit good than recent times. In 1972-73 around 74 % population was involved in agricultural and allied activities. According to the data taken in 1993-94 this percentage has fallen down to 64.9% and again in 2011-12 it was again slipped to 48.9 % which was just around 2/3 of the 1972-73 year percentage. And if we talk about the recent paradigm of agricultural employment it is providing 50% of the population of the total employment of the country. The proportional ratio of our exports is just equal to our total agricultural export which is very important in making a role to our economy.

### **Growth rate of Agricultural production-**

The agriculture is a very important part to our economy in providing employment, food and huge income. In 1951- 2006, the agricultural production rate was only 3.0 % per annum which is considerably lower as compared to China which is 5.3%, Pakistan 4.4% and it was 4.1 % in Indonesia. Average annual growth rate after the Green revolution period it was 2.4% on an average till 2014. The uncertainty in growth of agricultural production in India is due the percentage of rainfall in the respective region. The normal rainfall in any of the year is considered above 10% if it is 10% or less than it then it will be called drought effected area. In India around 50% of the agricultural production is dependent upon rainfall.

In last decades the crisis in agriculture is due to different economic policies organized by several governments whose attention was less dominant towards the development of agriculture. There are many reasons behind this economic crisis in agricultural production such as the falling prices of the agricultural produce, decreasing per capita income, increasing per capita consumption and increasing the poverty rate specially in rural India which dominates the crisis as well. The devastating condition of Indian agriculture was due to some more reason like the policy implemented of shifting the cultivation of the traditional crops (Like- Rice and Maize) to the commercial crops. A huge change in the cultivation of Food crops and Non food crops has recognized as in 1950-51 it was 74:26 , in 1980-81 it was 80:20, in 1990-91 it was again repeated like wise 1950-51 it was 77:23, and finally in 2013-14 the last recorded data was 73:27. This data reflects the shifting of Non food crops to Food crops in last 70 years approximately. The cultivation of Food crops in India is somehow gaining momentum but not that much as it can due to the different factors like inadequate finance, inconsistent and untimely finance causes the problem to the Indian farmers. Many subsidies are organized by Indian government to overcome the problem of seeds and the fertilizers for the cultivation but the upper class of the farmers is benefitted out of it but small farm holders are still unaware about the facility so that the benefit of the subsidy unable to reach the needy.

### **Problems of Agriculture in India-**

Around one third of India's families are dependent on the agriculture. This problem that is focused for the decreasing income of the farmers in the recent years. There are some reasons like- increasing population as our population was 50 crores at the time of independence now we are the population of 1 billion and 23 crores in India itself. And the cultivated land is decreasing and the remaining is also diversified into the hands of the owners. So that the recent level of agricultural development somehow is good but it can be more better by using the new technology of production and cultivation.

The majority of India's poor lives in rural areas (around 770 million people or we can say 70 percent people). It is a big challenge before India to overcome so that it can reduce the rural poverty level. There must be some inclusive strategy to be formed to get benefitted the rural poor like who are involved in agriculture or non agricultural activities it includes the scheduled caste and tribes, landless laborer and women's. India's poverty level is decreasing day by day but it has to be reduced much to ensure the growth of the nation. As India who was having the poverty level around 40 percent in early 90s now it is reduced to below 30 percent of mid 2000s.

India's food security has become the issue in recent times as the population is growing in India on a very faster rate that is not under proper control of the government policies which are made for controlling the population. India has to increase the production of the cereal crops to tackle the increasing population needs and to give proper attention to the production fruits, vegetables, milk and grains to meet the upcoming demands of the population.

As India has achieved self sufficiency in production of grains to meet the demand in past also. In 1970s the time of green revolution India has made the landmark in the bumper production of the crops. Agricultural self sufficiency in 1970s to 1980s has increased the rural demand and rural labor which helped to remove the poverty level and reduced the food prices. In spite of these achievements India's agricultural growth has become the cause of concern now. Now India's rice fields are just one third to that of China and about half of Vietnam and Indonesia. And this is also same for the other commodities of Agriculture.

Farmers suicide has also become the main problem for the government in the recent year. In the year 2012, the National Crime Records Bureau had reported total of 13754 farmers suicide in India till that date. It forms around 11.2% part of all suicides happened in India. Many scholars, welfare organizations and a number of activists had explored many reasons for these suicides like- monsoon failure, policies of the government, higher debt burden, personal issues and many economic problems related to their families.

### **Objectives of the study-**

1. The first objective of this research paper is to explore the development in the production of agricultural produce and its contribution in the Indian Economy in last decades.
2. To study the pattern of agricultural inputs provided in last 5 decades.
3. To Identify the main problems causing recession in the agricultural development.
4. To identify the sustainability of the agricultural development in last several decades and in recent times.

### **Literature review-**

*The Kharif outlook report which was published by NCAER for the year 2014-15 which says that the slow or we can say the negative growth of agricultural output in India is mainly effected by the weather which should be resistant to the weather. This study also shows some signs of the advancement and introduction of new technology in the agriculture which is providing the self sufficiency to the farmers in spite of the unfavorable monsoons. This report reveals the timely involvement of the government policy formulation and effective implementation to cut the effect of the drought, and affected areas are being provided a timely attention but it was not up to the mark.*

In an empirical investigation which was conducted in the year 1983 includes the three decades of agricultural development of India (Ray,1983). This study was conducted in 1983 taken last three decades data to approach the growth and instability in agriculture (1950-80). The findings of this investigation during this time had shown some satisfactory results as - adoption of new technology. In these decades, it was also found that the new technology is some how difficult to introduce in the crop production but also some problems like serious drainage and irrigation problems make the new technology unwanted initiative. At that time the timely supply of the power and water was also a cause of concern, seeds were also not tested properly for making the crop production healthy and growing, land ceiling were also a problem, costs of production were high under the new technology and the subsidies were provided not enough for application of the new inputs.

In this investigation the final outcome to increase the use of technology and bringing in the growth and stability in the agriculture the term was used "Buffer Stock Programme". The author has described it as tool to stabilize prices and farm incomes, and promote growth in agriculture. This programme can be helpful in stabilizing the land infrastructure development programme, such as - drainage, irrigation and water harvesting facilities.

A study conducted on the growth deceleration in Indian agriculture (Kakarlapudi, 2010) concluded that the agricultural sources has been changing since independence. The total area which is cultivated after the independence was continuously reducing in terms of net sown and gross sown area due to the policies of urbanization, modernization and industrialization. The agricultural output which was upgraded during green revolution in 1980s, reduced in 90s due to the neo liberal policies which emphasized the modernization and leads to reduction of investment in irrigation and seeds, technology and extension. Post reform period the agricultural pattern was changed, grains cultivation was replaced by commercial crops advent of favorable prices and trading terms but it has created a negative impact on the growth of agriculture. There are so many reasons for slowing down the growth pattern of agriculture such as- mobile output prices, continuous reduction in subsidies for inputs and only dependency of the high cost inputs which increased the cost of cultivation. It was not backed by the adequate credit supply for the farmers and on the another hand crop production drop out and the regality of the crops were highly faulty which completely pushed the farmers into debts. *The NSS 59<sup>th</sup> round survey on Indebtedness of Farmer Households conducted in 2003 reported that 48.6% of farmer households were indebted. All the sectors of agriculture and allied sections are deeply affected by the agricultural menace.*

Another research was made for investigating the economic development in agriculture (Cagliarini et al,2009) shows that the share of Indian agriculture has decreased in Indian economy in last 50 years. Although India has made the remarkable come back in agricultural production in recent years which includes the highly output seeds varieties, increment in uses of fertilizers and well managed water management systems. Many more things such as-policy changes in land distribution, more better water management systems and food distribution systems can improve India's productivity and may help in meeting the future population demands.

A study had concluded that (Madhusudan. L, 2015) maximum Indians may be directly or indirectly is attached with agriculture. Some of the people are directly cultivating the land as his sole source of living and some of them treat it as like commercial activity for their lively hood. As per the capacity of the Indian agriculture it has the potential for higher production that can make a highest difference in Indian economy. But to achieve this landmark, the government of India has to provide some support in case of land, bank loans and other major steps to be taken to avail the new technology for the small farmers as well as the big farmers only after this move India can achieve the targeted mark in the crop production.

### **Research Methodology-**

This study uses the secondary data from different sources like the economic survey conducted by government organizations, survey report of NCAER, World bank report on India. In this paper, information has been arranged to show a comprehensive pattern of agricultural growth by depicting the table with different issues related to agriculture.

### **Government initiatives for the agricultural development-**

#### **Agriculture Price Commission, 1965-**

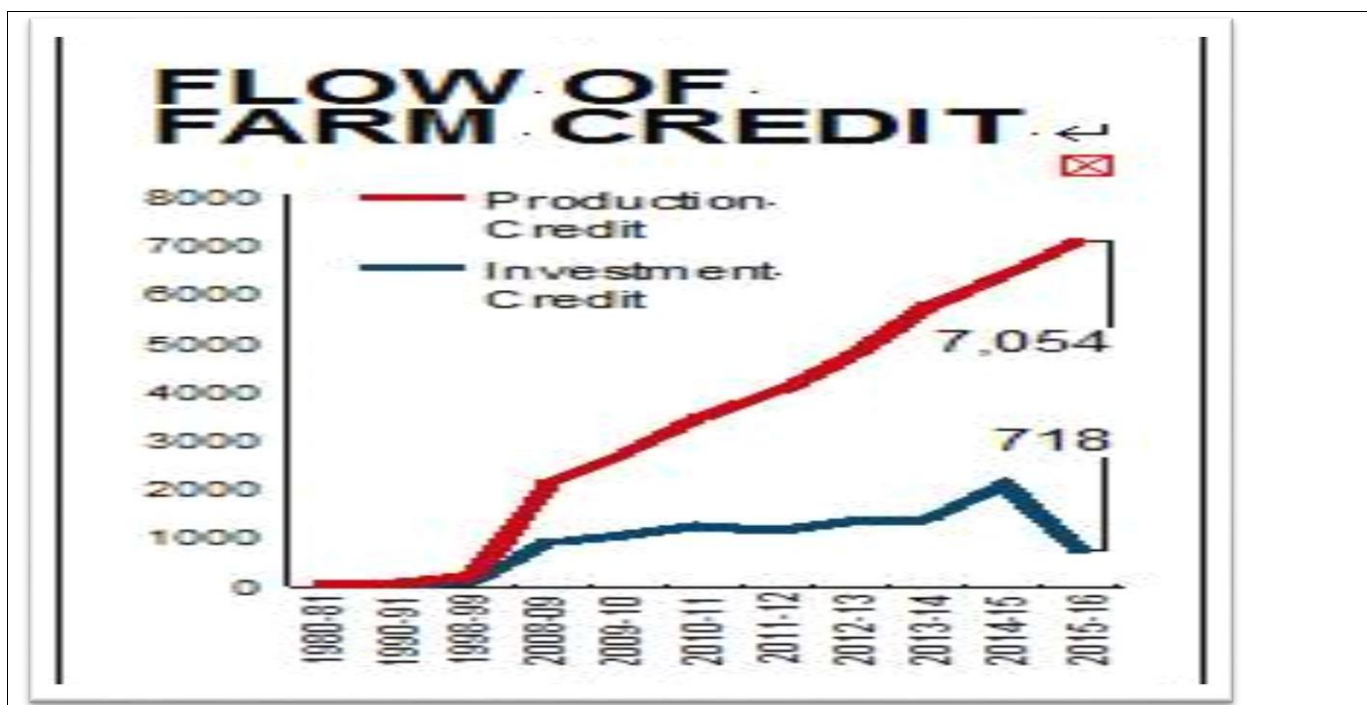
In the year 1965, Agricultural Prices Commission were set up by the Government of India for the welfare and strategy making of agriculture in India. Later it was renamed as Commission for Agricultural Costs and Prices (CACP) which was having a mandate of Minimum Support Price(MSP) for the farmers for their crops. Another issue for setting up of such an institution was to increase the production level of the crops to meet the upcoming demand of the growing population inside the country. As today also CACP supports 23 crops for MSP like- 7 cereals(paddy, wheat, maize, sorghum, pearl, millet, barley and ragi), 5 pulses (gram, tur, moong, urad, lentil), 7 oilseeds (groundnut, mustard, soya bean, seas mum, sunflower, safflower, nigerseed) and four commercial crops (copra, sugarcane, cotton and raw jute). This commission was considered as the foundation stone of the "Green Revolution".

#### **Kisan Credit card scheme-**

In 1998 the government has launched the Kisan Credit Card Scheme for the small and marginal peasants. NABARD was asked to formulate "Model Scheme" for unifying the credit pattern adopted by all banks of India. After that KCC scheme was launched in August, 1998 turned to be a big hit among the farmers of India. The mode of financing in KCC was just to accumulate the all pattern of the credit provided to the farmers and make remarkable growth by changing the investment pattern of different credit providing agencies. The KCC account is formed like cash-credit facility that businessmen and small traders has for their commercial purpose. Moreover the farmers has to apply every time when he wants to take the loan earlier but in KCC, once the card is issued then it is valid for three years but in 2001 it was extended to five years means the farmers has the freedom to draws and repayment within the sanctioned period. Farmers are provided 12 months time limit to pay off the loan taken through KCC and he can repay just after 24 hours of the loan taken. In the year 2006 the 2% subsidy was provided by the govt. for making the payment of KCC upto the limit of 3 lakhs with the 7% of the interest amount to be paid. And again in 2008, 3% subsidy was given to the farmers and the final interest rate settled in 2008 it was only 4%. In 2012, Some modification was done in the functioning of KCC, like the post harvesting included, provided marketing expenses to the farmers, stabilize capital for owning, maintaining the farming assets. The credit limit was also allowed to increase to 10% annually. One more facility was introduced to the farmers, issuance of RuPay Credit cards for the KCC holders to take the benefit of the ATM withdrawal any time.

The attraction of this scheme is can be guessed by only this fact that in 2005 five crores cards were issued but in 2017 it has reached up to 15crore mark. Due to the sheer attraction of the expansion and popularity of the Kisan Credit Card, Private sector banks bound to jump in the agricultural arena. *In a study which was conducted by Centre for Research in Rural and Industrial Development (CRRID), based on a survey of 103 farmers in only Punjab and Haryana state in the year 2016, private sector banks are gaining a more favorable market share in comparison to SCBs after 2012-13.* Private banks are looking more attractive in increased credit limits as they are providing the 100000 to 300000 per acre as compared to SCBs which is providing only 60000-80000 per acre on the cultivated land. The KCC credit is utilizing only by 63% of the farmers and the excess credit provided over the KCC limit is utilized in purchase of the tractors, pumping sets for irrigation and the poly houses. 12% farmers utilize it for non farming investments , 23%for the child marriage, 10% for making new houses and children education, and 6% of them are using it to send their wards to abroad.

Not proper use of the farm credit has stagnating the agricultural productivity became the reason of agrarian crisis. The success of the Farm credit schemes is only when government and banks combined make a plan of action to undertake a policy for farm credit to utilize it properly by the needy farmers only.



Source : A report on KCC prepared by CRRID (Centre for Research in Rural and Industrial Development) (Table -2)

### Indian National Policy for Farmers, 2007-

Indian National Policy for Farmers was framed in 2007 which states clearly that “ *prime farmland must be conserved for agriculture except under exceptional circumstances, provided that the agencies that are provided with agricultural land for non-agricultural projects should compensate for treatment and full development of equivalent degraded or wastelands elsewhere*”. This policy was earmarked only for the nonagricultural land which is not suitable at all for the farming purpose can be used for making industrial parks and other commercial paradigms.

### Pradhan Mantri Kisan Samman Nidhi Scheme-

Government of India has introduced several policy measures time to time to give benefits to the marginal farmers. It has introduced various policies to combat the situation comes before the small tenants and marginal farmers in farming activities. The scheme which was launched recently by ruling government in India January 2019 “Pradhanmantri Kisan Samman Nidhi Scheme” mainly concerned for the betterment of the marginal class of the farmers. This scheme is only made for the small and marginal peasants who can't afford the purchase of seeds of better quality . It will work like a dependable support in adopting the better technology and seeds for the better output.

Under this scheme total of 6000 rupees is given to the farmers for their agricultural expenditures, from this quarter the 2000 rupees installment has been started from January 2019. In every subsequent quarter the 2000 rupees installment will be transferred to the account of beneficiary. In Punjab around 2.63 lakhs farmers has taken the benefit of this scheme with the first installment of the scheme. In Assam around 80000 farmers, in U.P around 74.71 lakhs farmers has got the first installment of the scheme. In all over India around 21832062 billion farmers has taken the benefit of this first installment of the scheme.

Year	Average Annual Exponential Growth rate (%)	GDP Contribution (Total)	Total Population involved (%)
1951-60	1.25% (Avg.)	54.66%	71.9%
1961-70	1.96%	49.14%	76.0%
1971-80	2.22%	43%	62.2%
1981-90	2.20%	37.5%	62.5%
1991-2000	2.14%	30.32%	59.7%
2001-2010	1.95%	24%	54.4%
Total	1.95%	39.77%	

Sources- Agricultural Statistics at a Glance (2008), indicated percentages to reported areas only. (Table-3).

### **Summary and Conclusion-**

This paper evaluates the performance and behavioral progress reported in last many years. It digs out the main problems of Indian agricultural diasporas and concentrates on the policies and initiatives taken by the Indian Government time to time. This analysis focuses on the previous years growth, total GDP contribution and the total of the employment generated through the help of agriculture. It also analysis the growth pattern after the introduction of Kisan Credit Card scheme.

This paper analysis the growth pattern of agriculture in last 70 years. Our total of around 70 % population was dependent only on the agriculture but now only 50% population is only involved in it. It is a matter of deep concern that we are having the fifth fastest growing economy in the world but we are lagging behind the other countries. Our agriculture makes only 15% part of the economy which is very low in comparison to the earlier years.

For igniting the agricultural growth govt. has to take some steps like – power supply at subsidized rate, seeds varieties at low rates, fertilizers with huge subsidy and market place provided to the farmers to their reach. Government can reduce the fuel prices also for the farmers only what they use in tractors and other agricultural equipments, that can make a huge difference in total cost of the production. Minimum support prices regulation can be made more easy to the farmers, more government policies can be inducted and a awareness programs can be organized at a very large level to every gram panchayat for these policies so that farmers related that village can take the benefits of the policies. Government can regularize the recent pump set technology(Submersible pumps) so that a definite depth is allowed to the farmers for irrigation purpose because most of the farmers put their pump set in a very low depth of water level inside the earth which causes over utilization of the water that makes deficiency to the other areas. Thus, there is a need for this concern to make long term perspective plan for the betterment of rural infrastructure to mainly focus on the infrastructural projects.

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