

A Study on Food Grains Production and Economic Development of India

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ABSTRACT

Agriculture is the major sector of economic activity. It provides not only food and raw materials but also employment to a very large proportion of population. Sustainable agriculture can be defined as production of sufficient food grains for the present as well as future generation without altering the quality of soil. The technology induced farming gave in for excessive usage of chemical fertilizers, pesticides and weedicides etc. Today India occupies a significant place at the global level as the second largest producer of milk. The Green Revolution of the 1960s initiated a gradual transformation of the traditional household agriculture into modern and scientific agriculture in several parts of India. Though the earth has perhaps 30,000 plant species with parts that people can eat, only 15 plants and 8 animal species supply 90 per cent of our food. Four crops wheat, rice, corn and potato make up most of the world's total food production than all other crops combined. Food grains production Average area and production of important food grain crops in India during the last four decades are presented in Table 1. The average cereal production per year increased from 73.90 million tonnes during 1960s to 172.71 million tonnes during 1990s showing about 2.5 times increase during this period. The share of superior cereals (rice and wheat) to total food grains production has shown increasing trend during the last four decades. Reforms introduced in the 1991's have not resulted in a significant increase in the production of major food grains to such as rice and wheat.

KEY WORDS: Food grains, Production, Yield, Economic Development.

1. INTRODUCTION

Agriculture is the major sector of economic activity. It provides not only food and raw materials but also employment to a very large proportion of population. Agriculture has been source of livelihood for more than two thirds of our Indian population. It remains the backbone of our economy. The new agricultural strategy has changed the demand for input such as credit, extension services, farmer's trainings, transport, food processing, storage and marketing activities, which are required for generating higher production. India would have a population of 137 crores by the year 2025, 400 million tones of food grains production would be needed to feed this population. It would be therefore be necessary to plan agricultural development on a sustainable level. Sustainable agriculture can be defined as production of sufficient food grains for the present as well as future generation without altering the quality of soil. The technology induced farming gave in for excessive usage of chemical fertilizers, pesticides and weedicides etc., bringing intensive agriculture. This indiscriminate use of synthetic pesticides not only pollutes our nature and natural resources but their toxic residues enter into animals and human through food chains and cause several health hazards. Also the lands are turning acidic leading to lesser production and ultimately to barrenness. In the race for higher production we are ignoring the resilience of the earth and have

threatened the sustainability of the production. Thus sustainable production is one of the greatest challenges of the 21st century. Sustainability emphasizes on consistency of production with a long term benefit rather than a short term development. Hence in order to overcome such problems, it is advisable to start cultivation of different types of crops and preservation of the natural products that could have to be arranged with farmers to identify suitable farming technologies in maintaining the quality of the available natural resources. It is the responsibility of the government to educate the people in general and the farmers in particular to save the natural resource management in the required direction. Agriculture is India's backbone for the growth and development of the country's economy. Nearly 65 per cent of the Indian population is still dependent on agriculture for its livelihood and employment. It is also the source of supply of raw materials for industries and provides support to the transport system. In recent years there has been great diversification in Indian agriculture such as livestock, horticulture and fisheries. Today India occupies a significant place at the global level as the second largest producer of milk. The Green Revolution of the 1960s initiated a gradual transformation of the traditional household agriculture into modern and scientific agriculture in several parts of India. The introduction of new technology in agriculture brought about unprecedented increases in yield and output of major cereal crops like rice and wheat.

FOOD GRAINS PRODUCTION IN INDIA

It is very significant that one third of the world's rice area is in India. That is level of 83 million hectares. It is grown in almost all the states of India but it is mostly concentrated in the river valleys, deltas, and low lying coastal area of North Eastern and Southern India. The rice producing states are Assam, West Bengal, Bihar, Madhya Pradesh, Orissa, Andhra Pradesh, Tamil Nadu, Kerala, Mysore, Maharashtra, Gujarat, and Uttar Pradesh, Jammu and Kashmir which together contribute over 95 per cent of the country's rice production. Of these, West Bengal, Orissa, Andhra Pradesh, Tamil Nadu and Bihar are the major rice producing states.

AGRICULTURAL PRODUCTION

Though the earth has perhaps 30,000 plant species with parts that people can eat, only 15 plants and 8 animal species supply 90 per cent of our food. Four crops wheat, rice, corn and potato make up most of the world's total food production than all other crops combined. These four, and most of our other food crops, are annuals; their seeds must be replanted each year. Grains provide about half the world's calories, with two out of three people eating mainly a vegetarian diet-mostly because they can't afford meat. As incomes rise, people consume even more grain, but indirectly in the form of meat, eggs, milk, cheese and other products of domesticated livestock feed to supply these individuals with meat. In addition, one third of the world's fish catch is converted into fish meal to feed livestock consumed by meat eaters.

The single most important implication of India's rapid population growth during the second half of the twentieth century was the threat it posed to national food security. That threat reached dangerous proportions in the mid 1960s, leading to the launching of the Green Revolution, achievement of food self sufficiency, and subsequently, a growing stock of surplus food grains by the mid 1970s. Happily, such a threat no longer exists for the country. Growth of food production has exceeded population growth for each of the past three decades. Statistics present a confusing picture of India's progress on food security. Both per capita food grain consumption and total calorific intake have declined slightly in recent years among all levels of the levels and real per

capita expenditure on food is raising among all income groups. Increasing food consumption alone is not a sufficient condition for overcoming malnutrition in India. It is also necessary to address the factors responsible for the high incidence of gastrointestinal and respiratory infections as well as cultural factors responsible for faulty child feeding and weaning practices. Assured are necessary elements of a comprehensive strategy to eliminate malnutrition and achieve the goal of food for all before 2020. Continued growth of the agriculture sector is particularly important because it plays such a vital role in generating purchasing power among the rural population. Therefore, it is essential that agricultural development strategies for the 21st century focus on generating both higher incomes and greater on-farm and off farm employment opportunities. The factors influencing this trend are numerous and complex; however, it can be primarily attributed to; Reduction in calorie requirement due to a more sedentary life style among both the rural and urban population. Bicycle and bus travel, mechanized pumps and equipments, access to telephones and newspapers and have reduced the physical work to a greater or lesser extent for most Indians. Diversification of the Indian diet to include a larger intake of fruits, vegetables, dairy products, sugar, oil, eggs, fish and meat products thereby reducing the required intake of calories from cereals.

PRODUCTIVITY OF FOOD GRAINS

The information about the average annual growth in the yield of food grains production in general and yield of rice, wheat, pulses and coarse cereals in particular is given in the following table 3. The data reveals that in the pre-reform period average annual growth rate of yield of food grains production is greater than the growth rate in the post-reform period. In comparison to 1970s, 1980s observed higher growth in yield of food grains production. During the post reform period there is mixed or wide fluctuation in growth rate in yield of food grains production is observed. The growth rate in yield of total food grains production in pre-reform period is 2.60 percent per annum.

GROWTH RATES OF FOOD PRODUCTION AND POPULATION GROWTH

Year	Food production		Population Growth %
	Aggregate	Per capita	
1961-63 to 1971-73	2.11	-0.10	2.24
1971-73 to 1981-83	3.00	0.84	2.23
1981-83 to 1991-93	3.77	1.62	2.02
1991-93 to 1997-99	2.72	0.90	1.84
2001-03 to 2010-11	4.37	1.75	2.31

Source: FAO, state of Food and Agriculture

TABLE NO 1

The growth of food production down to 2.72 per cent per annum in the nineties. Ironically, even at the low growth rate food grain production, the supplies outstripped the effective demand and nineties has been a rapid increase in the stock of food grains held by the government. Disposal of stock has become a cause of concern. The domestic supplies are more than adequate to prevent food gaps.

STATEMENT OF THE PROBLEM

Agriculture forms the backbone of the Indian economy and despite concerted industrialization in the last four decades: agriculture occupies a place of pride. Being the large industry in the country,

agriculture is the source of livelihood for over to present of population in the country. The planning commission states “An approach to national food security, which relies largely on domestic production of food needed for consumption as well as for building buffer stocks, can be described as a strategy was adopted in the early phase of Indian planning.

OBJECTIVES OF THE STUDY

- To analyze the trend of food grains production
- To study the determinants of food grains production.

Percentage Change in Food grains Production in India

Year	Production	% Change
2000-01	196.81	-6.19
2001-02	212.85	8.14
2002-03	174.77	-17.89
2003-04	213.19	21.98
2004-05	198.36	-6.95
2005-06	208.60	5.16
2006-07	217.28	4.16
2007-08	230.78	9.18
2008-09	234.47	7.17
2009-10	218.11	5.43
2011-12	244.49	8.27
2012-13	259.29	6.96
2013-14	257.13	4.70
2014-15	265.04	9.71

Source: Handbook of Statistics on Indian Economy, 2008 (RBI)

TABLE NO 2

PRODUCTION

The results of trend analysis imply that the production under food grains in India had increased by 4.00 per cent annually the first sub-period i.e., 1980-81 to 1989-90. The regression co-efficient of the semi-log linear model implies that the production under food grains increased at compound growth rate of 1.10 per cent per year. The results of trend analysis imply that the production under food grains in India had increased by 2.23 per cent annually the second sub-period i.e., 2000-01 to 2014-15. The regression co-efficient of the semi-log linear model implies that the production under food grains increased at compound growth rate of 2.73 per cent per year.

YIELD

The results of trend analysis imply that the yield under food grains in India had increased by 34.18 per cent annually the first sub-period i.e., 2000-2001 to 2014-15. The regression co-efficient of the semi-log linear model implies that the yield under food grains increased at compound growth rate of 2.94 per cent per year.

RESULT DISCUSSION

Food grains production Average area and production of important food grain crops in India during the last four decades are presented in Table 1. The average cereal production per year increased from 73.90 million tonnes during 1960s to 172.71 million tonnes during 1990s showing about 2.5 times increase during this period. The share of superior cereals (rice and wheat) to total food grains production has shown increasing trend during the last four decades. However, the share of coarse cereals and pulses to total food grain production has experienced declining share during this period. Within the superior cereals, the share of wheat has increased from about 16 per cent during 1960s to about 34 per cent during 1990s, whereas the share of rice to total food grains production has remained about 41 per cent per year during this period. There was a substantial increase in average area per year under food grains during 1970s over 1960s but in 1980s, the pace of this increase slowed down. During 1990s, the average area was lower than the average area in 1970s and 1980s but higher than 1960s. The share of area under cereals to total area under food grains has been almost stagnant (81%) during the last four decades. Within the cereals, there was 6 substantial increase in share of wheat area and the area under coarse cereals was being replaced by superior cereals particularly by wheat and rice. The all India compound growth rate in area, production and yield of food grain crops are given in Table 2. Food grains production increased at an annual compound growth rate of 2.68 per cent during 1990-99. The growth rate indicate a marginal increase in the area and increased production was mainly because of productivity growth (2.44%). Decade wise growth indicate that the positive area growth rate during 1960s and 1970s turned into negative growth after words. Regarding production, there was steady increase in growth rate during 1970s and 1980s from the rate of their previous decade but during 1990s, India experienced shortfall in growth rate from the previous decade. However, there was no uniformity in the growth rates among the different crops. Declining trend in area growth was observed for cereal crops. In rice crop, the growth rate in production was found to be much higher during 1970s and 1980s over the previous decade mainly due to larger increase in yield growth despite of marginal decline in area growth rate during 1980s over previous decade. The production growth declined during 1990s over 1980s mainly due to decline in yield growth. In case of wheat crop, the growth rate in production was lower during 1970s, 1980s and 1990s over their previous decades due to drastic fall in yield growth during 1970s and area growth during 1980s over the previous decade. During 1990s, decline in yield growth was compensated by increase in area growth.

2. CONCLUSION

Reforms introduced in the 1991's have not resulted in a significant increased in the production of major food grains to such as rice and wheat. The area under cultivation of wheat and maize has increase at the cost of decline in the area under rice. Since agriculture is the backbone of Indian economy it is essential to take substantial measures to improve the agricultural production. In the post reform period the public investment in agricultural sector has slowed down Government investment is essential to provide basic infrastructure facilities to agricultural sector. Subsidies should be given in a gathered manner so that only small and marginal farmers will be benefited.

3. REFERENCES

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