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Production and growth of major crops in Indian agriculture during 11th five year plan period

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Abstract

In this paper an attempt has been made to examine the production and growth of major crops in Indian agriculture during 11th Five - year plan period. For this purpose, the necessary data required for the study has been collected from Directorate of Economics and Statistics of Ministry of Agriculture. The results of the study show that the production of all major crops has increased during the period of study. There has been remarkable production of food grains at 259.32 million tonnes during 2011-12. The growth rates of production and productivity of all major crops have recorded as positive during the period of study whereas the growth rate of cultivation area under cereals, oil seeds and jute & mesta has witnessed as negative. The impressive growth rate in production has been made in the case of cotton, oil seeds, wheat and pulses cultivation. The yield per hectare has been maximum in the cultivation of oil seeds crops.

Keywords: Indian Agriculture, Major crops, Production, Growth

1. Introduction

India is an agricultural country. The Indian economy is basically agrarian. In spite of economic development and industrialization, agriculture is the backbone of the Indian economy. As Mahatma Gandhi said, "India lives in villages and agriculture is the soul of Indian economy". Nearly two - thirds of its population depends directly on agriculture for its livelihood. Agriculture is the main stay of India's economy. It contributes about 14% of the Gross Domestic Product (GDP). Agriculture meets food requirements of the people and produces several raw materials for industries. From agricultural point of view India is a unique country. It has vast expanse of level land, rich soils, wild climatic variations suited for various types of crops, ample sunshine and a long growing season. The net sown area in India today is about 143 million hectares. India has the highest percentage of land under cultivation in the world. In spite of the fact that large areas in India, after independence, have been brought under irrigation, only one - third of the cropped area is actually irrigated. The productivity of agriculture is very low. Farming depends mainly upon monsoon rain. Most of the production comprises food crops. About one - third of the land holdings are small, less than one hectare in size. Farmers own their own small pieces of land and grow crops primarily for consumption. Even storage facilities for crops are inadequate. Now the use of pesticides and fertilizers has increased and large areas have been brought under high yielding variety of seeds. This has helped in increasing yields per hectare as well as total production of different crops.

The five - year plans accorded priority to the agricultural sector. In the past 60 years, the food grains production in the country has increased substantially. In spite of the constant raise of population, we are able to build an adequate food stock. **Ramachandra Murthy, Anand and Manjuprasad** in their work on "An economic analysis of trends in agricultural production in India" have highlighted that there has been record production of food grains of 259.32 million tonnes during 2011-12. Of the total food grains production, the production of cereals has been 242.23 million tones and pulses has been 17.09 million tones. As per second advance estimates for 2012-13, the total food grains production has been estimated at 250.14 million tones. Another study carried out by **Raghavulu** on "Performance of agricultural sector in India" has showed that the food grains production has accounted 244.5 million tonnes in 2008-09. The production of cereals has increased to 226.3 million tonnes in 2010-11 from 219.90 million tonnes in 2008-09. The productions of wheat and rice have accounted

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86.9 million tonnes and 96.0 million tonnes respectively during 2010-11. In these backgrounds this study attempts to examine the growth in area, production and yield of major crops in Indian agriculture.

2. Methodology

In this paper an attempt has been made to examine the production and growth of major crops in Indian agriculture during the 11th Five - year plan period (2007-08 to 2011-12). This study exclusively based on secondary data. The time series secondary data required for the study have been collected from Directorate of Economics and statistics, Ministry of Agriculture, Government of India. Simple percentage and growth analysis have been employed in this study to analyze the data.

3. Production of major crops

The production of major crops such as rice, wheat, cereals, pulses, food grains, sugarcane, oil seeds, cotton and jute & mesta during the period between 2007-08 and 2011-12 has been presented in Table -1

Table 1: Production of major crops during 11th five- year plan period (Million Tonnes /Bales)

S.No.	Crops	Year				
		2007-08	2008-09	2009-10	2010-11	2011-12
1.	Rice	96.69	99.18	89.10	95.98	105.31
2.	Wheat	78.57	80.68	80.80	86.87	94.88
3.	Cereals	216.01	219.90	203.45	226.25	242.23
4.	Pulses	14.76	14.57	14.66	18.24	17.09
5.	Food grains	230.78	234.47	218.10	244.49	259.32
6.	Oil seeds	29.75	27.72	24.88	32.48	29.80
7.	Sugarcane	348.19	285.03	292.30	342.38	361.04
8.	Cotton *	25.88	22.28	24.02	33.00	35.20
9.	Jute and Mesta**	11.21	10.37	11.82	10.62	11.40

Source: Directorate of Economics and Statistics, Ministry of Agriculture

Note: * - Million bales of 170 KG each

** - Million bales of 180 KG each

The table shows that the production of all major crops has increased during the 11th Five - year plan period. There has been record production of food grains at 259.32 million tonnes during 2011-12. Of the total food grains production, the production of cereals has been 242.23 million tonnes and the pulses production has been 17.09 million tonnes. The production of rice and wheat has increased respectively to 105.31 million tonnes and 94.88 million tonnes during 2011-12. The production of oil seeds has been estimated to be 29.80 million tonnes in 2011-12 which is marginally lower than that of in last year (32.48 million tonnes). Similarly the production of pulses in 2011-12 is lower than that of in last year.

Table 3: Gross capital formation in agriculture and allied sectors (At 2004 - 05 prices) (Rs. in Crores)

Year	GDP from agriculture and allied sectors	GCF in agriculture and allied sector			GCF as a % of GDP from agriculture and allied sector		
		Public sector	Private sector	Total	Public sector	Private sector	Total
2007-08	655080	23255	82484	105739	3.5	12.6	16.1
2008-09	655689	20572	106555	127127	3.1	16.3	19.4
2009-10	660987	22693	110469	133162	3.4	16.7	20.1
2010-11	713477	19918	111306	131224	2.8	15.6	18.4
2011-12	739495	22095	124483	146578	3.0	16.8	19.8

Source: National Account Division, Central Statistical Office, Government of India.

4. Growth rate in area, production and productivity of major crops

The average annual growth rate of area, production and productivity of major crops during the 11th Five - year plan period (2007- 08 to 2011-12) has been presented in table - 2. The table shows that the growth rate of production and productivity for all major crops has recorded positive growth during the 11th five -year plan period whereas the growth rate of area under cultivation of cereals, oil seeds and jute & mesta has witnessed a negative growth during the study period. Even though the area under cultivation of oil seeds has been declined by 0.07% per annum during the study period, the yield of oil seeds per hectare has been increased by 5.32% per annum. The high impressive growth rate in the productivity has been observed in the case of oil seeds. The impressive rate of growth (More than 4% per annum) in the production has been observed in the case of wheat (4.64%) pulses (4.28%), oil seeds (5.54%) and cotton (10.46%) during the period of study.

Table 2: Average annual growth rate of area, production and yield of major crops during 11th five year plan period (2007-08 to 2011-12)

S.No.	Crops	Average annual growth rate		
		Area	production	yield
1.	Rice	0.18%	2.69%	2.41%
2.	Wheat	1.31%	4.64%	3.29%
3.	Cereals	- 0.03%	3.79%	3.76%
4.	Pulses	1.36%	4.28%	2.78%
5.	Food grains	0.19%	3.80%	3.55%
6.	Oil seeds	- 0.07%	5.54%	5.32%
7.	Sugarcane	- 0.04%	0.99%	0.87%
8.	Cotton	5.97%	10.46%	3.93%
9.	Jute and Mesta	- 0.59%	0.62%	1.12%

Source: Directorate of Economics and Statistics, Ministry of Agriculture

5. Capital formation in agriculture and allied sector

Gross Capital Formation (GCF) in agriculture and allied sectors during 11th Five - year plan period is given in Table - 3. The table shows that the gross capital formation in agriculture and allied sectors as percentage of agricultural GDP has increased from 16.1% in 2007-08 to 19.8% in 2011-12. But when compared with the overall capital formation in the economy which is about 40% of GDP, capital formation in agriculture sector is much lower. The public sector capital formation in agriculture as a percentage of agricultural GDP has come down from 3.5% in 2007-08 to 3.0% in 2011-12, whereas private sector investment in agriculture as a percentage of agricultural GDP has increased to 16.8% in 2011-12 from 12.6% in 2007-08. While a higher share of private sector investment in agriculture is a welcome feature, public sector investment is critical as it is generally found to accelerate private investment.

6. Government initiatives to accelerate agricultural production during 11th Five - year plan period

In order to increase the agricultural growth the government launched Rashtriya Krishi Vikas Yojana (RKVY) in August 2007, incentivizes the states to increase public investment in agriculture and allied sectors taking agro - climatic conditions, natural resource issues and technology into account and integrating livestock, poultry and fisheries more fully while providing more flexibility and autonomy to the states in planning and execution of the schemes. It has become the principal investment in the agriculture sector which now includes several commodity specific measures namely Bringing Green Revolution to the Eastern Region of India (BGREI), Special initiative for pulses and oil seeds, accelerating food production, creating vegetable clusters, initiatives for nutritional security through Intensive Millet Promotion (IMP), oil palm development, protein supplements, rain fed area development programme and the saffron mission. Beside RKVY, National Food Security Mission (NFSM) and the National Horticulture Mission (NHM) have also emerged as the path breaking interventions which have helped in achieving record production of cereals, pulses, oil seeds, fruits, vegetables and spices during 2010-11 and 2011-12. With the focused interventions under the NFSM supported by other programmes and schemes and conducive price policy regime, target of 20 million tonnes of additional food grains production has been exceeded during the 11th five-year plan period. Not only has the demand been completely met particularly for the cereals, the buffer and strategic reserves are at levels that are more than double their set limit. There is a record export of cereals that has gained not only huge foreign remittance but has also stabilized global food economy through increased availability and reasonable price. To reduce over exploitation of natural resources in the north - west region and to increase the productivity of rice, wheat, maize and pulses, BGREI has started involving promotion of innovative production technologies and agronomical practices addressing the underlying key constraints of different agro-climatic sub - regions. System of Rice Intensification (SRI), laser land leveling; hybrid rice technologies and line transplanting of rice seedlings etc. are being promoted under this initiative.

7. Conclusion

This study has attempted to examine the production and growth of major crops in Indian agriculture during the 11th Five - year plan period. From the results of the study we can come to the conclusion that the production of major crops in Indian agriculture has increased over the period of time. There is record production of food grains in 2011-12. The growth rate of production and yield for all major crops has recorded positive growth during the period of study whereas the growth rate of area under cultivation of cereals, oilseeds and jute & mesta has witnessed a negative growth during the period of study. The higher rate of growth in production has been observed in the case of cotton, oilseeds, wheat and pulses respectively. Investment or capital formation is one of the basic requirements for growth of any sector. Even though the gross capital formation in agriculture and allied sector as percentage of agricultural GDP has increased from 16.1% in 2007-08 to 19.8% in 2011-12, when compared with the overall capital formation in the economy which is about 40% of GDP, capital formation in agriculture sector is much lower. The population of India is likely to be 220 crores. This

would require a huge amount of food grains along with the non-food grains. India, therefore, has to use its vast potential of agriculture in a systematic and planned manner. We have to develop some the techniques which the developed countries have been using.

8. References

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