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PRODUCTION OF SOME SELECTED CROPS IN INDIA: AN ANALYSIS





N Guruveera Kumar

Academic Consultant, Dept. Of Econometrics, S V University, Tirupati.

Short Profile

N Guruveera Kumar is a Academic & Research Scholar Consultant at Department Of Econometrics in S. V. University, Tirupati. He has completed B.Sc., M.A. He has professionalm experience of 1 year and research experience of 1 year.

Co-Author Details :

P Surya Kumar Pdf, Dept. Of Econometrics, S V University, Tirupati.



ABSTRACT:

Agriculture has always been the back bone of the Indian economy and despite concerted industrialization in the last six decades; agriculture still occupies a place of pride. It provides employment to around 60 percent of the total work force in the country. In this paper dealsShare of Agriculture Sector to the Total Plan Outlay, Targets, Actual Production of Food Grains and Growth Rates and also to find the

performance of trends of the Area, Production and Yield of some selected crops.From the analysis, the highest variability is registered in the crop of maize followed by wheat, rice and jute during the study period. The highest growth rate was registered 5.4 per cent per annum in the crop of maize followed by wheat (3.60%), rice (2.0%) and jute (0.70%). From the analysis all crops are statistically significant at 1 per cent level of significant except jute.

KEYWORDS

Agriculture, Planning periods, Plan Outlay, Targets, Actual Production of Food Grains, Growth Rates.

INTRODUCTION:

In India, agriculture and other allied activities contribute significantly to the Gross Domestic Product (GDP), accounting for nearly 16 per cent of the total GDP. It provides employment around 64 per cent of the total work force while contributing 18 per cent of the total export. India, with only 2.3 per cent of world's total land area supports 18 per cent of human and 15 percent of livestock population in the world. The country has made an impressive progress on the food front, which has resulted in increased production of food grains. The main objectives of the study are to find the share of agriculture sector to the total plan outlay, targets, actual production of food grains and growth rates and to find the performance of trends of the Area, Production and Yield of the some selected crops.

AGRICULTURE SECTOR DURING THE PLANNING PERIOD

In Indian agriculture was in a depressed and deplorable condition. Farmers were in heavy debt to the professional money lenders and agricultural money lenders. They had neither the money nor the knowledge to use proper equipment, good seeds and chemical manures. Mostly, agriculture was development upon rainfalland the vagaries of the monsoons. Productivity of land as well as labour had been declining and was the lowest in the world. Though 60 percent of the working population was engaged in cultivation, the country depends heavily on imports of food grains to satisfy the minimum requirements of the people. This was the challenge when India launched the first five year plan. Agricultural performance during the five year plans is presented in this table-1.

First Five Year Plan (1951-56)

The first five year plan was attempt rehabilitation the war torn economy of India. It did not accord priority to the development of agriculture and economic development. The outlay of agriculture was Rs.600. It came to 31 percent of the total out lay of the first five year plan period. There was a remarkable achievement in food grain production. i.e. 67 percent during this plan period. The planning efforts brought 5.1 million Hectares of land under irrigation and reclaimed 1.1 million hectares. The output of all agricultural commodities went by 2.2 percent giving a growth rate of 4.2 percent. The factors responsible for increased agricultural products were improved irrigation facilities, use of fertilizers, land development and the extension of area under cultivation.

Table-1 Share of Agriculture Sector to the Total Plan Outlay, Targets, Actual Production of Food Grains and Growth Rates.

S.No	Five Year Plans	Total Plan Outlay	Total Plan outlay to a griculture & allied activities (Rs.Crores)	Percent of Total Outlay	Food Grains Targets (M.T.)	Food Grains Achievement (M.T.)	Growth Rates
1	First Plan (1951-56)	1,960	600	31	62	67	4.2
2	Second Plan (1956-61)	4,670	950	20	81	82	3.1
3	Third Plan (1961-66)	8,540	1,750	21	100	72	3.3
4	Fourth Plan (1969-74)	15,800	3,670	24	129	104	2.2
5	Fifth Plan (1974-78)	39,430	8,740	22	125	132	4.2
6	Sixth Plan (1980-85)	1,09,300	26,100	24	154	146	5.2
7	Seventh Plan (1985-90)	2,18,730	47,100	23	180	171	3.13
8	Eighth Plan (1992-1997)	4,75,480	1,01,590	21	210	199	3.9
9	Ninth Plan (1997-02)	8,59,20	1,76,217	20.5	234	211	4.1
10	Tenth Plan (2002-07)	3,05,055	3,05,055	20.0	234	216	4.00
11	Eleventh Plan (2007-12)	6,74,105	6,74,105	18.5	N.A	257	3.6

Source; - 1. Government of India, Five Year Plans

- 2. Compiled from Indian agricultural in brief and economic survey.
- 3. Report on currency and finance, V.1, 1991-92, p.14.
- 4. Dutt&Sundaram 64th edition

Second Five Year Plan (1956-61)

The out lay of agriculture in the second plan was Rs.950 crore. It was 20 per cent of the total plan out lay. During this plan the main emphasis was on rapid industrialization which a special accent on the development of basic and key industries. However, about 5.8 million hectares of additional land were irrigated during this plan period. The target of food grain production was 81 million tonnes. The achievement of food grains production was 82.0 million tonnes, which was higher than the target of food grains production. The growth rate was registered 3.1 per cent.

Third Five Year Plan (1961-66)

Achieving self sufficiency in food grains was the major objective of the third five year plan. During this plan Rs.1750 crore were allotted to agricultural sector. It is 20 percent of the total outlay. In this plan government of India introduced the Intensive Agricultural District Programme (I.A.D.P.). The third plan aimed at rising over all agricultural production by 30 percent. During this plan period the food grains production was recorded 72 million tonnes and the growth rate was registered 3.3per cent.

Fourth Five Year Plan (1969-74)

The Fourth Five Year Plan emphasized the necessity to create additional infrastructure facilities for the promotion of agriculture and to make use of science and technology for this purpose. The planning commission adopted a "yield increase strategy", though the introduction of intensive agricultural production techniques. During this plan Rs.3670 crore were spent for agricultural purpose, which was 24 per cent of the total out lay. The achievement of food grains was 104 million tonnes. The growth rate was 2.2 per cent in this plan.

Fifth Five Year Plan (1974-79)

In the fifth five year plan the amount allotted to agriculture sector was Rs. 8740 crore which was 22 per cent of the total out lay. There was a steady increase in the use of agricultural inputs in this plan. The food grains productions achievement was 132 million tones. The achievement was higher than the target of 125million tonnes. The growth rate was 4.2 per cent.

Sixth Five Year Plan (1980-85)

The sixth five year plan aimed at marketing, trade and the institutional frame work to develop agriculture. The amount spent during this plan was Rs 26,100 crores on agriculture and allied activities. This amount was 24 percent of the total out lay. In this plan their programmes were introduced to help small and marginal farmers. They were

i)Improving productivity and income from small holdings.

ii)Promoting and helping small farmers in organizing their own storage and marketing facilities and iii)Diversifying the earning opportunity of the rural poor through the Integrated Rural Development Programme (I.R.D.P) and the National Rural Employment Programme N.R.E.P). The agriculture output grew at steady rate of 5.2 per cent during this plan.

Seventh Five Year Plan (1985-90)

The amount allocated for seventh five year plan was Rs.47100 crores. It was 23 percent of the total plan outlay. Indian agriculture turned the corner in the fourth year (1988-89) of the seventh five year plan. The food grains production grew by 3.23per cent when compared to the long-term growth rate of 2.68 during 1967-68. The average production of all crops in the seventh plan showed a substantial increase over of the sixth plan. The total food grains production increased to171 millions tonnes at the end of the seventh plan period. The growth rate was 3.13 percent.

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Eighth Five Year Plan (1992-97)

During the eighth plan, major effort s were made to restore and improve minor irrigation works. It aimed at not only achieving self sufficiency in food, but also generating a surplus of specific commodities. The total food grains productions during these plan was176.7 million tones. The amountallocated during this plan for agriculture was 1, 01,590. This amount was 14per cent of the total plan outlay. The growth rate of agriculture was 3.9 per cent.

NinthFive Year Plan(1997-2002)

During the ninth plan the allotted amount to agriculture was Rs.1, 76,217 crore, which was 20.5 per cent of the total out lay of the plan. The food grains production was 211 million tones. The growth rate of agriculture was 4.1 per cent.

Tenth Five Year Plan (2002-2007)

The Tenth Planidentified a number of key reforms including elimination of inter-state barriers to trade, and amendment to essential commodities etc. The agenda also proposed functions of trading in all commodities and removed of restrictions on financing, storingtrading. During this plan the allocated amount for agriculture was Rs. 3, 05,055 crore, which was 20 per cent of the total out lay of the plan. The food grains Production rose to 216 million tonnes.

Eleventh Five Year Plan (2007-12)

The eleventh five year plan emphasized the necessity to ensure electricity connection to all villages, road connection for all hill areas, and connectivity to every village by telephones to increase forest and tress cover by 5 per cent and reducing of malnutrition among children of age 0-3. In this eleventh five year plan the amount allotted 6, 74,105 crore which was 18.5 per cent of the total out lay. The total food grains production increased to 257 million tonnes sat the end of the eleventh plan period. The growth rate was 3.6 per cent in this plan.

Area, Production and Yield of selected crops in India

As per the land use statistics 2010-11, the total geographical area of the country is 328.7 million hectares, of which 141.6 million hectares is the net sown area. The gross cropped area is 198.9 million hectares with a cropping intensity of 140.5 per cent. The net irrigated area is 63.6 million hectares.In India, Cultivated area of rice is 42592.5 thousand hectares during the year 2003-04, and it was rose to 42753 thousand hectares during 2012-13. Wheat cultivated area were noted 26594.7 thousands hectares in the year of 2003-04, this cultivated area was increased 30003.34 thousands hectares in 2012-13. In the crop of Maize cultivated area were noted 7343.40 thousands hectares in 2003-04, this area has increased to 8672.63 thousand hectares during 2012-13. Finally, the crop of Jute area was recorded 849.00 thousands hectares in 2003-04 and this area were declined to 776.67 thousands hectares in the year 2012-13.

The production of rice was noted 88526 thousand tonnes during the year 2003-04, it was sharply rose to 105241.4 thousands tonnes in 2012-13. The production of wheat where noted 93506.5 thousand

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tonnes in 2012-13, just it was noted 72156.2 thousand tonnes in 2003-04.the production of maize was increased sharply, it was noted 14984.3 thousands tonnes in 2003-04 to 22258.22 thousand tonnes in 2012-13. There is no change of Indian jute production during the period of 2003-04 to 2012-13.From the analysis the productivity of all selected crops were increased during the study period.

Year	Rice			Wheat		Maize			Jute			
	Area ('000 Hectares)	Production ('000 Tonnes)	Yield	Area ('000 Hectares)	Production ('000 Tonnes)	Yield	Area ('000 Hectares)	Production ('000 Tonnes)	Yield	Area ('000 Hectares)	Production ('000 Bales of 180 Kgs. each)	Yield
2003-04	42592.50	88526.00	2078.44	26594.70	72156.20	2713.18	7343.40	14984.30	2040.51	849.00	10251.60	2173.48
2004-05	41906.70	83131.70	1983.73	26382.90	68636.90	2601.57	7430.40	14172.00	1907.30	773.90	9399.30	2186.17
2005-06	43659.80	91793.40	2102.47	26483.60	69354.50	2618.77	7588.30	14709.90	1938.50	759.80	9969.50	2361.82
2006-07	43813.60	93355.30	2130.74	27994.50	75806.70	2707.91	7894.00	15097.00	1912.47	792.90	10317.10	2342.13
2007-08	43914.40	96692.90	2201.85	28038.60	78570.20	2802.22	8117.30	18955.40	2335.19	814.10	10220.10	2259.70
2008-09	45537.40	99182.50	2178.04	27752.40	80679.40	2907.11	8173.80	19731.40	2413.98	785.60	9634.40	2207.47
2009-10	41918.40	89092.90	2125.39	28457.42	80803.56	2839.46	8261.63	16719.47	2023.75	811.17	1 1 2 3 0 . 3 7	2492.05
2010-11	42862.40	95979.80	2239.25	29068.59	86873.95	2988.59	8553.16	21725.75	2540.09	773.56	10009.41	2329.09
2011-12	44006.30	1053 10.90	2393.09	29864.70	94882.06	3177.06	8781.93	21759.37	2477.74	809.02	10735.64	2388.59
2012-13	42753.90	1052 41.40	2461.56	30003.34	93506.50	3116.54	8672.63	22258.22	2566.49	776.67	10340.33	2396.46

Table-2: Area, Production and Yield of some selected crops in India

Source: Directorate of Economics and Statistics

Growth rates of production of selected crops

From the analysis, the highest variability is registered in the crop of maize followed by wheat, rice and jute during the study period. In terms of the highest annual compound growth rate was registered 5.4 per cent per annum in the crop of maize followed by wheat (3.60 %), rice (2.0%) and jute (0.70%). From the analysis all crops are statistically significant at 1 per cent level of significant except jute.

Crops	Mean	STDEV	CV	ACGR	R ² -val	t-value
Rice	94830.68	7171.58	7.56	2.00	0.65	3.84
Wheat	80127.00	9283.79	11.59	3.60	0.91	8.86
Maize	18011.28	3243.72	18.01	5.40	0.81	5.85
Jute	10210.78	520.08	5.09	0.70	0.20	1.40

Table-3 Production of selected crops during 2003-04 to 2012-13 (million tonnes/bales)

Source: author's calculation

CONCLUSION:

Agriculture has always been the back bone of the Indian economy and despite concerted industrialization in the last six decades; agriculture still occupies a place of pride. It provides employment to around 60 percent of the total work force in the country. The eleventh five year plan emphasized the necessity to ensure electricity connection to all villages, road connection for all hill areas, and connectivity to every village by telephones to increase forest and tress cover by 5 per cent and reducing of malnutrition among children of age 0-3. In this eleventh five year plan the amount allotted 6, 74,105 crore which was 18.5 per cent of the total out lay. The total food grains production increased to 257 million tonnes set the end of the eleventh plan period. The growth rate was 3.6 per cent in this plan. From

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