

## An Analysis of State Wise Wheat Productivity in India

Dr. Veer Virendra Singh

Assistant Professor, Department of Economics, J. S. Hindu P.G College Amroha, INDIA

### ABSTRACT

Productivity, the output flow per unit of resources input, as an outcome of the interaction of the mutually reinforces of agrarian structure, resource endowment and technology. The three resources structure dimension of these three dimensions, the technology is likely to have the most direct impact on the productivity. For, the output flow per unit of resources input is the sum total of the product mix as well as input mixes the two technology factors. The availability and application of a technology is constrained by the structure and magnitude of resource endowment, which is turn, is conditioned by the agrarian structure prevailing in the economy. Through This process assumes a situation of no change and simple nature on the part of each of these resource structure dimensions.

**Keywords**----- IRRI, Productivity, Economic Growth

### I. INTRODUCTION

Productivity in India has largely been increased through new technology coming from four sources: - India public research, International agriculture research centres, International technology transfer, and private research investment. In the 1960s Indian agricultural research reached new heights, not only because of the adoption of high yield varieties developed for wheat and rice by the International centre for the improvement of the wheat and rice (CIMMYT) in Mexico and for rice by the **International Rice Research Institute** (IRRI) in the Philippines, but also Indian began develop its own engine of research. First, state agricultural universities that emphasized research and extension as well as teaching were formed. Second the **Indian Council of Agricultural Research** (ICAR) was given the authority, manpower, and budget to supervise and coordinate the work of a broad array of government research institutes and commodity research programs. Third the new varieties of wheat and rice were successfully introduced, proving the research could bad to increased food production.

Improvement in Agricultural Productivity<sup>11</sup> has become a necessity due to the limitation in expansion of cultivated acreage and ever increasing food demand. Food demand for seen to continue increasing along with the increasing in the world population. However, an expansion of activated acreage cannot be expected because of the limitation arising from environment conservation, especially forest conservation.

Therefore, an improvement in the farm productivity has become a necessary for coming days. The growth of the agricultural productivity depends on the lane conditions, as availability of the irrigation water resources, soil deterioration in addition to an improvement of the agricultural technology. Mechanization is also influenced by the topography. Whereas, increase the productivity by applying fertilizer are limited due to their side effect of environment loading. Like this, to for seen the growth of the agricultural productivity, various environment factors must be considered, and grasping on detailed space distribution of the crop production becomes indispensable. More over monitoring of the farming area in cultivating stage is effective, because the amount of harvest is insufficient. Remote sensing technology can be used as an effective fertilizer supplementation.

Productivity is not a narrow concept but a wider. It has integration with the economic factors. The inputs of economic development are also lies in the gap of productivity. The concept of productivity is a matter of research and advances studies, which provides the seeds of economic growth and economic development. A lot of studies and research have been done on economic growth and productivity, in which way productivity to define the concept of economic development and economic growth.

### II. OBJECTIVE

To examine the Wheat productivity of different States

### III. REVIEW OF LITERATURE

According to the analysis of Y.V.Reddy 2005, it is well known that economic growth as a mean to enhancing the welfare of people depends both on the use of factors of a production such as capital and labour, and the efficiency in resources use, often referred to as a productivity. Recent development indicates the growing importance of productivity, particularly for our economy as its present stage of development.

A study done by C.H.Hanumantha Roa 1988, describe that the output growth of most crops shows greater instability since the mid sixties than before, growth of wheat output which is among the fastest has become more stable. Also there is no evidence of any systematic relation across the states between the growth rate of crop output and the degree of instability in it.

A study done by Bina Agarwal 1982, shows that claim this fair to properly control inter farm variations in respect of other factors (such as level and quality of irrigation) Which have a bearing on the land use intensity. In Punjab where mechanization had advanced the furthest shows that it is the access to energized tube-wells which makes for higher cropping intensity.

A study done by A.M.Khusro 1964, it is concerned with the identification and interpretation of religion agricultural productivity pattern in India. The low level of productivity patterns in India. The low level of productivity and the recent concert to increase agricultural production have led to several studies concerned with various aspects of agricultural productivity in India.

However, most of the work on the theme has been done by economists and had been based on farm level data.

### IV. METHODOLOGY

#### Data Sources

Keeping in view the objective of the present study, the secondary data have been taken from the reputed sources. Notable among these are:-

- Handbook on Indian Economy, Reserve bank of India 2013
- Agricultural Statistics at a glance (Various Issues, Ministry of Agriculture, GOI.)
- Economic Surveys (various issues), Ministry of Finance, GOI.

The data published in reputed Journals, book and English news papers have also been used

#### Statistical Techniques

The compound annual growth rates of the Agricultural exports have been calculated by the following formula.

$$Y = AB^t$$

Where,

Y = Growth rate of the given variable. I.e. production

T = Time period

A & B = Coefficient

Then, compound annual growth rate is given below:

$$CAGR = (b-1) \times 100$$

Where,

A = Intercept

b = Antilog of log 'B'

### V. DATA ANALYSIS

State Wise Compound Annual Growth Rate of Wheat

State	Compound Annual Growth Rate		
	1951-52 to 1965-66	1966-67 to 1990-91	1991-92 to 2012-13
1. A.P	-1.44	3.78	2.72
2. Assam	0.92	2.02	-0.55
3. Bihar	2.98	3.21	-0.06
4. Orissa	-0.11	1.63	-0.47
5. Punjab	2.69	2.96	0.81

6. M.P	2.70	3.38	1.44
7. Rajasthan	0.68	3.53	1.71
8. U.P	1.62	3.38	1.24
9. W. Bengal	0.68	1.49	1.09
10. Karnataka	2.28	0.92	1.15
11. Maharashtra	1.19	3.68	1.27
12. Gujarat	11.73	2.34	1.55
13. H.P	3.78	1.49	-0.04
14. J&K	-1.47	1.02	0.57
15. Haryana	-	2.89	1.17
All India	1.71	3.31	1.12

**Source:** - Ministry of Food, Agriculture, Community, Development & Co-Operation Directorate of Economics & Statistics.

## VI. CONCLUSION

Bihar, Punjab, M.P,U.P, Karnataka, Maharashtra, H.P had positive CAGR and Gujarat had notable growth rate of Wheat but A.P, Orissa and J&K had negative growth rate of wheat. Rest of States had normal growth rate of wheat during 1951-1965.

A.P, Assam, Bihar, Orissa, Punjab, M.P, Rajasthan, U.P, W.B, Maharashtra, Gujarat, H.P & J&K had positive growth rate of Wheat during 1965-1991. This study showed that maximum states had positive growth rate of Wheat after green revaluation.

Assam, Bihar, Orissa & H.P have negative growth rate of Wheat except these all states have normal and saturated growth rate of Wheat.

We can conclude that CAGR was 1.71 in 1951-1965, 3.31 in 1965-1991 and 1.12 in 1991-2013 in India. This study showed that India have not satisfactory growth rate of wheat now.

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