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Agricultural development in Sindhudurg district

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Abstract

The present study was undertaken in Sindhudurg district of Maharashtra state to study the growth rate of area, production and productivity of important crops. The secondary data for a period 2001-02 to 2020-21 was collected from various secondary sources i.e. Department of Agriculture, Government of Maharashtra, Pune. Socio Economic Review and District Statistical Abstract of Sindhudurg district. In analytical techniques functional analysis such as linear and compound growth rates were used for analysis the data. The results revealed that the positive growth rate were observed in terms of area, production, productivity of majority of important crops was noticed. As regards the productivity of ragi, total cereals, total fruits and total oilseed showed positive growth rate.

Keywords: Area, production, productivity

1. Introduction

The agriculture sector is the backbone of an economy which provides the basic ingredients to mankind and raw material for industry. Agriculture is the primary source of food for all countries around the world, whether they are underdeveloped, developing or developed. Food demand is rapidly increasing as a result of the high population pressures and rapid growth in underdeveloped and developing countries. Agriculture is found to have a negative impact on the economy's growth rate if it fails to meet rising demand for food products. Agriculture development necessitates the construction of roads, market yards, storage, transportation, railways, postal services and other infrastructure which creates demand for industrial products and the growth of a commercial sector. The development of the agricultural sector has mitigated the burden on several developed countries that were experiencing a lack of foreign capital. Agriculture is a multifunctional activity that provides employment, livelihood, food protection, nutritional and environmental security. Agriculture has made significant progress over the last five decades by increasing agricultural production. All of this has been accomplished thanks to the hard work of policymakers, agricultural educators, farm scientists and our dynamic farmers. India's agricultural sector is still in its early stages. Development has three primary goals: to provide food and fibre to a growing population, to provide capital and foreign exchange for economic growth and to contribute to a direct increase in rural welfare.

2. Materials and Methods

Sindhudurg district was a earlier part of Ratnagiri district. For administrative convenience, industrial and agricultural development, Ratnagiri district is divided into Ratnagiri and Sindhudurg. To know the fact and figures and development of agriculture it was necessary to have analysis of Sindhudurg district for its improvement, hence this district was purposively selected for the present study. The time series data was necessary to measure the development of agriculture in Sindhudurg district. The secondary data for a period 2001-02 to 2020-21 was collected from various secondary sources i.e. Different published records of the State Government, Co- operative and Private Institution. such as, Sindhudurg Zilha Krishi Pratishthan Kendra, Season and Crop Report Department of Agriculture, Government of Maharashtra, Pune. Socio Economic Review and District Statistical Abstract of Sindhudurg District, Directorate of Economics and Statistics, Government of Maharashtra. To examine the area, production and productivity of main crops linear growth rates and compound growth rates were carried out.

3. Results and Discussion

The present study entitled with, "Agricultural Development in Sindhudurg District" includes

different growth rate that are analysed under following subheadings.

3.1.1 Growth rates of area under rice and ragi

In Sindhudurg district, the growth rates of area under rice showed a significant increase of (2.5%). They showed a significant result for area under rice. The growth rates of area under ragi showed a significant decrease (4.84%). They showed a significant result for area under ragi.

3.1.2 Growth rates of area under Black gram and Green gram

During 2001-02 to 2020-21, the growth rates of area under black gram showed a significant result. There was a decrease in area (10.09%). The growth rate of area under green gram showed a non-significant increase of (5.16%).

3.1.3 Growth rates of area under total cereals and total pulses

During 2001-02 to 2020-21, the growth rates of area under total cereals showed a significant decrease of (2.56%) in Sindhudurg district. The growth rates of area under total pulses showed a non-significant increase of 3.62 per cent.

Table 1: Growth rates of area under principal crops (2001-02 to 2020-21)

Sr. No.	Particulars	Linear growth rate	Compound growth rate
1	Rice	0.12**	2.5**
2	Ragi	-43.73**	-4.84**
3	Total cereals	0.11**	-2.56**
4	Green gram	0.03	5.16
5	Black Gram	-4.39**	-10.09**
6	Total pulses	2.04	3.62**
7	Groundnut	6.62**	-15.96**
8	Total oilseed	0.95**	-15.23**
9	Mango	0.57**	5.43**
10	Total fruits	0.25**	8.27**
11	Total food grains	0.11**	-1.63**

(** Indicates Significant at 5% level)

3.1.4 Growth rates of area under total oilseed and groundnut

During 2001-02 to 2020-21, the growth rates of area under total oilseed showed a significant decrease of (15.23%). The growth rates of area under groundnut showed a significant decrease of (15.96%). They showed a significant result for area under groundnut.

3.1.5 Growth rates of area under mango, total fruits and total foodgrains

During 2001-02 to 2020-21, the growth rates of area under total foodgrains showed a significant decrease of (1.63%). The linear growth rates of area under total foodgrains showed a significant increase of 0.11 per cent. In the district the growth rate of mango and fruits has significantly increased over the period of 20 years.

3.2 Growth rates in production of principal crops

The growth rate in production of principal crops during 2001-02 to 2020-21, is given in Table 2.

3.2.1 Growth rates in production of rice and ragi

The growth rates in production of rice showed non-significant results in Sindhudurg district. The production under rice

showed a significant increase of (1.17%) during 2001-02 to 2020-21. The growth rate for production of ragi showed non-significant result. The production under ragi showed a non-significant increase of 1.85 per cent.

3.2.2 Growth rates in production of black gram and green gram

During 2001-02 to 2020-21, the growth rate in production of black gram showed a significant result. The significant decrease in black gram was (13.35%). The growth rates in production of green gram were showed non-significant decrease of (4.86%).

3.2.3 Growth rates in production of total cereals and total pulses

The growth rates in production of total cereals showed a non-significant increase of (1.8%). The growth rates in production of total pulses showed a non-significant decrease of (3.66%). The production under groundnut showed a non-significant result.

Table 2: Growth rates in production of principal crops (2001-02 to 2020-21)

Sr. No.	Particular	Linear growth rate	Compound growth rate
1	Rice	0.05	1.17
2	Ragi	2.68	1.85
3	Total cereals	0.04	1.80
4	Green gram	-2.73	-4.86
5	Black gram	-5.64**	-13.35**
6	Total pulses	-3.66	-3.66
7	Groundnut	-10.93	-6.44
8	Total oilseed	-4.44	-3.07

(** Indicates Significant at 5% level)

3.2.4 Growth rates in production of total oilseed and groundnut

The growth rates in production of total oilseed showed a non-significant decrease of (3.07%). The growth rates in production of total groundnut showed a non-significant decrease of (6.44%).

3.3 Growth rates in productivity of principal crops

The growth rates in productivity of principal crops during 2001-02 to 2020-21 is given in Table 3.

3.3.1 Growth rates in productivity of rice and ragi

In Sindhudurg district, growth rates in productivity of rice showed a non-significant increase of 0.1 per cent. The Productivity of Ragi had shown a significant increase of (2.78%).

Table 3: Growth rates in productivity of principal crops (2001-02 to 2020-21)

Sr. No.	Particulars	Linear growth rate	Compound growth rate
1	Rice	0.03	0.10
2	Ragi	0.08**	2.78**
3	Total cereals	0.04**	7**
4	Green gram	-0.07	-6.74
5	Black gram	0.15	7.65
6	Total pulses	0.19**	1.60
7	Groundnut	0.30	2.49
8	Total oilseed	12.89**	18.26**

(** Indicates Significant at 5% level)

3.3.2 Growth rates in productivity of black gram and green gram

The growth rates in productivity of black gram showed a non-significant increase of (7.65%). The growth rates in productivity of green gram showed a non-significant increase of (6.74%).

3.3.3 Growth rates in productivity of total cereals and total pulses

In Sindhudurg district, the linear growth rate in productivity of total cereals showed a significant increase of (7.0%). The growth rates in productivity of total pulses showed a significant increase of (1.6%).

3.3.4 Growth rates in productivity of total oilseed and total groundnut

The growth rates in productivity of total oilseed showed a significant increase of (18.26%). The growth rates in productivity of total groundnut showed a non-significant increase of (2.49%).

4. Conclusions

The production of rice was highest among the total cereals. Rice stands first in the production than the other crops in the district. Among the total oilseed, groundnut has maximum production and productivity in the district. In the district, positive growth rate was observed in the production of rice, ragi and total cereals while there was declination in the growth rates of total pulses, groundnut and total oilseed. The major variability in the area of green gram, groundnut and total oilseed crops was noticed. The variability occurred in the crops rice, ragi and fruits crop were showed good results. The positive growth rate in the productivity of ragi, total cereals and total pulses was observed. The maximum growth in productivity of total oilseed was noticed.

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