

Instability in Agricultural production

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ABSTRACT

The production of rice in Ratnagiri district has increased with significant productivity of rice by 46.80 kg/ha (2.26%). This has resulted into significant increase in productivity of total foodgrains by 41.84kg(2.57%) in Ratnagiri district. During the same period productivity of total foodgrains was increased by 33.17kg/ha (1.94%) in Konkan region 15.81kg/ha (1.98%)in Maharashtra State. In this period area under rice has increased significantly for the state 6214ha (0.39%),while area under fruits & Vegetables showed significant increase by 1383ha(6.69%)in Ratnagiri District, 3579ha(6.40%)in Konkan region and 166663ha (4.25%) in Maharashtra State.In Ratnagiri district regarding instability index for area under different crops revealed that instability for total foodgrains was 8.96% and area under total cereals was 13.58%. The productivity of total foodgrains was 7.63% which was comparatively stable. The productivity of rice and total cereals was comparatively stable (i.e. 10.43% and 10.93% respectively) except productivity of total oilseed (25.94%). In Maharashtra State area under total cereals, rice and total pulses was stable as compared to area under total oilseeds. The production of rice, total cereals and total foodgrains was stable as compared to total oilseeds. The productivity of total cereals and total foodgrains was comparatively stable (13.64%and 13.68%)as compared to total pulses (17.67%)and total oilseeds(17.55%).Productivity of total food grains was stable for Ratnagiri district (7.63%) and Konkan region (7.51%) while it was unstable(13.68%) for Maharashtra state. This has indicated better signs for agricultural development in Ratnagiri district over Maharashtra state.

Key words: Area, Production, Productivity, Instability.

INTRODUCTION

Development of the nation lies in the development of the villages; some attempts have been made to study the evaluation of level of development in agriculture sector, infrastructure service sector and overall socio-economic sector. It would be quite interesting and useful to evaluate the level of development of district, since there has been a growing consensus about the need of district level planning in the country. Moreover, knowledge of the level of development at district level will help in identifying where it stands in relation to others. The present study highlights the growth performance of agricultural production in Ratnagiri district.

MATERIALS AND METHODS

The secondary data of area, production and productivity for Ratnagiri district, Konkan region and Maharashtra state was compiled from various Report of Government of Maharashtra for the period from 1980-81 to 1998-99 and it was analysed to study the growth and instability in agricultural production

Compound growth rate :

Compound growth rates were estimated to study the percentage increase or decrease in the selected parameters. The following exponential growth function

was used.

$$y = ab^x e$$

Where,

y = Dependent variable for which growth is stimulated

a = Intercept or constant

b = Regression / Trend coefficient

x = Period (in years)

e = Error term with zero mean and constant variance

b = 1 + r where, 'r' is compound growth rate

C.G.R. (%) = (b-1)× 100

Instability:

$$C.V.(%) = \frac{S.D.}{Mean} \times 100$$

The linear trend was fitted using the equation,

$$Y = a + bX + e$$

$$C.V.(%) = \frac{S.D.}{Mean} \times 100 \times \sqrt{1 - r^2}$$

Where, r^2 = Coefficient of multiple determination

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