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“ IMPACT OF IRRIGATION ON OVERALL AGRICULTURAL
PRODUCTIVITY PATTERN IN OMERGA TAHSIL”
OSMANABAD DIST. (M.H)



Rathod Suryakant Lalchand¹ and H. N. Rede²

OBJECTIVE

The paper is to assess the spatio-temporal changes in overall productivity in Omergatahsil from 1991-92 and 2011-12.

INTRODUCTION

Agricultural productivity is a dynamic concept. It is dynamic in its spatio-temporal perspectives. The development of irrigation facilities, mechanization, use of fertilizers etc. leads to variations in agricultural productivity per unit of time and space. The erratic nature of rainfall affects badly on agricultural productivity in the study area. Generally, the crop needs optimum Quantity of water for higher yields and irrigation play a significant role in enhancing the yield of crops. Besides this ,it ensures assured water supply in

Abstract

The concept of Productivity seems to be a relative term and cannot be uniformly applied everywhere. Sometimes, it is considered synonymous of efficiency of overall effectiveness of productivity unit, while at other, as ratio of output to resources expanded. An attempt has been made here to examine the overall productivity and changes therein in Omergatahsil. The ranking co-efficient of overall productivity ranges from 1.00 at MulajCircle to 4.5 at Dalimb circle. The average ranking co-efficient for the tahsil is marked 3.00 during 2011-12. High productivity region consists of Mulaj and murum circles, where the ranking co-efficient below two, while moderate productivity is found in Naragwadi circle, where ranking co-efficient is registered 3.5 and concentration indices 97.40. Omerga and Dalimb circle have experienced low level of agricultural productivity.

Keywords : *Agricultural productivity, crop yield index, crop concentration index, cropping pattern.*

Short Profile

Rathod Suryakant Lalchand is working as Assistant Professor in Geography (Research Student) at H.O.D.Dept.of Geography in B.S.S.Art's Sci. and Comm. College Makni Tq. Lohara Dist.Osmanabad.(M.H).

the areas, where crop are victimized by scarcity condition. There is significant scope of increasing the net area under cultivation by growing more than one crop on the same hectare with the help irrigation.

STUDY REGION

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The region under study i.e. Omarga tahsil lies to the south-eastern part of Osmanabad district on the border of Maharashtra and Karnataka state. Omergatahsil lies between 17°45'N to 18°N latitude and 76°30' E to 76°45' E longitude and situated in the Bhima river basin. The study area covers an area of 977.33 sq.km. and total population was 2,77,837 persons as per 2011 census.

The tahsil comprises five Z.P. circle i.e. Omarga, Mulaj, Naragwadi, Dalimb and Murum. The average height of region is about 600 meters above the sea level. On the basis of the topography region is divided into three basic unit i.e. hilly region, plateau region and low land region.

Climate of the region is generally dry except during south –west monsoon season. Annual variation in rainfall from year to year is very large in the tahsil.

DATA BASE AND METHODOLOGY

The present study relies upon secondary data for the period 1991-92 and 2011-12. Secondary data is obtained form the socio economic review and district statistical abstract

of osmanabad district. where the data regarding per hectare veiled of various crops is obtained from Darpan bulletin ,which is published by agricultural Dept. of Osmanabad district.

The Zillha perished circle is considered as unit of the study. The gathered data was then processed and mapped. choropleth technique of mapping was used to portray the spatial variations clearly.

To calculate the overall productivity of various crop, whereas, J. Singh's 1976) method of the crop yield and concentration indices ranking co-efficient is applied to measure the overall productivity of selected crops in Omergatahsil.

The result obtained from this method is presented in fig 2 A and B.

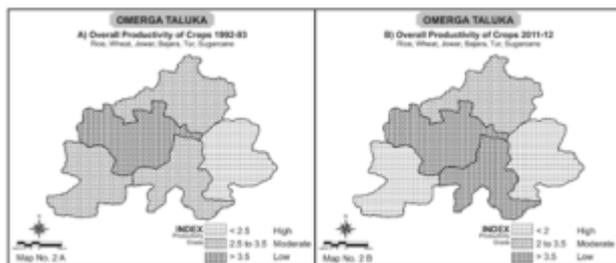
RESULT AND DISCUSSION

Considering the productivity of all these crop,(Rice, Wheat, Jawar, Gram , Tur, Sugarcane etc. crops), overall productivity is worked out in fig 2 A&B. The ranking co-efficient of overall productivity ranges from 1.00 at Mulaj circle to 4,5 at Dalimb circle . The average ranking co-efficient for the tahsil is registered 3.00. The regional disparities these in area well reflected in the level of irrigation development .On the basis of circle wise crop yield- and concentration indices ranking co-efficient for selected crops in the region under study, is grouped conveniently in to three categories i.e.(I) High productivity (II) moderate productivity (III) Low productivity.

I)HIGH PRODUCTIVITY

During the year 1991-92, high productivity observed in Mulaj and Murum circle, with the ranking co-efficient below 2.5and concentration indices registered 121.43 and 104.08 respectively. There is no change in overall productivity of crops in the year 2011-12, whereas, the high overall productivity was again marked in Mulaj and Murum circle and ranking co-efficient is marked 1 and 2 respectively, where the concentration indices marked 130.70

and 108.96 respectively both circle. .Comparatively these circles are agriculturally developed, as it possesses favorable attributed i.e. fertile soil, irrigation facilities and familiarity of farmer's with new techniques. (fig.2.A&B)



II) MODERATE PRODUCTIVITY

Moderate productivity is found, where there is moderate development of irrigation. The moderate productivity noticed in two circles, namely Omarga and Naragwadi during 1991-92. The ranking co-efficient of these circle are marked same (3), where as the concentration indices 64.77 and 26.57 respectively. But in the year 2011-12, only Naragwadi, circled came in this productivity group, where the ranking co-efficient is marked 3.5 and concentration indices registered 97.40. (fig.2.A&B)

III) LOW PRODUCTIVITY

In the region under study, low overall productivity is experienced in Dalimb circle in 1991-92. The ranking co-efficient is marked 4.5 and concentration indices marked 95.24. On contrary, in Omarga and Dalimb circles have experienced low level of agricultural productivity in 2011-12. Where the ranking co-efficient of Omarga and Dalimb are 4 and 4.5 respectively, whereas, the concentration indices are registered 78 and 89.32 respectively. These circles have limited irrigation development, as compared to Murum and Mulaj circles. Therefore, these circle have remained as a weaker and agriculturally backward, hence effort have to be made to increase it by providing adequate irrigation along with modern inputs.

CONCLUSION

The overall high agricultural productivity is experienced in the Mulaj and Murum circle during the study period. About 45.54% of the total cultivated area registered high overall productivity in the study region, indicated that, after the introduction of new agricultural technology, some circles have shown increase in overall productivity, while remaining circles namely Omarga and Dalimb remained as a weaker and agriculturally back ward Hence, effort have to be made to increase it, by providing adequate irrigation along with modern inputs.

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