



Agricultural Changes and Agriculture Productivity in Ahmednagar District

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ABSTRACT

The Ahmednagar district is agriculturally imbalance, the valleys of river Godavari, Bhima and its tributaries are agriculturally superior and different components are agriculturally backward. There is excessive diploma of iversification in physiography and soils due to this, district have pretty disparities in gricultural productivity. There is excessive variant in distribution and density of non bodily determinants such as irrigation, regular and contemporary farm implements, technological input, agricultural credit etc. Agriculture is the main occupation and the predominant remain of the humans dwelling in the Ahmednagar district which is one of creating district of Maharsashtra. The effects of productiveness indices published that there are greater or much less comparable sample of agricultural productivity. Although modifications in agricultural productiveness are no longer uniform and there is variant amongst the specific tehsils of district. These variants are due to the variant in the bodily and non bodily determinants. The availability and use of bodily and non bodily determinants in all the tehsils is no longer uniform and so is the productivity. On the groundwork of composite productiveness at some stage in the length of investigation seven tehsils has recorded exchange in their productiveness level. The bad alternate observed in 4 tehsils namely, Nagar, Shrirampur, Nevasa and Karjat whilst fine exchange observed in tehsils of Shevgaon, Sangamner and Kopargaon. Rest of the six tehsils namely, Rahuri, Pathardi, Jamkhed, Shrigonda, Parner and Akole seen no exchange in their productiveness level.

Introduction:-

Development in agriculture performs an essential position in each country wide economy- climate developing, developed or in-transition. It has remained an vital sourceof food, fodder and uncooked fabric for range of industries. In the world close to aboutfifty percentage working populace nevertheless relies upon on agriculture for employment. Indeveloping nations agriculture and allied things to do maintain the practicable for providingsignificant employment possibilities and typical monetary boom as nicely as socioeconomic development. India's financial improvement appreciably rests onagriculture that employs 58.5 percentage of country's work pressure and it contributes about20 percentage Gross Domestic Product (GDP) (Shah, R. K. 2014).

Indian agriculture looks to be the three phases of the place the nature ofagriculture has been shifted i.e. put up independence length (1950-51 to 1965-66),



the green revolution and modernization of Indian agriculture (1966 to 1990) and the period of reforms and new exchange settlement of WTO. The agriculture reshuffles have long time period have an effect on the agriculture quarter of the country. It can be investigated through shift in cropping pattern from mono cropping to multi cropping system, crop diversification from food-grains to non-food crops.

Increase in institutional irrigation facilities and the incremental waft of institutional savings to agriculture zone in general and especially at some stage in the submit inexperienced revolution length and adjustments in land holding and land-use pattern in the agriculture sector. These changes, each in policy and technological know-how have contributed to make bigger in manufacturing and productiveness of the agriculture. The implementation of the current technologies, use of excessive yielding varieties of seeds and chemical fertilizers has shifted the agriculture reputation from meals shortage and begging bowl to meals self sufficiency, buffer inventory and meals export (RBI, 2009).

Due to this increase the agro-based industries, employment, earnings generation, transport and communication, schooling and fitness services and thereby enlarge in general of living of rural hundreds (Naidu and Venkatalakshmi 2007). All above drastic alternate in agriculture is the end result of trade in the mindset of farmers is equally important. The thinking of agricultural productiveness is described through quite a few geographers and economist. In general, agricultural productiveness skill output per unit of enter or per unit of region respectively. The increase in agricultural productiveness is usually the result of a greater environment friendly use of the variables of productions namely, physical environment, arable land, labour, capital etc. The regional variations in agricultural productivity are the result, partly of the herbal benefits of abiotic environment (soil and climate) and partly of farming effectivity as managed through cultural ecology (Chaudhuri, T. 2012).

Bhatia, S. (1967) described 'agricultural affectivity as the mixture performance of quite a number plants in regard to their output per acre however the contribution of every crop to the agricultural affectivity would be relative to its share of the crop land'

The Study Area

For the current find out about Ahmednagar district of Maharashtra has been chosen as a find out about area. It extends between 18° 20' to 19° 59' north latitudes and 73° 40' to 75° 43' east longitudes. For administrative reason district is divided into 14 tehsils. It located partly in the higher Godavari basin and partly in the Bhima basin.

The district is very compact in shape, north-south size of 210 km. and east-west width of 200 km. The find out about vicinity is divided into three bodily divisions, namely, Sahyadri hill stages i.e. Kalsubai, Adula, Baleshwar and Harishchandragad, plateau and plains. It is bounded through Nashik and Aurangabad district to the north side, south side by means of Solapur and Pune district, east aspect by way of Beed and Osmanabad district and the west aspect by means of Thane and Pune district. The river Godavari, Bhima and their tributary (Pravara, Mula, Dhora, Ghod, Kukadi and Sina) are the primary rivers in district. The discharge of rivers is ordinarily relying on excessive rainfall in western ghat.

**Objective of the Study:**

- 1) 1. To hint the elements accountable for the adjustments in the agricultural productiveness in the find out about region.
- 2) 2. To check the spatial and temporal patterns of agricultural productiveness and adjustments in the productiveness sample

Hypothesis

Agricultural changes in the agricultural productiveness in Ahmednagar district, which is a end result of geographical, economical, technological and social elements which inflicting spatial inequalities in the agricultural productiveness.

Research Methodology –

The current learn about is primarily based on principal and secondary sources of data. The most important statistics accumulated via questionnaires, non-public interviews of farmers, discipline observations and crew dialogue with farmers. The secondary records for the years 1990-91 and 2010-11 has been received from quite a number sources, namely, Socioeconomic summary of Ahmednagar district, District land file office, Agriculture branch of every tehsil, Department of agriculture Maharashtra State Pune, Census (1991 and 2011), Department of Irrigation, District agriculture department, Indian Metrology branch Pune, Panchayat Sammittee of every tehsil and Talathi workplace of chosen villages.

In the first section of the lookup predominant and secondary information was once collected. The gathered information analyzed through making use of distinctive statistical strategies and is introduced via tables and figures. The spatio temporal distribution sample and extent of exchange of non bodily determinants, widespread land use and agricultural land use have studied in depth.

To delineation of crop areas Doi's crop aggregate method used to be applied. Enyedi's productiveness index, Shafi's modified index, Calorie per Capita index, Sapre and Deshpande's index. The index values divided into three exceptional classes i.e. high, reasonable and low productiveness areas with the assist of statistical approach i.e. vary and maps had been prepared.

These indices indicates greater or much less comparable sample of agricultural productiveness in the learn about region. So a ways as agricultural productiveness is involved there is now not a single universally regularly occurring technique of measuring agricultural productivity. Therefore, it is determined to observe composite productiveness regions. For this, all these productiveness indices maps are blended collectively with the assist of GIS software program i.e. Arc GIS. Its output generates a map which indicates composite productiveness areas i.e. high, reasonable and low. It is carried out for the years 1990-91 and 2010-11 separately.

Statistical Interpretation:**Shafi's Modified Productivity Index**

This index brings out the ratio of land productiveness of tehsils in relation to the land productiveness of the district as a unit. This agricultural productiveness index highly positively correlated with internet irrigated vicinity ($r = 0.721$), wide variety of tractor ($r = 0.694$), agricultural density of populace ($r = 0.766$), use of excessive yielding range of seeds ($r = 0.766$), use of chemical fertilizer ($r = 0.850$) and agricultural savings ($r = 0.686$) at 1% stage of significant. This index fine correlated



with wide variety of electric powered pump ($r = 0.622$), crude density of populace ($r = 0.525$) and physiological density of population ($r = 0.647$) at 5 percent degree of significant.

Calories per Capita Index

This index brings out the agricultural productiveness mixed with the population pressure on the cultivated land due to this physico-socio-economic, technological, demographic and cultural elements now not nice correlated with this index at any stage of significant. This index is excessive poor correlated with populace density ($r = -0.669$) at 0.01 percent degree of significant, whilst bad correlated with physiological density of populace ($r = -0.635$) at 0.05 p.c degree of significant. This index is high positive correlated with variety of wood plough ($r = 0.721$) per hundred hectare tonet sown vicinity at 0.01 p.c degree of significant.

The conclusion after the find out about of correlation, there is a giant positive correlation of agricultural productiveness with a number agricultural inputs such as tractor, electric pumps, irrigation facilities, rural literacy, crude density of population, physiological density of population, agricultural density of population, chemical fertilizer, excessive yielding range of seeds and agricultural credits.

Conclusion:

On the groundwork of composite productiveness at some stage in the duration of investigation poor exchange observed in 4 tehsils namely, Nagar, Shirampur, Nevasa and Karjat. Tehsil of Nagar and Shirampur shifted reasonable and excessive to low productiveness vicinity respectively whilst tehsil Nevasa and Karjat shifted excessive to average region. Positive trade observed in three tehsils namely, Shevgaon, Sangamner and Kopargaon. Tehsil Shevgaon shifted low to reasonable vicinity whilst tehsil of Sangamner and Kopargaon shifted low and reasonable to excessive location respectively. Rest of the six tehsils namely, Rahuri, Pathardi, Jamkhed, Shrigonda, Parner and Akole observed no trade in their productiveness region.

An enter (independent variables i.e. bodily and non bodily determinants) and output (productivity) evaluation published that, Bhatia's productiveness index positively great correlated with wide variety electric powered pump, variety of tractor, use of chemical fertilizer and agricultural savings per hundred hectare of internet sown location at 0.05 percent degree of significant. Standard Nutrition Unit's index has very sizeable correlation with electric powered pump, tractor, agricultural density of populace and use of chemical fertilizer per hundred hectare of internet sown location at 0.01% degree of significant. Even for this productiveness index positively correlated with irrigation, physiological density of population, use of excessive yielding range of seeds and agricultural deposit at 0.05 p.c degree of significant.

This index high quality correlated with variety of electric powered pump, crude density of populace and physiological density of populace at 5 percent degree of significant. Calories per Capita index excessive poor correlated with populace density at 0.01 p.c degree of sizable whilst poor correlated with physiological density of populace at 0.05 percent stage of significant. This index has excessive tremendous correlated with wide variety of timber plough per hundred hectare of internet sown place at 0.01 percent degree of significant.



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