

CHANGING SCENARIO OF PRODUCTION AND PRODUCTIVITY IN NANDURBAR DISTRICT

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ABSTRACT

Agricultural productivity is taken as the most important indicator to show the spatial pattern of agricultural development in study region. Such study would help perspective agricultural development plans on a rational basis to lessen the regional disparities. Studies on crop productivity are so important in a country where food requirements need constant attention due to the rapid growth of population. Increase in crop production is a must in study region since areal spread of crop land has almost reached its saturation limit. Measurement and evaluation of agricultural productivity forms a basis for planning, evaluating and taking appropriate measures for improving productivity at various levels. Hence it has been a important concern of scholars of various disciplines. Sometimes productivity considered to be synonym of efficiency on over all effectiveness of a productive unit be it a plant, farm or company, while at other as ratio of output to resources used. Some have used the term productivity to denote the ratio of output to the corresponding input of labour.

KEYWORDS: Agricultural productivity, Agriculture area, Changing scenario, Rural area,

INTRODUCTION:-

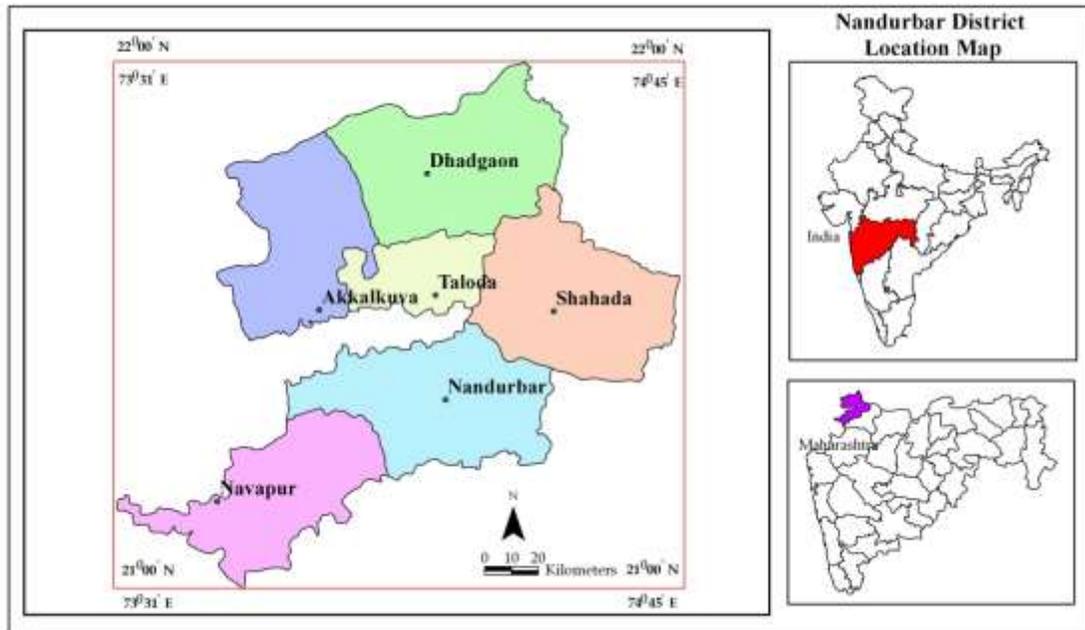
Agriculture is the backbone of the Indian economy, which play a vital role in the overall development. About 70 percent population depends on the agricultural sector directly or indirectly.

Agricultural productivity is a multidimensional concept, which includes technological advancement, effective management of available resources and organizational setup for the agricultural production. There are different variables which determine to increase agricultural production; they can be grouped as environmental, technological and institutional.

Therefore, agricultural productivity could be defined as the ratio of output to input in relation to land, labour, capital and overall resources employed in agriculture. Prof. Jasbir Singh says that 'productivity as defined in economics or agriculture geography means output per unit of input or per unit of area respectively' (Singh and Dhillon, 1984, 226). Since both input and output variables are of diversified nature, their comparison is possible only after converting them into index. Thus, in the words of Shafi, 'agricultural productivity may be defined as the ratio of the index of total agricultural output to the index of total input used in form production' (Shafi, 1984). In economics usually productivity is measured in terms of production per unit of input. Pandit has agreed to these views and says that 'productivity is defined in economics as the output per unit of input the art of securing an increase in output from the same input or of getting the same output from a smaller input' (Pandit, 1965).

STUDY AREA:

Astronomically Nandurbar district extends between 21° 0' to 22° 03' north latitude and 73° 47' to 74° 47' east longitude. Nandurbar district lies in the north western part of Maharashtra. Nandurbar district was created with bifurcation of Dhule district on 1st July, 1998. The region is bounded by Dhule district on east and south. While on the west by Surat district of Gujrat state and on the north by Badwani and Jhabua district of Madhya Pradesh. The Nandurbar district with a geographical area of 5034.23 sq.km. has an amorphous shape. According to 2011 census Nandurbar district accommodates 16, 48,295 people with 69.28 percent of scheduled tribe population, which ranks first in the state with 39 tribal groups being accommodated in various tahasils of the region. According to census 2011 proportion of urban population is very low with 16.71 percent of total population in the district and 83.29 percent of the total is living in rural areas. Decadal population growth rate in the region has been 25.66 percent with annual growth rate of 2.21 percent.



OBJECTIVES

- To study the proportion of Agricultural productivity.
- To find out the distributional pattern of Agricultural productivity.
- To identify the factors affecting on Agricultural productivity.

DATA BASE AND METHODOOGY:

Present study is based on Primary and secondary data source. The data regarding area under different land use category and population is obtained from Socio Economic Review and District statistical abstract of Nandurbar district. For the present study Enyedi, G.Y. (1964) while describing geographical types of agriculture in Hungary refers to a formula for determining agricultural productivity. Shafi (1972 and 1974) also adopted this approach to determine the productivity indices in respect of twelve food crops in India.

His formula for assessing productivity coefficient is,

$$\text{Productivity Index} = \frac{Y}{Y_n} \div \frac{T}{T_n} \times 100$$

Where Y = Production of the respective crop in the unit area.

Y_n = Total production of the crop in entire region.

T = Area under selected crop in a unit area.

T_n = Area under selected crop in entire region.

Using this formula the productivity index values were calculated for study region the two years i.e. 2001-02 and 2015-16. Productivity Regions Based on Enyedi's Productivity Index Application of these techniques for the demarking the categories of agricultural productivity in the study area and its analysis reveals interesting facts.

DISCUSSION

The changes in the production of the selected crops are given during the years 2001-02 to 2015-16 in show the table no. 6.1. Fifteen yearly average changes in production of selected crops are worked out for the entire region. The production of selected crops in 2001-02 indicates an increase and decrease over that in 2015-16 in study the region.

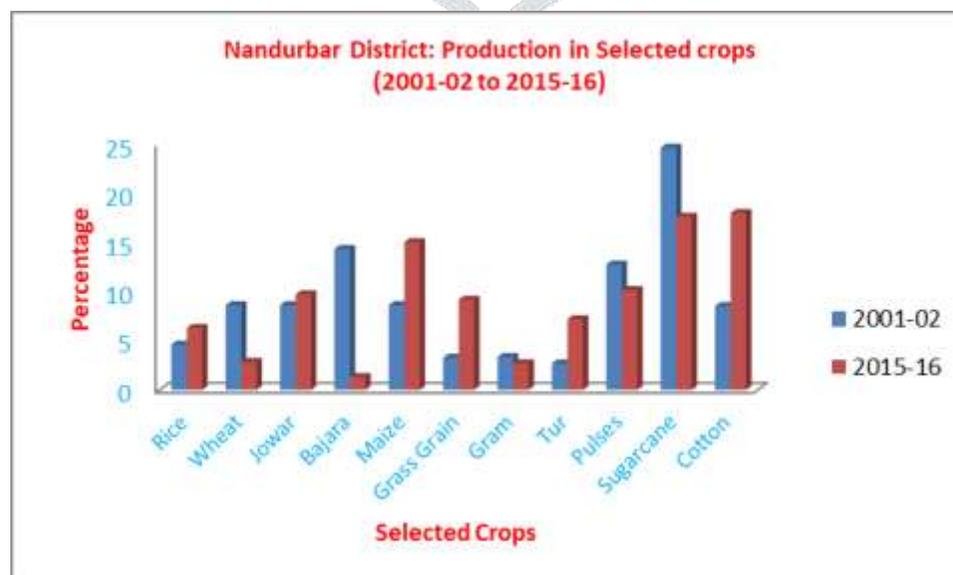
Table No.1
Nandurbar District: Changes in Production of Selected crops
(2001-02 to 2015-16)

Sr. No.	Selected Crops	Comparative Percentage of Production In All crops		Changes in Percentage
		2001-02	2015-16	
1	Rice	04.60	06.30	36.83
2	Wheat	08.61	02.85	-66.93
3	Jowar	08.62	09.71	12.76
4	Bajara	14.33	01.32	-90.77
5	Maize	08.63	15.02	73.93
6	Grass Grain	03.27	09.17	180.47
7	Gram	03.35	02.71	-19.05
8	Tur	02.70	07.19	166.82
9	Pulses	12.75	10.15	-20.34
10	Sugarcane	24.62	17.60	-28.54
11	Cotton	08.52	17.98	110.85

Source: Computed by the Researcher.

Table no.1 clearly shows that changes in production of selected crops in the study region. During 2001-02 the maximum production area under Sugarcane crops with 24.62 per cent followed by Bajara and Pulses with 14.33 and 12.75 per cent respectively. Minimum production area under Tur crop with 02.70 per cent followed by Grass Grain, Gram and Rice crop with 03.27, 03.35 and 04.60 per cent respectively, while in Cotton, Wheat, Jowar and Maize crop the production was increased with 08.52, 08.61, 08.62 and 08.63 per cent respectively.

Fig. No.1



Researcher noticed that during 2015-16 the highest proportion of production area under Cotton crop with 17.98 per cent followed by Sugarcane, Maize, Pulses, Jowar and Grass Grain crops with 17.60, 15.02, 10.15, 09.71 and 09.17 per cent respectively, while lowest proportion of production area under Bajara crop with only 01.32 per cent followed by Gram, Wheat, Rice and Tur crops with 02.71, 02.85, 06.30 and 07.19 per cent respectively.

Researcher observed that during the period of 2001-02 to 2015-16 Districts as analysis a both positive and negative change is observed. The highest negative changes in production is found in Bajara crop with -90.77 per cent followed by Wheat, Sugarcane, Pulses and Gram crop with -66.93, -28.54, -20.34 and -19.05 per cent respectively. Low positive changes in this category is in Jowar crops with 12.76 per cent followed by Rice and Maize crops with 36.83 and 73.93 per cent respectively, whereas it is high positive changes in Grass Grain crops with 180.47 per cent followed by Tur and Cottan crops with 166.82 and 110.85 per cent respectively. Thus, an output of crops has been increasing at faster rate in this district. This may be both cause and effect of using the agricultural innovations after advent of the green revolution. An outcome of higher yield rates of different crops and crop groups, share of this district in their production is higher than their shares in area under the crop.

Table No. 2
Nandurbar District: Changes in Productivity of Selected crops
(2001-02 to 2015-16)

Sr. No.	Selected Crops	Comparative Productivity Index In Percentage of All Crops		Changes in Percentage
		2001-02	2015-16	
1	Rice	52.62	79.53	51.14
2	Wheat	441.60	95.46	-78.38
3	Jowar	42.46	60.33	42.09
4	Bajara	276.56	33.88	-87.74
5	Maize	145.73	310.40	112.99
6	Grass Grain	19.75	56.37	185.42
7	Gram	162.76	136.06	-16.40
8	Tur	45.52	150.72	231.11
9	Pulses	99.25	93.91	-05.38
10	Sugarcane	438.23	372.97	-14.89
11	Cotton	57.15	69.95	22.39

Source: Computed by the Researcher.

Fig.No.2

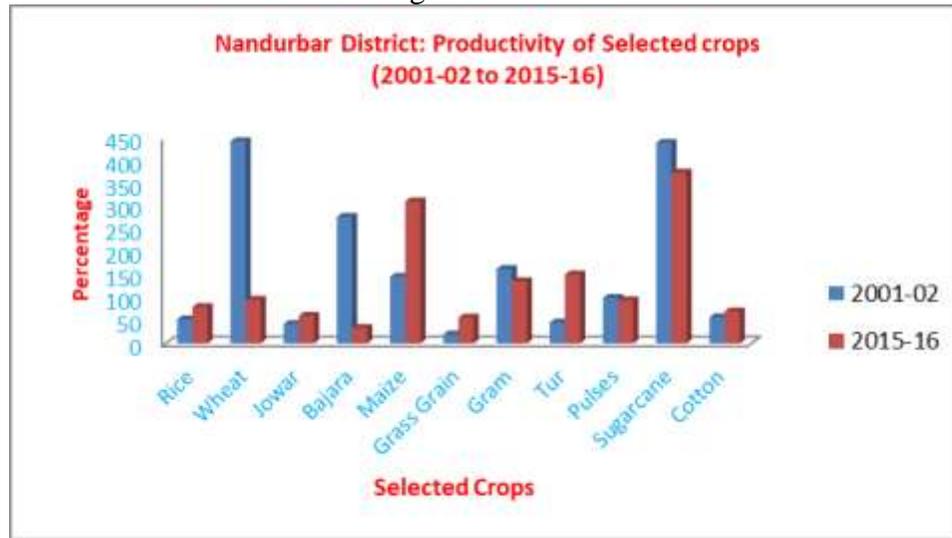


Table no.2 clearly shows that changes in productivity index of selected crops in the study region. During 2001-02 the maximum index of productivity area under Wheat crops with 441.60 per cent followed by Sugarcane, Bajara, Gram and Maize with 438.23, 276.56, 162.76 and 145.73 per cent respectively. Minimum index of productivity area under Grass Grain crop with 19.75 per cent followed by Jowar, Tur, Rise, Cotton and Pulses crop with 42.46, 45.52, 52.62, 57.15 and 99.25 per cent respectively.

Researcher concluded that during 2015-16 the highest proportion index of productivity area under Sugarcane crop with 372.97 per cent followed by Maize, Tur and Gram crops with 310.40, 150.72 and 136.06 per cent respectively. Lowest proportion index of productivity area under Bajara crop with 33.88 per cent followed by Grass Grain, Jowar, Cotton, Rice, Pulses and Wheat crops with 56.37, 60.33, 69.95, 79.53, 93.91 and 95.46 per cent respectively. In the Akrani and Akkalkuwa tahsils has very poor condition in this respect. Per capita productivity is low in this tahsils because of high proportion of agricultural workers and low yield per hectare. Therefore, yield per unit of area must be raised for improving the situation

During the period of 2001-02 to 2015-16 District as per recorded data analysis both positive and negative changes is observed. The highest negative changes in index of productivity is found in Bajara crop with -87.74 per cent followed by Wheat, Gram, Sugarcane and Pulses crop with -78.38, -16.40, -14.89 and -05.38 per cent respectively. Low positive changes in this category is in Cotton crops with 22.39 per cent followed by Jowar and Rice crops with 42.09 and 51.14 per cent respectively, whereas it is high positive changes in Tur crops with 231.11 per cent followed by Grass Grain and Maize crops with 185.42 and 112.99 per cent respectively.

The study region mainly drained by Tapi and Narmda river basins can be resolved into a number of smaller plateaus and river valley plains. The region displays significant regional variations in the amount and distribution of rainfall. The minimum annual rainfall recorded below 400 mm. in the study region. The agriculture in this region is largely dependent on rainfall and it suffers from the problems of low production and instability.

CONCLUSION

In the Green Revolution crop production has increased tremendously. But in last 20 years the production increased as 'Diminishing Return'. Due to urbanization, modernization and other changes in the composition of crops and their production in the region has been recorded during 1981-2006 period. To meet the growing demands of non-food crops due to rural industrialization, modernization and urbanization declining trend in the proportion of area under food crops and their production has also been recorded. In the study region social factors are also important in agricultural activity. Some social factors such as increasing population, Small and fragmented land holdings, illiteracy, superstitions, conservative approach, lack of response to new agricultural technology, etc. are the obstacles in the agricultural development. This ultimately results into low agricultural production. Nandurbar district is a dominant tribal district 65 percent people are belonging from tribal communities. Mainly in satpura mountain ranges, several villages are cent percent tribal. In these villages,

the tribal farmers are not adopt the modern tools and techniques as well as the HYV seeds o a large scale, hence the agricultural productivity.

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