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AGRICULTURAL PRODUCTIVITY OF GONDIA DISTRICT IN MAHARASHTRA STATE

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ABSTRACTS

In this present study to analysis of agricultural productivity of Gondia district in Maharashtra state. Vidharbha region, Maharashtra has been selected as an area unit of investigation. Agriculture is the principal occupation and more than 80% of the total population depends on it as a way of living. For the smooth development of agriculture and high yielding of crop needs of labours are being felt time to time. Though, many modern agricultural tools or equipment's are available in the modern era, but still for the operating skilled persons are required. But, nowadays interest on working in the field is declining. Labours are moving towards the cities in search of jobs which can give them huge wages. In order to examine its impact on agriculture, the Gondia district can be taken up as an ideal unit of investigation. The agriculture operations and the agro-ecological conditions of the district are congenial both for the production of crops and human occupation

KEY WORDS: *Agriculture productivity, technological advancement, cropping pattern, Irrigation*

INTRODUCTION

India is an agricultural country. Main occupation of Indian rural people is farming. Agriculture is the main occupation of India from thousands of year. Even today about 69% of population depends on agricultural sector for their livelihood [1,2,3,4,5]. They are involved in the farming activities and allied business sectors, 60% of rural population is directly associated in this sector. But despite a steady decline (GDP), agriculture remains the largest economic sector in the country. In India, the importance of agriculture arises out of the position the agrarian sector occupies in the overall economic growth of the country [6,7,8,9,10,11,12]. Agriculture, being the largest sector of the economy plays a crucial role in the country's economic development by providing food and raw material, employment to a large proportion of population, capital for its own development and surplus for national development [13,14,15,16,17,18,19,20]. Such a situation must have continued even after small urban settlements produce for those directly dependent upon agriculture but even for urban dwellers [21,22,23,24,25].

Agriculture in India is the vertical backbone of the country and is regarded as the largest sector of the country's economic activity. It is the major sector of the State economy, in which the majority of people earn their livelihood.

SIGNIFICANCE OF THE STUDY

Gondia is also known as rice city, as it is a rice producing district. The present research work has been undertaken to examine the status of the agriculture productivity of the study region. The study will suggests that agricultural extension system of the district/ state/ country should be geared-up, to bring out farmers from the conventional methods of cultivation and to educate them on adoption about agriculture productivity technologies and implements cooperatively. In addition, agricultural jobs should be made more remunerative by increasing the wages at least as par with other jobs available locally.

STUDY REGION – BRIEF INTRODUCTION

Gondia district came into existence on 1st May 1999, separating from Bhandara district . Administratively it is divided into eight Tahsils Gondia district lies in the northeast corner of Maharashtra state. Beyond northern boundary, there is Balaghat district of Madhya Pradesh, beyond Western boundary there is Bhandara district (M.S.) Rajnandgaon district of Chattisgarh to east and Gadchiroli (M.S.) to the south. The district headquarter is situated at Gondia situated on Mumbai – Kolkata route which is 1060 Km. from Mumbai, capital of state. Gondia known as the district of lakes and the city of rice, resplendent with natural beauty, as it is a rice producing district and has about 250 rice mills near the vicinity of city. It lies between $20^0$39' to $21^0$38' north latitude and $79^0$27' to $80^0$42' East longitude. The total area of the district is 5641 sq. kms. Gondia district occupies only 1.83% of the total area of Maharashtra state. According to 2011 census the total population of the district is 1322331. (Fig.1) The district has a physical variety. There are hilly areas as well as alluvial place. The hilly areas are common in many parts of the district. In the north west part of the district [26,27,28,29,30].

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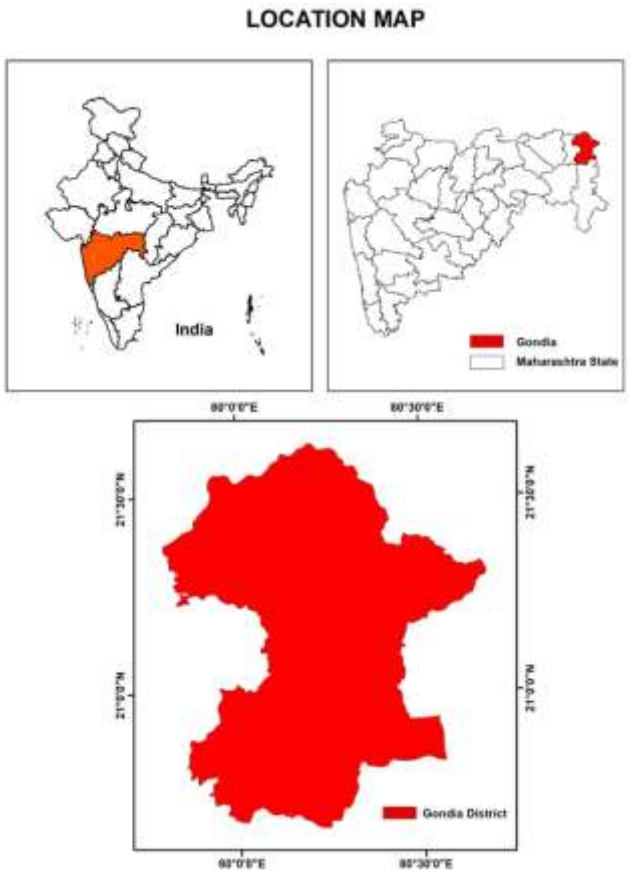

Fig.1. Gondia District

There are "Gaimukh" hills and in the south west there are Pratapgarh ranges. Navegaon hills are the central parts. There are Chichgarh hills in Deori Tahsils while Darekasa hills are in the north east. These hills are really part of the district, the extensions of Satpura mountain ranges. Among these hilly areas there are several river basins. Wainganga is the main river and it forms the district boundary in the north east and central parts of the district. Both are the major tributaries of river Wainganga. It forms boundary in the north. There is another river Pangoli which flows towards north and it joins the Baghriver. In the central part Chulbandh and Gadvi in the other parts are important rivers [31,32,33]. Thus the hills and rivers have resulted into topographic differences. Most of the hilly areas are covered with forest while rice is cultivated in river basin. The average annual rainfall in the district is 1300 to 1500 mm. The lowest rainfall among is over north western part. It increases toward east and south where the hilly areas lie. In the district, the length of the broad gauge railways is 206 kms., similarly there are 465 km roads in the district. Mumbai, Kolkatta N.H. No. 6 passes through the district. These transport facilities have positive as well as negative effects on forest activities. Products like lumber are transported by railways but road development and other human activities are distinctive. Gondia District shows a great variation in natural factors. The distribution of population is generally affected by physical and social factors. Therefore it is necessary to review this background. In the northern part of the district there are Gaimukh hills. Similarly in the north east there are Darekasa hills. In the south east there are Chichgarh hills while Navegaon hill lie in the south central parts of the district. The maximum height in this area is 611 meters from the sea level. Wainganga, Pangoli and Bagh are the important rivers in the north. Chulbandh valley in the west central part. Valley of the Bagh in the east and valley of Gadhavi river in the southern part are important. Apart from this there are several several tanks of various sides.The district has a primarily agriculture-based economy. Gondia district of Vidharbha region, Maharashtra has been selected as an area unit of investigation. Agriculture is the principal occupation and more than 80% of the total population depends on it as a way of living. For the smooth development of agriculture and high yielding of crop needs of labours are being felt time to time. Though, many modern agricultural tools or equipment's are available in the modern era, but still for the operating skilled persons are required. But, nowadays interest on working in the field is declining. Labours are moving towards the cities in search of jobs which can give them huge wages. In order to examine its impact on agriculture, the Gondia district can be taken up as an ideal unit of investigation. The agriculture operations and the agro-ecological conditions of the district are congenial both for the production of crops and human occupation.

OBJECTIVES OF THE STUDY

- To assess the influence on the cropping pattern in the district,
- To assess the status of agriculture productivity in the district.

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- To identify the thesil wise agriculture productivity in the study region.
- To see the changes of agriculture productivity if any in the study region.

REVIEW OF LITERATURE

The examined the multiplexity of livelihoods in rural Africa. The income diversification efforts of most rural dwellers over the past decade have been directed at meeting daily needs amidst declining returns to commercial agriculture. Individuals and households have experimented with new forms of livelihood, expanding their non agricultural income source, while retaining their base in subsistence farming. Had conducted a study on rural farm and non-farm employment in West Godhavari district. The results of the study revealed that agriculture plays a leading role ingeneration of employment. The share of male workforce in agriculture tended to decline, while its share in non-agriculture employment has shown an increase. In his study on the employment of landless laborers in Aligarh district of Uttar Pradesh has revealed that due to the distress phenomenon of unemployment the laborers undertook non-farm work either inside the village or as daily commuters to nearby city area or as seasonal migrants to some far off urban centers. Inside the village they worked as loaders, rag pickers, basket makers, constructional workers, in match industries, pot makers and as weavers.

DATABASE METHODOLOGY

Sampling Procedure

Since the basis purpose of the present study it to examine the impact of agriculture productivity in the study region. Since Gondia district has eight talukas(Tirora, Goregaon, Gondia, Amgaon, Salekasa, Sadak Arjuni, Arjuni Morgaon and Deori), eight thesil were selected for the study. The sample farmers were post-stratified crop wise,viz. paddy, wheat, green gram and oilseed etc., carry out the analyses.

Database

The information related to available agricultural productivity of various crops in the district, cropping pattern and crop-wise area coverage in the district (2008- 09 to 20011-12) was obtained from the secondary sources, viz., Office of the Assistant Director of Agriculture, District Statistics Office in Gondia District.

Results and Discussion

Agriculture is the most important sector of our economy which contributes about 45% of the national income, provides employment to about 70% of our population and contributes substantially to under export earnings. The success story of Indian agriculture is well-known and universally regarded as a model for agriculture growth and development in the third world. India's agricultural has been "galvanised into a quantum jump- the leap we called the Green Revolution". India is basically predominately agricultural country where above 75% of population is directly dependent on the agriculture. Out of the total agricultural land 76% agricultural land is occupied by small and marginal farmers. Any agricultural land is evaluated on the basis of their productivity level. Agricultural productivity provides an opportunity to ascertain the ground reality, the real cause of agricultural backwardness of a region. The delimitation of the areas of low, medium and high productivity, agricultural plans may be formulated to remove and minimize the regional inequalities [34,35,36,37].

Productivity of Rice in the district

Rice is the main food crop of the district as the climatic terrain and soil conditions are very much suitable for the crop. In the year 2011-2012 the total production of the rice in the district was 27554 m.tonnes while area under rice in the district was 180867 [38]. In the year 2008-09 the production was slightly lower and it was 17316 out of the 182650 hect. are under the crop. In comparison with the regional average maximum productivity of rice in the district was in Salekasa and Arjuni Morgaon where it was 44% More than the regional average, out of the aggregate district Amgaon, Salekasa, Sadak Arjuni, Arjuni Morgaon and Deori are above regional average in the year 2011-12. In comparison to these talukas Tirora, Gondia and Goregaon productivity is below the district average which was minimum in Gondia taluka which was only 50% of the district average. The reason for this discrimination is due to comparative low rainfall and irrigated area. In the high productivity Zone Paddy is grown on the basis of irrigation facilities (Table 1 & Fig. 2 & Fig. 3).

Table 1. Gondia district: Productivity of Rice (2008-09 to 2011-12)

Sr.No.	Taluka	Productivity of Rice 2008-09	Productivity of Rice 2011-12
1	Tirora	0.68	0.73
2	Goregaon	1.19	0.90
3	Gondia	0.52	0.55
4	Amgaon	1.00	1.23
5	Salekasa	1.66	1.44
6	Sadak Arjuni	1.58	1.12
7	ArjuniMorgaon	1.60	1.43
8	Deori	0.81	1.04
Total		**182650**	**17316**

Source: *Socio-Economic Bulletin Gondia District - 2008-2009, 2011-2012*

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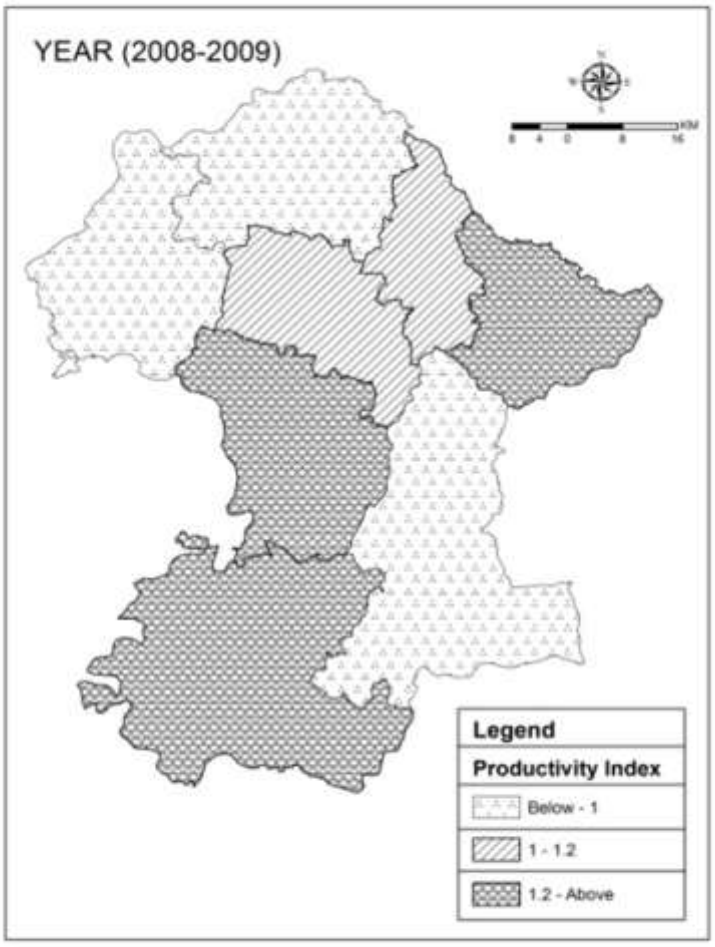

Fig. 2. Gondia District: Productivity Of Rice (2008-2009)

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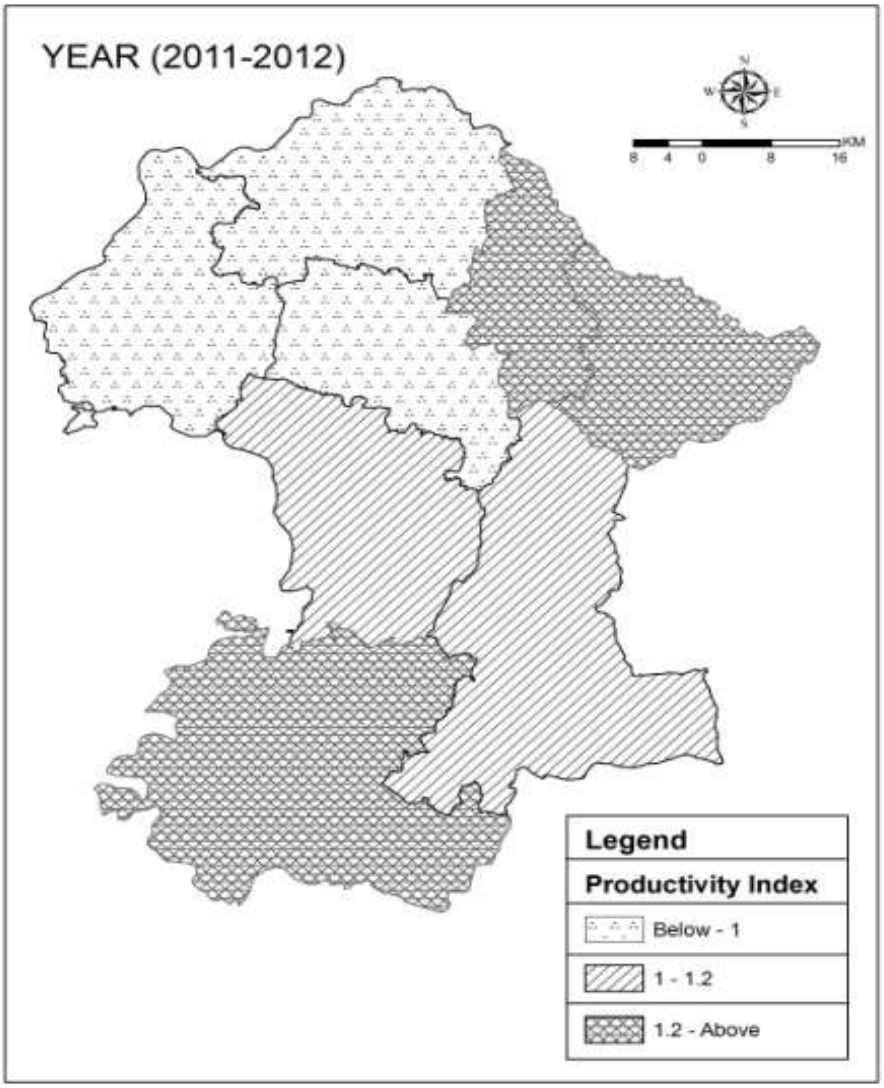

Fig. 3. Gondia District: Productivity of Rice (2011-2012)

Productivity of Wheat

Wheat is the major Rabi crop which is economically important crop though area under this crop is not very high in the district. The crop is produced only where irrigation facilities are available. In the year 2008-2009 9824 m.tonnes production was taken out of 4365 Hect area. In the year 2011-12 Arjuni Morgaon and Salekasa were far below the average district productivity and it was only 0.39 in Morgaon and 0.86 in Salekasa. The reason for this low ratio is that cultivation of these talukas grown paddy in the winter so land is not free for wheat. Deori 2.89 times More productivity than district average while Tirora, Goregaon, Gondia, Amgaon shows moving high productivity level. In the year 2011-12 though the production of wheat in the district increased about 2000 tonnes but area under the crop decreased as it was 9824 in 2008-09 decreased up to only 40%. Production was zero in the Salekasa tahsil and progressive growth in the productivity was counted only in the Deori and Sadak Arjuni where it was accounted 2.94 and 2.08 successively. In the remaining taluka it was less than district aggregate performance. (Table 2 & Fig. 4 & Fig. 5)

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Table 2. Gondia district: Productivity of Wheat (2008-09 to 2011-12)

Sr.No.	Taluka	Productivity of Wheat 2008-09	Productivity of Wheat 2011-12
1	Tirora	1.36	0.59
2	Goregaon	1.19	0.52
3	Gondia	1.48	0.94
4	Amgaon	1.38	1.14
5	Salekasa	0.86	--
6	Sadak Arjuni	1.06	2.08
7	Arjuni Morgaon	0.39	0.81
8	Deori	2.89	2.94
Total		**10.61**	**9.02**

Source: *Socio-Economic Bulletin Gondia District - 2008-2009, 2011-2012*

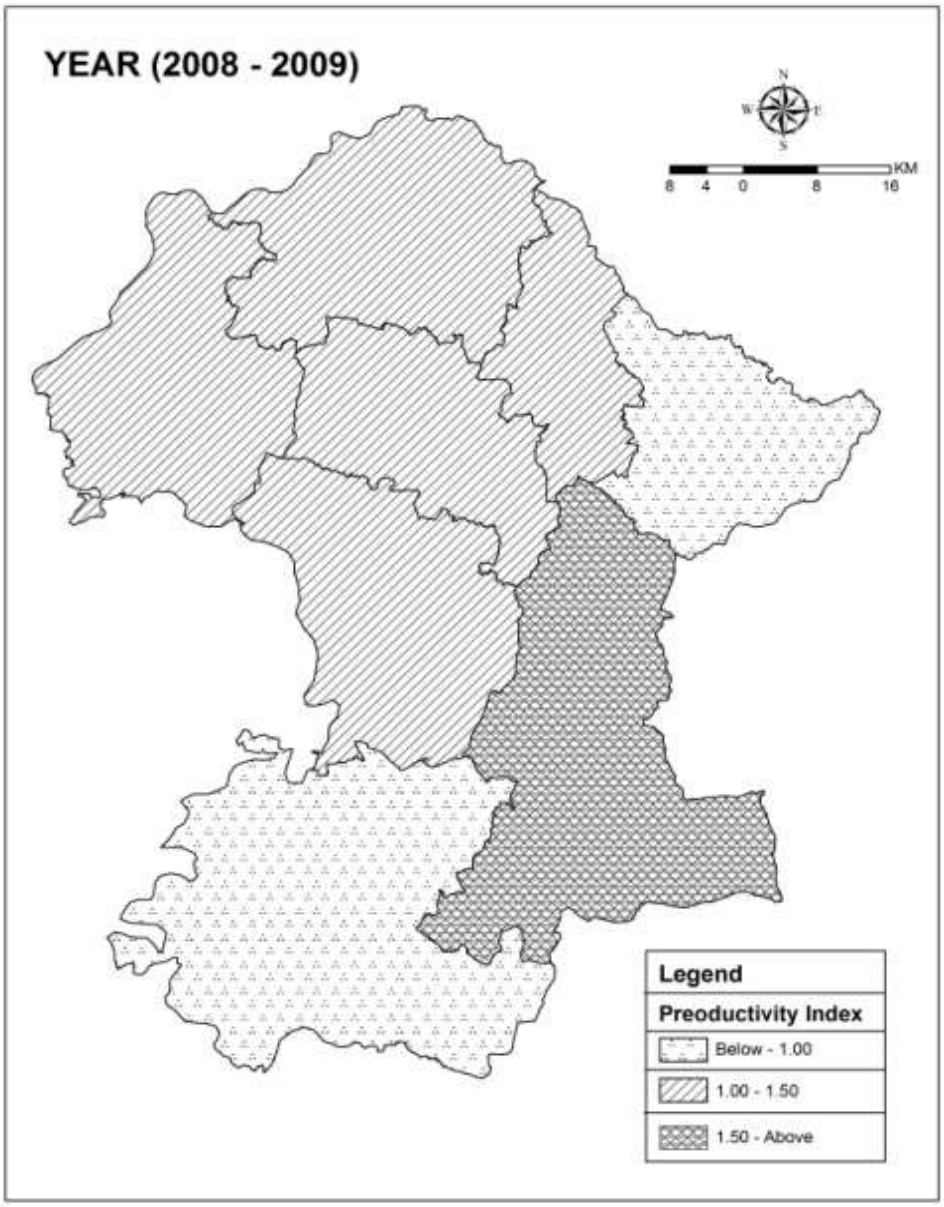

Fig. 4. Gondia District: Productivity of Wheat (2008-2009)

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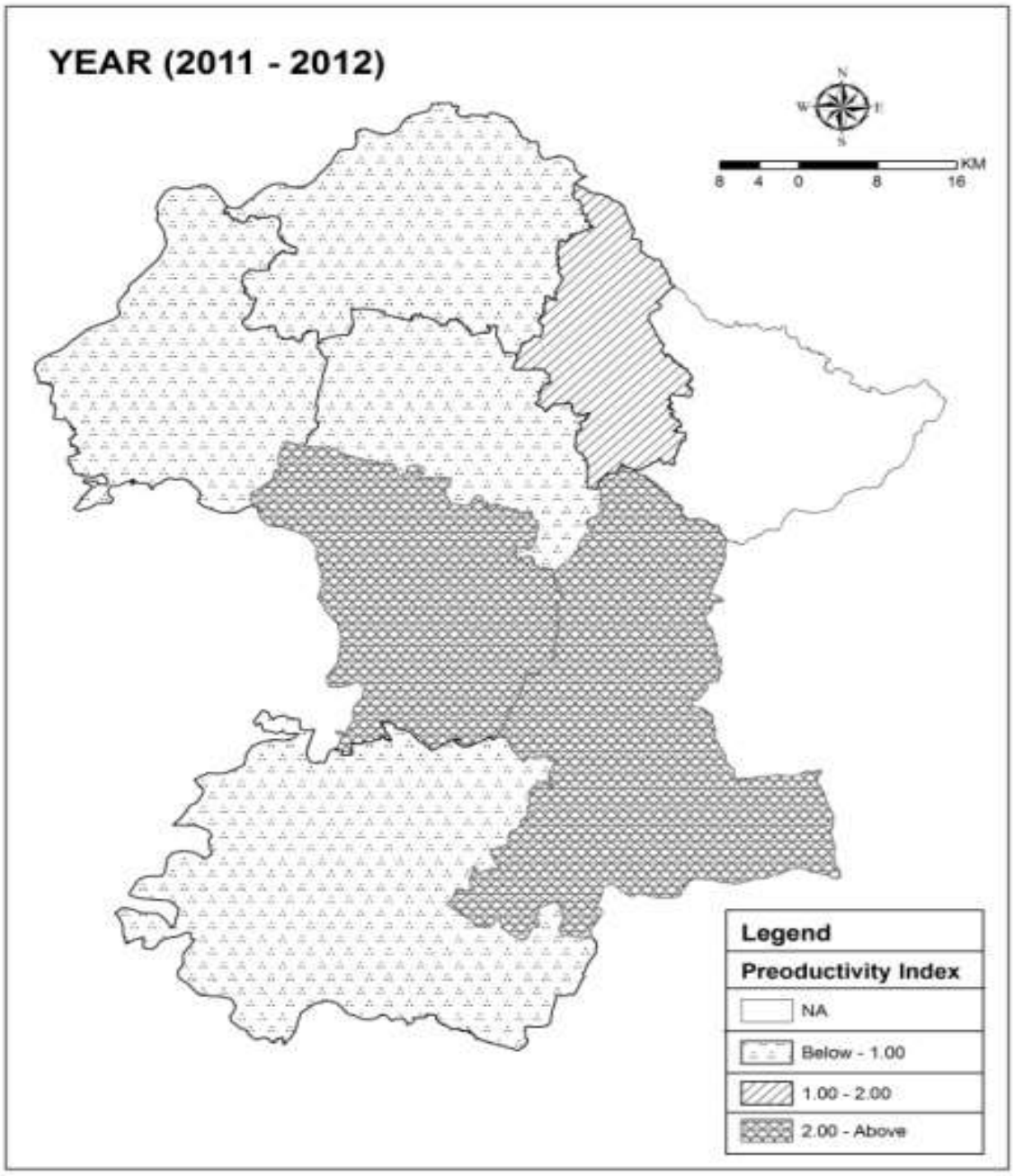

Fig. 5. Gondia District: Productivity of Wheat (2011-2012)

CONCLUSION

Out of the total area of the district 26% is occupied by forests, 8% is not available for cultivation, 3.4% is barren and uncultivated land, 9.2% is fallow land. Net sown area is 43.2% of the total 47% available for cultivation and rest is cultivable land but not in use. Two main crops mainly Kharif and Rabi are sown in the district. Main Kharif crops are Rice, wheat, green gram, and oilseeds and main Rabi crops are Wheat and green gram. Agriculture productivity is an input output ratio. At present the measurement of agricultural productivity, the question of sustainability of soil, health of ecosystem and social acceptability have become increasingly important. Agricultural productivity of a micro region is closely influenced by a number of physical, socio-economic, political, institutional and organizational factors Agricultural productivity is a function of interplay of physical and cultural variables and it manifests itself through per hectare productivity. The measurement of agricultural productivity helps in knowing the areas that are performing rather less efficiently in comparison to the neighboring areas. By delimiting the areas of low, medium and high productivity, agricultural plans may be formulated to remove and minimize the regional inequalities.

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FINDINGS

- In the year 2011-2012 the change in fertilizers application and production indicates that though change in both the variables is in the same direction, but till now the cultivators of the district is not having the proper orientation regarding the use and application of chemical fertilizers. There is a need to create awareness regarding the importance of chemical fertilizers to increase the level of production.
- Though the district is known as the lake district of the Maharashtra, but the facility of irrigation is basically by tanks, which are seasonal in nature, that's why the water is available only for the Kharif crop.
- The role of technological advancement in the district has been tested with reference to the productivity level. The technological equipments like Iron Plough, tractor, harvesters, water pumps, thresure are utilized to make the agricultural procedure faster. The result indicate that the impact is increasing with reference to time span though at the very slow rate and it requires a lot of awareness and innovativeness to state the importance of this mechanization.
- Various major, medium and minor irrigation projects are working in the district to increase the irrigated area.
- Irrigation is the factor on which the implementation of HYV, Chemical fertilizers and plant protection measures are implemented and as a result of these factors agriculture level of advancement can be increased. There is a need of policy paper so that the level of agricultural productivity and cultivators can be enhanced.

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