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## ROLE OF AGRICULTURE IN REGIONAL DEVELOPMENT AND ASSOCIATED AGRICULTURAL PROBLEMS IN OSMANABAD DISTRICT

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### **Abstract:**

*Agriculture is important economic activity of India's near about 60 percent population. India is rural country and it has agrarian economic base. Agriculture helps human beings to not only fulfil his basic needs but also it provides raw material for different type of industries. Agriculture plays an important role in development of any region. Today, agricultural area is decreasing day by day due to growing size of urban places. Agriculture is depended on climatic, physiographic and human elements. Climate plays a significant role in agricultural productivity. Rainfall, temperature, soil, availability of water and topography of an area are responsible for regional variations in agricultural productivity. In this present paper an attempt is made to find out the correlation of agriculture and regional development of Osmanabad district and problems associated with agricultural development.*

**Keywords:** Agriculture, Regional development, Agricultural productivity.

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### **Introduction:**

From ancient period man has practicing agriculture for fulfilling his basic need of food. In India agriculture is a backbone of Indian economy. Agriculture plays significant role in Indian economy by providing food and employment opportunities to its largest proportion of population. India's near about 65 percent population is engaged (directly or indirectly) in agriculture practices and related activities. Agriculture provides food and fodder for man and animals. It also provides raw materials to number of small and big industries. India is densely populated nation in world. It occupies only 2.46 percent geographical area and supports more than 17.5 percent of world's population. In terms of geographical area India holds seventh rank while in terms of world's total population India holds second rank after China.

As stated, earlier India is rural country. Over 65 percent of the rural households depend on agriculture as their principle means of livelihood. Osmanabad district is an important district in state of Maharashtra. Osmanabad district has agrarian economic base. The economy of the district is

mainly depending on agriculture; district's 77.1 percent peoples are engaged in primary sector. According to 2011 census Osmanabad district's only 16.96 percent population is living in urban areas. That means remaining 83.04 percent peoples are still living in rural areas. In rural region main economic source is agriculture; hence largest proportion of working force of the district is engaged in agricultural activities. The physiography of Osmanabad district is undulating; it creating number of problems in development of agriculture. Therefore, it is necessary to assess the role of agriculture in development of Osmanabad district and associated agricultural problems.

**Objective:** The principal objective of this research paper is to assess the role of agriculture on regional development and to find out associated agriculture problems in Osmanabad district.

### **Database And Methodology:**

Present research work entitled Role of agriculture in regional development and associated agricultural problems in Osmanabad district is mostly analytical and descriptive type; based on secondary data. The

required data is collected from the socio-economic review of Osmanabad district as well as published reports, research articles. Census data has been used for collecting data. Collected data is represented in tabular and graphical form such as bar graph and pie diagram.

**Study Area:** Osmanabad district is an administrative district in the state of Maharashtra in India. The district headquarter is located at Osmanabad. The Osmanabad district is located between 17° 35' North to 18° 40' North latitudes and 75° 16' East to 76° 40' East longitudes. The study area is situated entirely over the Sina, Manjra, Terna and Benithora river basins which is a part of the Deccan plateau. The district is divided into 8 tahsil (Administrative units) and two subdivisions such as Osmanabad (Osmanabad, Tuljapur, Omarga, and Lohara tahsil), and Bhum (Bhum, Kalamb, Paranda and Washi tahsil). The district as a whole is monotonously underlain by Deccan trap basaltic lava flows. This lava flows on account of weathering given rise to undulating topography. Most of the area of the district belongs to the Deccan plateau region. The

district is well defined to its west as well as to its east by Balaghat range. On an average the climate of the district is dry and comparatively extreme. As the region comes under rain shadow area, rainfall throughout the year is scanty and its distribution both spatial and temporal is not uniform. Climate of Osmanabad district is dry as daily mean maximum temperature range between 30° C to 42° C and minimum temperature range 10° C to 24° C. The annual average rainfall is 718 mm. in Osmanabad district.

#### Results and Discussions:

#### Proportion of Rural – Urban Area and Population in Osmanabad District:

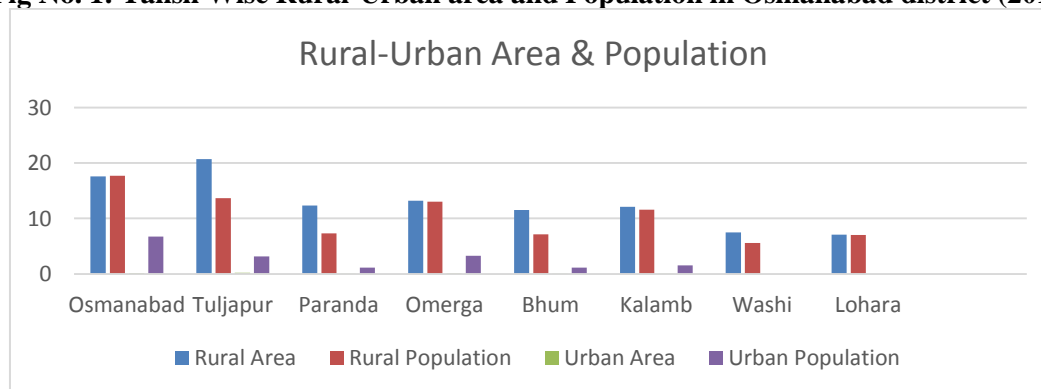
Osmanabad district is mostly rural tahsil. It has agrarian economic base. Out of district's total geographical (7569 sq.km) area, 7440 sq.km (98.29 percent) is rural while 83.05 percent population is living in rural areas. On the other hand, only 1.70 percent area is urban and 16.95 percent population is living in urban areas. Detail information of tahsil wise rural – urban area and population is shown in following table.

**Table No. 1 : Tahsil Wise Rural-Urban Area and Population in Osmanabad District (2011)**

Sr. no.	Tahsil	Rural area in %	Rural population in %	Urban area in %	Urban population in %
1.	Osmanabad	17.59	17.73	0.15	6.74
2.	Tuljapur	20.72	13.66	0.21	3.15
3.	Paranda	12.36	7.32	0.05	1.13
4.	Omerga	13.19	13.01	0.08	3.24
5.	Bhum	11.52	7.12	0.06	1.11
6.	Kalamb	12.09	11.58	0.04	1.55
7.	Washi	7.50	5.55	00	00
8.	Lohara	7.06	7.04	00	00
	<b>District</b>	<b>98.29</b>	<b>83.04</b>	<b>1.70</b>	<b>16.95</b>

Source: Compiled by Researcher from District Census Handbook of Osmanabad (2011)

**Fig No. 1: Tahsil Wise Rural-Urban area and Population in Osmanabad district (2011)**



Above table no. 1 and fig no. 1 shows that, in Osmanabad district 83.04 percent

peoples are living in rural areas over 98.29 percent of geographical area. On the other

hand, district's 16.95 percent peoples are concentrated in urban centres over only 1.70 percent of land area. It is noted from above table that maximum part of the study area is rural and agriculture is the main economic activity of peoples for livelihood. But in rural area the population concentration is very low compared to urban sectors. In district Tuljapur tahsil is largest tahsil in terms of total as well as rural geographical area but supporting very low percent of peoples because of agricultural development is very rare in Tuljapur tahsil, due to uneven land, hilly area etc. After Tuljapur tahsil, Osmanabad and Omarga tahsils are largest tahsils in terms of land area; both these tahsils have supporting largest population share of district. New and advanced agricultural practices, use of modern machineries, seeds, and fertilizers are the basic reasons of profitable agriculture in this region. Paranda, Kalamb and Bhum have moderate area while Lohara and Washi tahsils have covered lowest area of the district.

In study area i.e., Osmanabad district, there are 8 urban centres spread over six

tahsils. Osmanabad urban centre supporting highest urban population of the district followed by Tuljapur and Omarga urban centres. It is clear from above discussion that, while districts most part is rural still peoples migrating to urban places and due to this reason highest population concentration or density of population is found in urban places. In district agricultural activities are affected by undulating topography, climate, unavailability of irrigation sources etc. Hence the productivity of agriculture is low and peoples were going elsewhere in search of better job opportunities. It results into high population concentration in urban area.

#### **Percentage Wise Work Participation Rate in Agricultural and Other Economic Activities:**

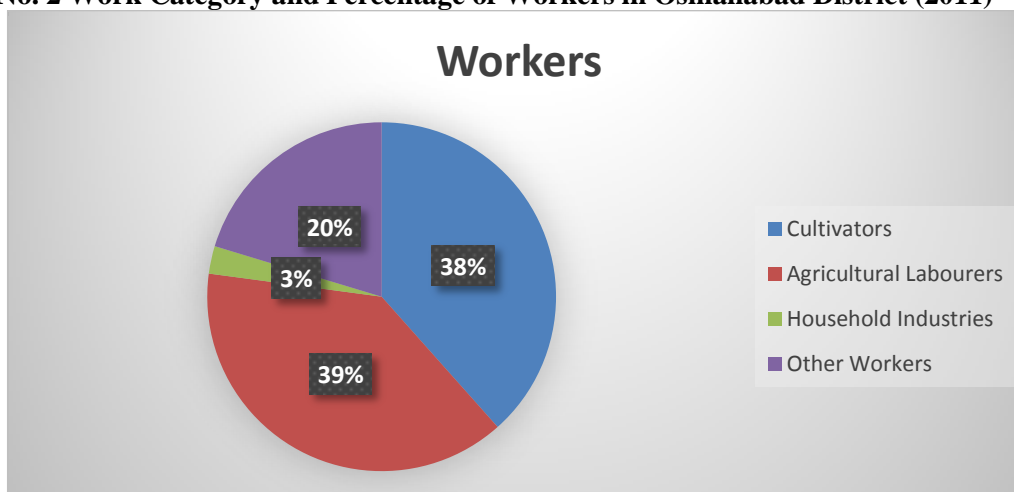
As stated earlier, Osmanabad district is rural district and maximum population of the district is living in rural areas. Following table no. 2 shows work category and workers engaged in different categories.

**Table No. 2: Total number of workers engaged in different work categories in Osmanabad District (2011).**

Sr. no.	Category of workers	No. of workers	Workers in %
1.	Cultivators	297361	38.42
2.	Agricultural Labourers	299525	38.70
3.	Workers in Household Industries	19831	2.56
4.	Other workers	157199	20.32
<b>District</b>		<b>773916</b>	<b>100</b>

*Source: Source: Compiled by Researcher from District Census Handbook of Osmanabad (2011)*

**Fig No. 2 Work Category and Percentage of Workers in Osmanabad District (2011)**



Above table no. 2 and fig no. 2 shows that in 2011 workers are divided into four categories like wise Cultivators, Agricultural laborers, Workers in household industry and other workers. It is evident from above table

that, in Osmanabad district 77.12 percent workers are engaged in agricultural activities, while 2.56 percent are in household industry and remaining 20.32 percent workers are engaged in other activities.

It is clear that district's 77 percent workforce is engaged in agricultural activity but per-capita income in the rural area is very low. Tahsil wise disparity is observed in per head income. Osmanabad, Tuljapur and Omarga this tahsils have recorded high per capita income due to industrial areas, developed communication and transportation facilities, medical and other health facilities. On the other hand, Lohara and Washi tahsils recorded very low per capita income due to totally rural area, low productivity of agriculture etc. There are so many reasons for disparity in tahsil wise development in study area. But agricultural play's important role in districts economy and regional development. Variations in agricultural land, soil type etc are the main reasons in regional disparity in study area.

#### **Agricultural Problems in Osmanabad District:**

In study area there are so many agricultural problems are observed. Following are some important problems discussed in depth.

#### **Climatic Barriers:**

India's climate is mostly monsoon type. In all of the physical factors, climate is significant that determines the agricultural land use and regions agricultural pattern. In climate various factors have included, they are temperature, humidity, rainfall, fog, and frost, length of growing season, sunshine, winds and air pressure. The agricultural scientist proved that every crop has specific type of temperature, humidity, rainfall etc. Each crop has specific zero, below the specific zero which it cannot grow. The upper limit of temperature for plants growth is 600 C under high temperature conditions, i.e., over 400 C, crops dry up if the moisture supply is inadequate. Light plays an important role in photosynthesis activity in plants; frost is also crucial factor which restricts the cultivation of crops at higher latitudes and altitudes. In study area variations in agricultural productivity is observed from one region to another, why that regional development was not even all over district.

#### **Undulating Topography:**

The agricultural patterns are strictly dependent on the conditions of topography, terrain and altitude. Even topography with plain areas and low elevation areas helps to better agricultural practices and better agricultural production. But in India

topography and terrain is not even; some parts have plain areas with fertile soil, while another part is mountainous with high elevation and undeveloped soil. The highly ratified air, low pressure, low temperature and shortage of Oxygen at high altitudes are the serious impediments not only in the cultivation of crops but also in keeping animals. The soils of high elevated mountainous tracts are immature, which are low fertile. Apart from altitude, terrain, aspect of slope and nature of the ground surface also affects agricultural activity. Due to these physical barriers, Indian farmers were unable to develop their agriculture.

#### **Soils:**

In any agricultural operation soil is the most importance as it is the cradle for all plants and crops. The top soil having an average depth of about 15-20 cm on the surface of the land is the natural body of soil on which plants grow and the activities flourish. The people's standard of living is depending on agriculture is often determined by the productivity and fertility of soils. Osmanabad has various types of soils which has changing one part to countries another part. In Osmanabad district those regions which have immature and unfertile soil suffers from low regional development.

#### **Drought Prone Regions:**

For development of agricultural sector in study area, drought prone area is serious problem. In district every third consecutive years is drought year. Study areas agriculture is mostly dependant on monsoons. Without irrigation facilities sustainable development of agriculture is impossible. The whole district is coming under drought prone region of Maharashtra state, which receive very scanty rainfall during the rainy seasons. Droughts and unavailability of irrigation facility these are the major problems for uneven regional development in study region.

#### **Size of Land holding and Fragmentation of Fields:**

Not only the land tenancy and the system of ownership which influence the agricultural and cropping patterns, the size of holding and fragmentation of field also have a close bearing on agricultural land use patterns and per unit yields. The size of farm and size of holding decide the degree of risks that a farm operator may bear. This, in turn, would affect the extent of specialization and also the nature

of technology and equipment's to be used in agriculture development. In Osmanabad district near about 70 per cent of the total holding are below one and a half hectares. The small size of agriculture is also major problem for agricultural development.

**Land Tenancy:**

Land tenure includes such all forms of tenancy and also ownership in any form. Land tenure and tenancy affects the agricultural operations and pattern of cropping in many ways. The farmers and cultivators plan the agricultural activities and farming fields management keeping in mind their rights and possession duration on the land.

**Lack of Proper Agricultural Knowledge:**

Osmanabad is developing district. Most of the district's population have inhabited in villages. It is observed that in rural areas educational facilities are very scanty. Agriculture is the major economic activity in rural part in study area. Due to lack of proper knowledge to adopt appropriate agricultural methods and modern technology, rural farmers use wrong agricultural practices. They were unable to use modern equipment in farm due to illiteracy and lack of knowledge.

**Low Productivity:**

Low productivity of agricultural land is another serious problem all over study area. Most part of the district is covered by Balaghat hilly range. Over hilly region soils are immature and less productive. Due to this over hilly region reason per hectore production is less than the fertile lands of river plains. For improving productivity of such agricultural land's fertilizers, irrigation facilities are mandatory.

**High Production Cost:**

As stated earlier Osmanabad district is developing district and comes into rain shadow zone. Due to small size of agriculture farmers unable to use modern technologies like as tractors, harvesters etc. It results into high production cost of agricultural production.

**Uncertainty in Price of Agricultural Production:**

It is most important agricultural problem which worstly affecting farmers livelihoods. The selling price of agricultural products are not fix; it is changing from time to time. Sometime production cost may high than the produced goods. Especially it is observed in production of onion. Farmers cultivate onion

over large area but at the time of selling its prices suddenly decreases. Due to large investment in agriculture and unprofitable farming farmers commits suicide.

**Conclusion:**

Osmanabad is developing district in Maharashtra state having agrarian economy. Agriculture provides livelihood to its 77 per cent of total population. Development of agriculture is needed for the increasing agricultural productivity and maintaining its fertility as well as to maintain regional balance. In Osmanabad climatic conditions have not even all over district. Undulating topography is also affecting on regional development. Population explosion creates huge pressure on the district's agriculture. Farmers of the study area have very small size of land holdings, which restrict them from adopting new technology and new agricultural methods. For maintaining regional development in district government policies have great importance. There is strong need to provide irrigation facilities by constructing canals and dams on flowing river in district. There is need to aware farmers about sustainable agriculture and its benefits.

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