National Seminar on Present Scenario of Geofraphical Perspectives on Enviroment & Sustainable Development
Organizer :- Jaikranti Arts and Commerce Senior College , Latur | 20th Sept. 2019

Impact of Irrigation on Crop Productivity InOsmanabad District

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Abstract :

The Present research paper is to analyze the impact of irrigation sources on agricultural productivity in Osmanabad district during the year of 2016-17. This study is based on secondary data which is collected from secondary records. Agricultural production is influenced by physical, socio-economic, and farmer's attitude. An endeavor is made here to study why the agricultural productivity various in different crops. The data regarding area under different crops has been collected. In this paper also studied to irrigation sources like dam, wells, bores, etc. which is used for agricultural purposes. Also to analyses major crops in study region and its productivity in per hector. Its distributed by two ways first is rained and second one is irrigated area. All these are studied in this research paper.

Keywords :Agricultural productivity, irrigation, crop yield.

Introduction :

Agricultural productivity is becoming increasingly important issue as the world population continues to grow. India one of the world's most populous countries, has taken steps in the past decades to increase its land productivity. Agriculture still forms the backbone of Indian economy. Irrigation sources is important factor for agricultural productivity. After independence the Govt. has provided facilities, schemes for irrigation and its effects on agricultural productivity. The growth rate of production in agricultural must be more than the growth rate of population. Hence there is an urgent need to accelerate agricultural growth to address issues on food scarcity, nutritional adequacy and income generation. So irrigation facility is most important for growth of agricultural productivity.

Study Area :

The study area is Osmanabad district in Marathwada region. It is located in the southern part of Maharashtra, between 17°30' to 18°40' north latitude and 75°16' to 76°40' east longitudes. It is bounded by solapur district to the south-west, by Beed district to the north , by Ahmednagar district to north-west, and by Latur district to east. The total geographical area of Osmanabad district is 7512 sq.km. the district has 8 tehsils. It comes under the Deccan plateau and hills region. The district forms part of Godavari basin and Manjra subbasin. Manjra, Sina, Terna, Bori, Benitura are the main rivers flowing through the district.

Objectives :

1. To analyses irrigation facilities in study area.
2. To study the effect of irrigation on crop yield.

Sources Of Irrigation

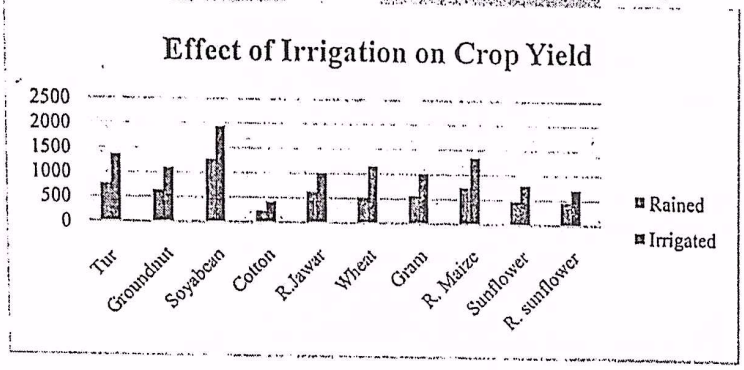
Sources of water for irrigation	Area irrigated [HA]	Percentage
Tanks	6900	5.59
Open wells	92106	74.66
Tube/bore wells	10644	8.63
Lift irrigation	13718	11.12
Total	123368	100

The total source-wise irrigated area of the district is 123368 ha., which is 21.11% of net sown area. Maximum proportion of irrigated area occurs in Tuljapur Tehsil 29633 ha.(24.02%)) while minimum in Washi Tehsil (Table 4.8)). Major source of irrigation in this district is open wells through, which maximum area is irrigated (92106 ha.) followed by Lift Irrigation (Table 4.7). It is well known fact that crop yield increases under irrigated condition. It is possible to take 2 to 3 crops per year on the same piece of land one after another. Hence, it is proposed to increase the irrigated area up to maximum possible limit, as early as possible. Irrigated area can be increased by 50% or so if modern methods of irrigation such as drip or sprinklers are used. It is also suggested that necessary arrangements for improved on farms surface irrigation methods be made.

Effect of Irrigation on crop yield

Sr.no.	Crops	Yield in kg/ha		Percentage increasing in yield
		Rained	Irrigated	
1.	Tur	764	1366	78.80
2.	Groundnut	642	1098	71.03
3.	Soyabean	1286	1950	51.63
4.	Cotton	240	420	75.00
5.	R. Jawar	628	1020	62.42
6.	Wheat	528	1160	119.70
7.	Gram	559	1025	83.36
8.	R. Maize	740	1340	81.08
9.	Sunflower	480	800	66.67
10.	R. sunflower	453	1706	55.85

In study region effect of irrigation on each crop yield. The most of area is occupied by Soyabeans crop and its yield in rained area is 1286 kg/ha and irrigated area is 1950 kg/ha. Increasing percentage of soyabeans is 51.63.the most effect is on wheat its increasing in yield is 119.70% which was highest. All crops increasing in yield in average 75%. The crops which generate higher monetary return should be preferred in irrigated area. The irrigation water is not available for all the area for all the crops in the district. It means water is a limiting input. In this situation our aim should be to harvest more yield per unit of water. Awareness amongst the farmers in this regard should be created so that, they should try to convert the irrigation water into more agricultural production and ultimately higher monetary returns. At present, most of the farmers prefer sugarcane crop. Sugarcane requires about 1600 mm3 of irrigation water i.e. 16000 m3 water for one hectare area. If same quantity of water is used for chili crop, more than 2 ha, area can be irrigated or if it is used for onion, it is possible to irrigate three hectares of area and the total monetary return of challis or onion will be much higher as compared to sugarcane. This concept needs to be explained to all farmers in training programs.



Conclusion :

The present research was carried out in Osmanabad district for the evaluation of impact of irrigation on socio-economic condition of people. Where the irrigation facilities are available there is high crop intensity and productivity. Income level is also higher than that of before irrigation facility. The impact of irrigation in this area is directly positive. The current agricultural productivity is positive compared to that of before irrigation in the surveyed household.

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