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Agriculture And Irrigation In Jawali Taluka

M.B. Waghmode

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Abstract:

Irrigation is an artificial supply of water to land for growing crops and to increase the per hector yield. Irrigation is necessary particularly in and uncertain rainfall areas. It is essential and artificial application of water to overcome the deficiencies in rainfall for growing crops. Irrigation is one of the indispensable inputs in the transformation of agriculture. However, it is recognized as basic necessity of cultivators in arid and semiarid regions for sustaining high productivity of crops and also to bring more and more land under cultivation.

KEYWORDS:

Irrigation, Agricultural productivity.

1. INTRODUCTION:-

Irrigation plays a vital role in meeting rising demands of food and fodder, for growing human diestock population; moreover it is an age old practice of ancient civilization design to reduce moisture deficiency. Investment in irrigation leads to multiple benefits, such as it enables farmer to harvest two or three crops a year.

The need of irrigation is greater in the part, where rainfall is seasonal and un-assured Moreover, it is life giving agent to plant hence the artificial supply of water has become most essential. Other inputs such as fertilizers and plant protection measures are hardly effective without supplemental irrigation to mitigate water stress. Therefore, there is need of the development of water resources, creation of irrigation of facilities is, however only the means to end of their effective use for crop production.

STUDY AREA:

The study region i.e. Jawalitalukais one of the important historical place, lies between 17°, 57" and 17°, 25" north latitude and 73°, 32" and 73°, 57" east longitudes. This is situated at the Sahyadri mountain ranges. The Pune-Banglore National Highway No. 4 passes from the east of the Jawalitaluka. According to 2001 census The Jawalitalukacovers an area 864.53 sq.km. The population of Jawalitaluka was 1, 24,600 persons and density of population was 144.22 people per sq km.

The physiographic of the study region is typical and interesting because the taluka located in hill ranges and surrounding villages have foothill location and has strategic importance. The taluka and its surrounding area lie at northern foothill of Sahaydri mountain ranges. This is extended in the east-west and south-east direction, which forms the water divider of Venna River and NiranjanaRiver having various spurs and small valleys.

CLIMATE:

The climate of Jawalitaluka is entirely favorable for agriculture. Taluka and surrounding region

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experiences a monsoon type of climate. The climate of Jawalitaluka is favorable and healthy. The average maximum temperature ranges from 30°C to 35°C and it is highest in the month of April. The average minimum temperature ranges between 14°C to 18°C and it is minimum in the month of December and January up to 8°C to 10°C. The annual range of temperature is between 12°C to 15°C. The average rainfall is about 1250 mm and it is highest in the month of July and August.

DRAINAGE PATTERN:

The general slope of the ground of the study area is found south - east and north - east direction, so the various streams flow from the north of the Mahableshwar and Panchgani plateau, which drains their water into Venna River, Niranjana River and Koyana River. The Venna and Niranjanais an important tributary of the Krishna which dominates the drainage system of the taluka which passes through northward direction and intersected by various roads and passes through the east-west direction of the region, and the Koyana dam streams intersected by the Kandati and Sindhi small villages. The Kahaner dam intersected the Medha region and Mahu-Hatgehrghar dam intersected the Karahar region.

OBJECTIVE:

To know, the existing pattern of irrigation and changes therein.

METHODOLGY:

The essential primary data collected to investigate the irrigation and its impact on cultivated area at micro level the main body of the data used in this study was collected from direct contact and discussion with the Class I and Class II officers, taluka office, Panchayatsamitee Agriculture office of Jawalitaluka for collecting data.

The essential secondary data were collected from published and unpublished report and socio-economic abstracts of JawaliTaluka.

IRRIGATION PATTERN:

The success of agriculture depends upon wise use of irrigation water, irrigation plays very significant role particularly in the areas where rainfall is low and uncertain. In Jawalitaluka Government policies have encouraged to utilize the surface and ground water resources by providing financial assistance and subsidies, many cooperative societies emerged and formed dense network of lift, drip as well as sprinkler irrigation.

The sources of irrigation in the study region largely affected by the physical features such as topography, water, geology means structure of rocks, soils and presence of ground water etc. The physical feature of Jaoli is not suitable for lift irrigation. The lift irrigation widely spread in the Venna and Niranjana river basins. The lift irrigation is on co-operative basis. The well and tank irrigation found in eastern part of study area.

Table No. 1
JAWALI TALUKA IRRIGATION AREA IN DIFFERENT SOURCE

Source	Area in Hector	Total In Percentage
Canals, Tanks and Others	170230	43
Wells	225415	57
Total	395645	100

*Source: - Socio economic data Satara District-2010-11.

The table shows Canal, Tank and other irrigation area in Jawalitaluka is 17, 0,230 hector and it is a 43 percent in total irrigation. Well irrigation is 22, 54,415 hector and it is a 57 percent in total irrigation.

Other sources of irrigation consisting rainfall and moisture in the air where there is no chance to

get water from canal or lift irrigation, even though well is not possible in such area rain is one and only source of irrigation in the study area. These areas can be bringing under lift irrigation.

CONCLUSION:

The region is characterized by different physical features which have affected the methods and development of irrigation. It is observed that the percentage of area under irrigation has increased about hector during last 10 years.

This mainly because of development in lift irrigation and various major and minor irrigation project of the Govt. The two main river basins are suitable for canal and lift irrigation. Whereas eastern, western and some part of central region in the favors of well irrigation. However eastern and some portion of central part is cultivated have scarcity of irrigation. The whole study region depends for its water need on southwest monsoon which is irregular both in space and time.

SUGGESTIONS:

In this context some suggestions for improving irrigated farming and agricultural productivity have been made. They are as follows:

- 1)The farmers in canal irrigated area use excess water for crops. If the farmers in these areas guided properly and convinced them significances of judicious use of water, the problems would be controlled to some extent.
- 2)The farmers make use of traditional methods of irrigation such as flood, border methods in which water is wasted; therefore they should be trained to use scientific methods of irrigation, viz. drip, sprinkler and micro sprinkler etc. to save water which would help to irrigate additional land.
- 3)The percentage of degraded land is greater in the ill drained region. Therefore it is essential to improve vertical and horizontal drainage system in order to check the extension of the waste land.
- 4)The surplus water should be diverted to the rivers.

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