

**“CHANGING CROPPING PATTERN OF KAVHE VILLAGE IN MADHA  
TAHSIL OF SOLAPUR DISTRICT”**

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**ABSTRACT:**

Canal irrigation has been practiced in one form or other in the arid, semi arid and in drought prone area. Madha tahsil is located in drought prone area of Maharashtra. The canal construction is an art and science of artificial application of water to agriculture and different types of uses (industrial use, drinking water etc.) to develop and increase in agriculture production. In India there are many canal constructed to solve the irrigation problem in arid, semi arid and in drought prone area. The Bhima Sina River joint canal started at Kandalgaon (near Ujani Dam) and meets to Sina River near Kavhegaon in Madha tahsil. The construction of canal was started in 1994-95 and completed in 2003. Cropping pattern is the acreage distribution of different crops in any one year in a particular farm. It is the pattern of crops for given piece of land or cropping pattern means the proportion of an area under various crops at a point of time in a unit area or it indicates the yearly sequence and spatial arrangements of crops and follows in an area.

The present paper analyzes the impact of Bhima- Sina joint canal on changing cropping pattern of Kavhe village in Madha tahsil of Solapur district. It shows that the changing cropping pattern due to the availability of such an irrigation sources. Irrigation is the single most important factor which changes the cropping pattern of area or region.

**Key words:** Cropping Pattern, Irrigation resource - Bhima- Sina Joint Canal.

**Introduction:**

In India, the rivers that are proposed to be linked with each other, work on many of them has been started. Some of the main projects are such as Mahanadi has to be linked with Godawari & the river Inchampalli is to be linked with Nagarjun Sagar & Pulichintala. Somasila River is to be linked with Nagarjun Sagar & Grand Anicut Link. To Link of Penar River to Almati & Siriselam, to link Yamuna river with Sharda & Rajasthan & Rajasthan is to be linked with Sabarmati. Similarly Son bairaj is to be linked with Chunar & Ganges in the South, to link Ganges River to Damodar River & Swarn Rekha River to Mahanadi. Like that the Bhima River is link to the sina river tunnel canal in Solapur district of Maharashtra.

Canal irrigation has been practiced in one form or other in the

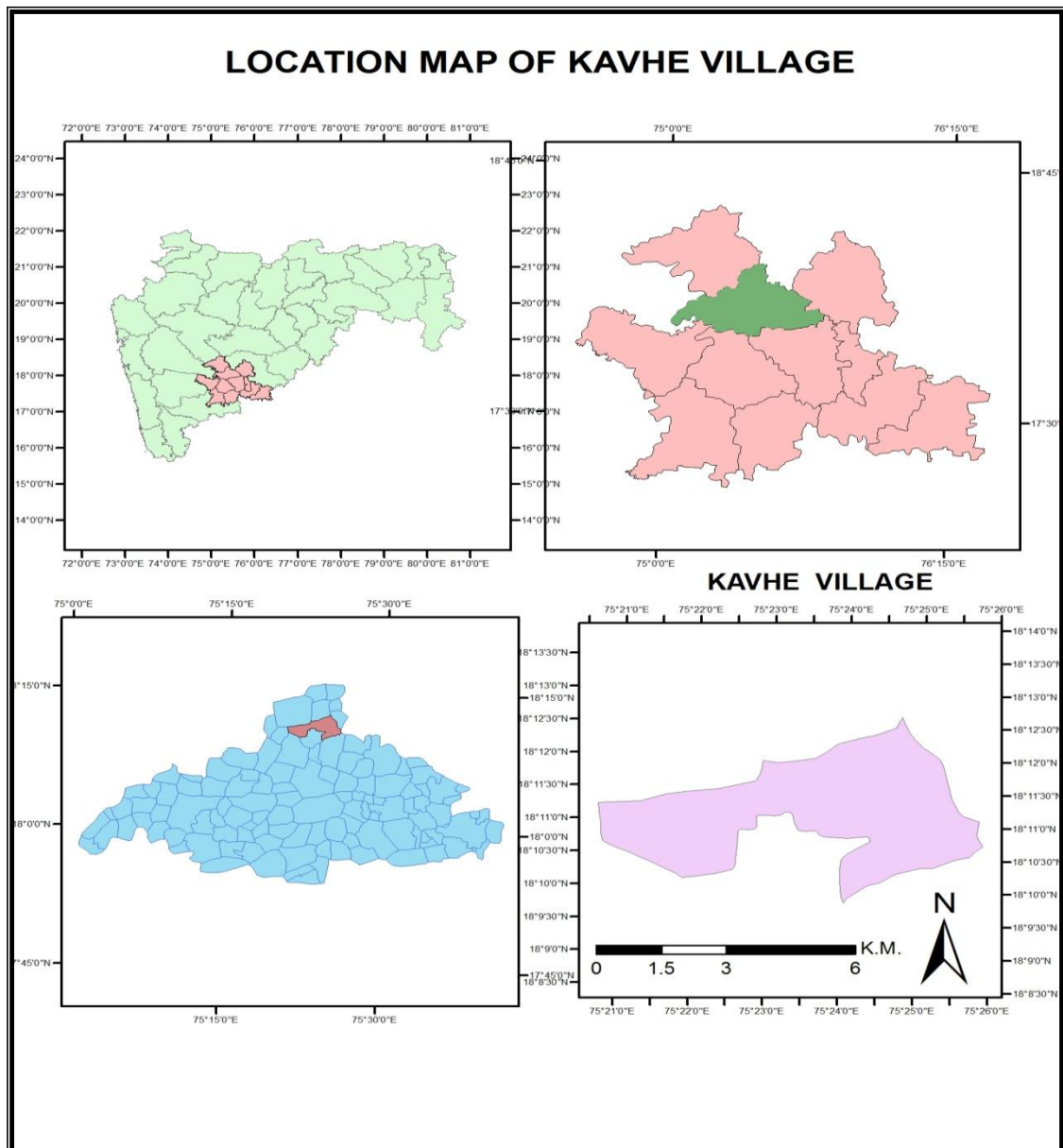
arid, semi arid and in drought prone area. Madha tahsil is located in drought prone area of Maharashtra. In India there are many canals constructed to solve the irrigation problem in arid, semi arid and in drought prone area. The Bhima Sina River joint canal started at Kandalgaon (near Ujani Dam) and meets to Sina River near Kavhe gaon in Madha tahsil. The construction of canal was started in 1994-95 and completed in 2003. Due to this canal, the area under irrigation is increasing in Solapur district and its impact shows the development of socio-cultural and economic growth in Solapur district. The area under irrigation is increasing in Madha, Barshi, Mohol, North Solapur and South Solapur Tahsils.

Cropping pattern is an area under various crops at a point of it changes over space and time. The cropping pattern of a region is closely influenced by the geo-climatic, socio-economic, historical and political factors. Patterns of crop land use of region are influenced of physical and human environment.

#### Study Area:

The Village Kavhe lies in North part of Madha Tahshil of

Solapur District. This village is located on the right bank of Sina River and on the border of the Paranda Tahsil of Osmanabad district and Madha . The village lies in the drought prone area of Maharashtra. Absolute location of village is  $18^{\circ} 30' 45''$  North latitude and  $75^{\circ} 45' 15''$  East longitudes. The geographical area of village is 6210 hectares. The village has hot and dry climate, with an average annual rainfall of 525.84 mm.



**Fig.1 Location of Kavhe village.**

**Objectives:**

1. To study cropping pattern of village Kavhe before construction of Bhima-Sina river joint canal.
2. To study changing cropping pattern of village Kavhe after construction of Bhima-Sina river joint canal.

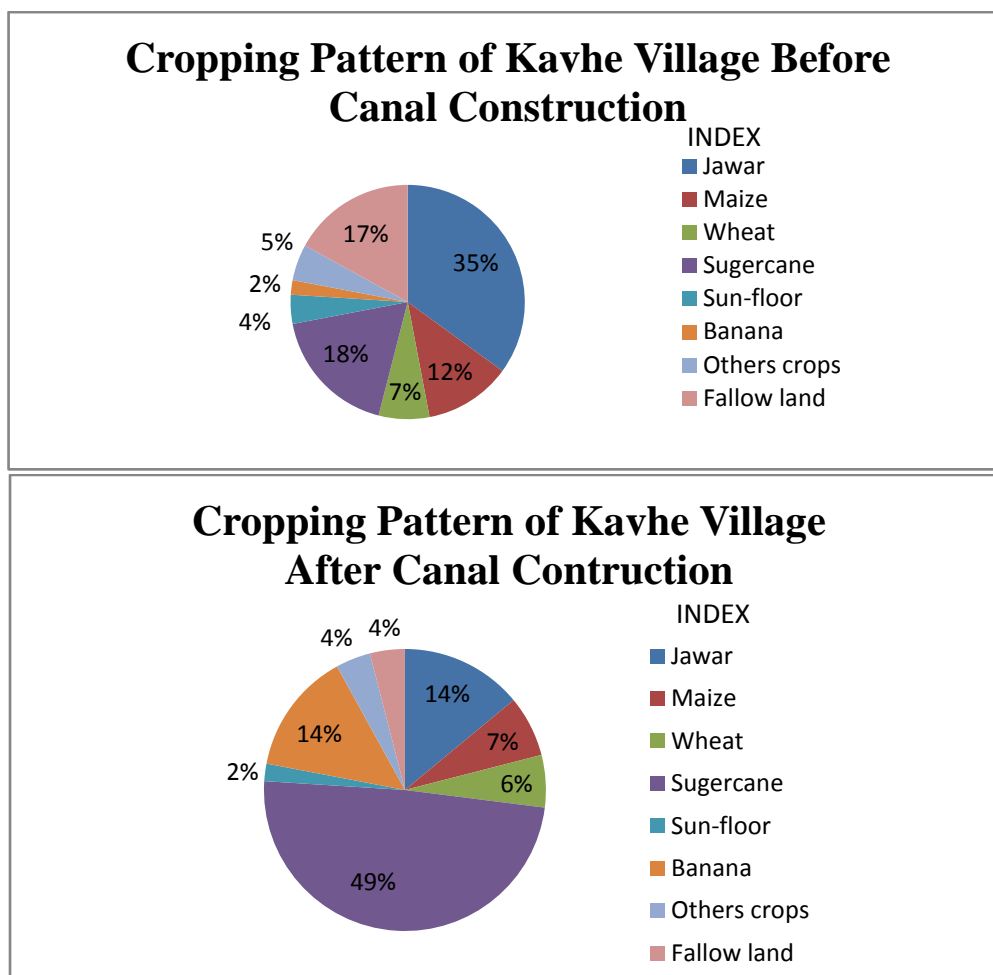
**Data collection & Methodology:**

Present study based on the secondary data. Data is collected from Panchayat Samiti Office Kurduwadi and also from Grampanchayat office Kahve, Tal-

Madha, Dist- Solapur. The period of data collection is 5 years before the construction of Bhima –Sina joint canal i.e. 1997-98 to 2002-03, and 5 years after construction of canal i.e. 2003-04 to 2008-09. The average area under various crops in Kavhe village has been considered for the comparison of changing cropping pattern. The suitable cartographic technique was adopted to depict diagram to find out variation of cropping pattern in above period in village Kavhe.

**Table 1. Distribution of under crops area in study region.**

Sr. No.	Name of Crops	Average under crops Percentage (before construction)	Area in (%) canal	Average under crops Percentage (after construction)	Area in (%) canal	Change
1	Jawar	35	2173	14	869	-21
2	Maize	12	745	7	434	-5
3	Wheat	7	434	6	373	-1
4	Sugercane	17	1057	49	3043	31
5	Sun-floor	4	248	2	124	-2
6	Banana	3	186	14	869	12
7	Others crops	5	310	4	249	-1
8	Fallow land	17	1057	4	249	-13
	Total area	100 (%)	6210	100 (%)	6210	



**Fig.2 Cropping pattern of Kavhe village before and after Bhima-Sina joint canal construction.**

#### **Data Interpretation:**

The above table and diagram shows that the after construction of Bhima-Sina River joint canal cropping pattern of Kavhe village has been changed. Before the canal construction i.e. the year 1997-2003 cropping pattern of Kavhe village shows that different subsistence crops were taken out. The Jawar was the major crops it cover the 35% area of the village. Sugercane crop is the second highest crop at that time and it covers the 17% area. The other crops, Banana, Sunfloor, Maize and Wheat contributes the 5%, 3%, 4%, 12%, and 7% area

respectively. Most of these crops are dependent on Indian Monsoon.

After the Bhima-Sina river joint canal the cropping pattern of Kavhe village has been changed. The data shows that the most of cash crops area has been increased because of availability of irrigation resource. The period 2003-04 to 2008-09 shows that after canal construction Sugercane occupies 49%, Banana 14% etc. cash crops area has been increased in Kavhe village. The Other crops, Sunfloor, Maize, Jawar and Wheat contributes the 4%, 2%, 7%, 14%, and 6% area respectively. Jawar crops reduced 21% area after the canal construction. The

fallow land area also change, the fallow land area decreased up to 4% after the canal construction.

**Conclusion:**

The present paper concludes that the Cropping pattern of Kavhe village has been changed because of Bhima-Sina river joint canal. Irrigation

is the single most important factor which changes the cropping pattern of area or region. The area under Jawar has been decreased and area under Sugercane has been increased in study region. Minor changes are observed in Wheat, Sunflower and other crops area. There is major change found in fallow land and it is observed upto 13%.

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