Vol II Issue VI Dec 2012

Impact Factor : 0.1870

ISSN No :2231-5063

Monthly Multidisciplinary Research Journal

Golden Research Thoughts

IMPACT FACTOR : 0.2105

Welcome to ISRJ

RNI MAHMUL/2011/38595 **ISSN No.2230-7850**

Indian Streams Research Journal is a multidisciplinary research journal, published monthly in English, Hindi & Marathi Language. All research papers submitted to the journal will be double - blind peer reviewed referred by members of the editorial Board readers will include investigator in universities, research institutes government and industry with research interest in the general subjects.

International Advisory Board

Editorial Board

Address:-Ashok Yakkaldevi 258/34, Raviwar Peth, Solapur - 413 005 Maharashtra, India
Cell : 9595 359 435, Ph No: 02172372010 Email: ayisrj@yahoo.in Website: www.isrj.net

Golden Research Thoughts
Volume 2, Issue. 6, Dec. 2012
ISSN:-2231-5063
Available online at www.aygrt.net

ORIGINAL ARTICLE

"A STUDY OF IRRIGATION AND AGRICULTURE IN KINHIPAI VILLAGE OF BEED TAHSIL"

H.N. REDE

Head dept. Of Geography,
S.C.S.College, Omerga.Tq. Omerga dist. Osmanabad.

Abstract:

Irrigation is essentially the artificial application of water to overcome deficiencies in rainfall for growing crops (cantor 167). It encourages the farmer to adopt scientific techniques and go for more intensive cropping there by creating new opportunities for gainful employment. The purpose of this article is to highlight the changes in agriculture in the context of irrigation at micro level during 1998-99 and 2010-11. Wells and canal are the sources of irrigation in the village of which 18.14% and 3.10% of cultivated area is irrigated by wells and canal respectively. It is noticed that the net sown area which is increased by 1.30% during the period of investigation. Out of the total cropped area, about 80.61% of cultivated area was under food crops in 1998-99, as against 75.97% in the year 2010-11 most of the cultivated land is occupied by cash crops. The percentage of cropped area under jowar has decreased in the village. Whereas cultivated area under wheat, sugarcane and gram are registered increase in the period under study. Among the cereal crops wheat and jowar are most important irrigated crops, which share 24.88% and 29.40% of cultivated area respectively. There is marked tremendous change in per hectare yield of crops. whereas per hectare yield of jowar was marked 975 kg, wheat 1054 kg, Bajara 491 kg, gram 42 kg, in 1998-99 as against 1401 kg/hect, 1675 kg/hect, 675 kg/ hect, 533 kg/hect respectively in the year 2010-11.

KEYWORDS:

Irrigation, drought condition ,agricultural transformation, cash crops, crop yield and production.

OBJECTIVE :

The specific objective of the present paper is to evaluate the overall impact of irrigation on agricultural land use and output of crops.

HYPOTHESIS :-

In the light of the above objective following hypothesis are formulated and proposed to be tasted.
i) Irrigation leads to take multiple cropping and hence intersity of cropping increases.
ii) Per hectare gross value of output in irrigated land is more than that of un irrigated land.

DATABASE AND METHODOLOGY :-

The work is based on primary sources of data, collected for the period 1998-99 and 2010-11. The existing land use of the village is recorded on the outline cadastral map, obtained from the village talathi office. The primary data is the raw data, collected through different sources, for which special questionnaires was designed. Through intensive field work. the interview of the farmers and other relevant persons were conducted to generate data, relating to irrigation and cropping pattern etc. During the survey

Title:"A STUDY OF IRRIGATION AND AGRICULTURE IN KINHIPAI VILLAGE OF BEED TAHSIL"
Source:Golden Research Thoughts [2231-5063] H.N. REDE yr:2012 vol:2 iss:6.

exhaustive field notes were also prepared which have been plot to plot study was considered as essential. Since it acts a supplement to and check up on the broad picture of general discussion. The collected data was processed and organized in the table form and represented through cartographic techniques.

INTRODUCTION :-

Irrigation is the most important instrument of the development of agriculture. The agriculture of different regions and countries in the world. Enjoying high productivities in different crops are found to be mainly depended on irrigation. In the earlier times, when there was no pressure of population, water flowing in the rivers, supported by the rainfall, was adequate to meet the needs of human life and for cultivation of the required crops as the pressure of population increased and standard of living of human being raised. Necessarily of increased water resources has been felt. This led to the concept of storing water through the construction of dams and using it through a canal system in other season.

Development in India is synonymous rural development because more than 65% of its population live rural areas, whose livelihood is mainly, depend on agriculture and its concerned activities. But more than 82% of cultivated land is depend on rain. Which is erratic in nature. Agriculture is become always viticm of this nature of rain. Therefore there is no consistence in agricultural production. Acceleration of agricultural production and productivity has become the primary objective to meet the increasing demands both food and employment of the population and also boost the national economy basis for realizing this full potential of agriculture and sustained basis for releasing this full potential of agriculture. Water is the most critical input and efforts to harness it in the form of irrigation are being done extensively, both by the central and state government of India.

STUDY AREA :-

The village Kinhipai lies in transition zone. This zone is confined only western part of Bindusara river. The rainfall in this zone is 670 m.m. to 740 m.m. annually which is well distributed physical factors of the village have influenced the irrigation facilities and method of irrigation.

RESULT AND DISCUSSION :-

Land use pattern is significantly in influenced by irrigation facilities. Irrigation permits intensive use of land and there by increased the gross cropped area. It brings more area under cultivation and it is also possible to cultivate double or multiple crops during year, which enhances double cropped area.

Table-1 cropping pattern of Kanhipai Village from 1998-99 & 2010-11. (Area in %)

Year	Crops														
	Rice	Jowar	Wheat	Bajara	Other cereal	Total cereal	Total pulses	Total food grain	Sugar cane	Con.3 spices	Fruit vege	Total food crops	Oil sec.	Cotton	Food
1998-99	1.11	50.10	3.95	10.11	1.00	66.27	2.03	68.70	4.23	5.10	2.98	80.61	7.30	10.75	1.34
2010-11	1.89	24.49	8.18	24.59	0.30	59.05	0.30	59.35	6.13	6.50	3.99	75.97	13.61	9.20	0.31
volume of change	0.78	-25.61	4.23	14.48	-0.70	-1.71	-1.73	-2.44	1.90	1.40	1.01	-4.64	6.31	-1.55	-1.03

Source :- Based on field Work.

The village cropping pattern is presented in table-1 it reveals that out of the total cropped area about 80.61% of cultivated area was under food crops at Kinhipai village in 1998-99 as compared to the figure of 2010-11, it was registered 75.97% it means that there was marked 4.64% decrease in cultivated land under food crops during the period of investigation. In food grains major share is of jowar and bajara, occupying 49.08% of total cropped area (2010-11) and remaining 10.67% is under rice, wheat other cereals and pulses. Jowar (50.10%) ranks first all cereal crops in 1998-99 as against bajara (24.59%) in the year 2010-11. The share of wheat (3.95%) rice (1.11%) and other cereals (1.00%) only 19.39% cropped area was under non food crops out of which 7.30% was under oil seeds. Change in cropping pattern is noticed in 1998-99 to 2010-11. The percentage of cropped area under Jowr has decreased (25.61%) in the village, whereas the proportion of cultivated area under Bajara, Sugarcane, wheat etc are observed increased between 1998-99 and 2010-11. This change has resulted due to availability of irrigation facilities

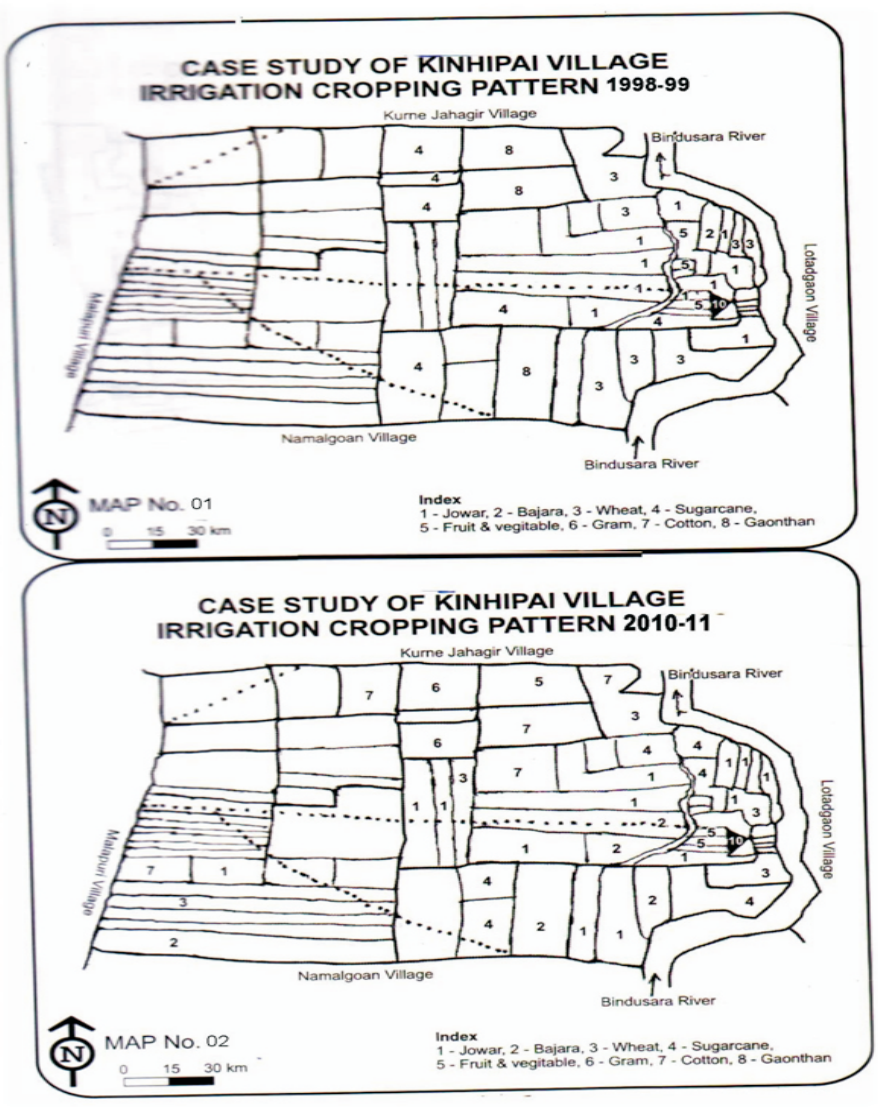
(map.1&2)

Table-2 Irrigated cropping Pattern of Kinhipai Village (Area in %)

Year	Crops										
	Rice	Wheat	Jowar	Bajara	Other cereal	Gram	Other pulses	Sugar cane	Con.2 & Spices	Fruit Vege.	Cotton
1998-99	0.70	18.39	30.10	15.40	3.65	2.56	1.20	7.10	10.15	6.10	4.65
2010-11	0.04	24.88	29.40	17.34	4.28	2.92	1.14	10.40	4.72	1.50	3.38
Volume of Change in %	-0.66	+6.4	-0.70	+1.94	+0.63	+0.36	-0.06	+3.3	-5.443	-4.60	-1.27

Source : Based on Fieldwork.

Table-2 indicate that sugarcane is the most important irrigated case crop (map.1&2) in the village, which is occupied 10.40% of total irrigated area of village in 2010-11. There is recorded 3.30% of increase in irrigated area during the period of investigation. Among cereal crops wheat and jowar are most important irrigated crops, which share 24.88% and 29.40% of irrigated area respectively in the year 2010-11 (fig.2) besides above crops, Bajara, Gram, Fruit and Vegetable etc. crops are grown with the help of irrigation.



Crops Yields :-

Crops yield associated with the improvement in irrigation facilities and use of optimum quantities of fertilizers have lead to increase crops yield.

Table-3 Volume of Change in Crop Yield in Kinhipai village *(yield kg/hectare)*

Year	Crops										
	Rice	Wheat	Jowar	Bajara	Other cereal	Gram	Other pulses	Sugar cane	Con.2 & Spices	Fruit Vege.	Cotton
1998-99	630	1054	975	491	592	429	569	6645533	540	300	126
2010-11	375	1675	1401	675	600	533	610	6900000	632	550	198
Volume of Change in %	-2.55	621	426	216	92	104	41	254467	92	250	72

Source : Based on Filed work. (Production of cotton 'oo'gathi) 1-Gathi-170 Kg)

Irrigation has vital role in yield/hectare of crops in any region. Irrigation ensures stability in yields it leads to a higher yield in both types of technology. Its role in the new technology is well known as it act as catalyst in the seed. Fertilizer irrigation package. The per hectare yield of the rice was 630 kg. in 1998-66, decreasing upto 375 kg in 2010-11, when the district average is 450 kg/hectare, however the districts averaged is 450 kg/hectare. The yield of wheat increased from 1054 kg to 1675 kg per hectare, however the district average during the period has 1050 kg/ hectare same period the yield of jowar in the village ranges from 975 kg to 1401 kg per hectare yield of pulses is also found have to increase. Per hectare yield of sugarcane is found increase during the period of investigation. Per hectare of cotton in 1998-99 was 21420 kg and increased up to 33600 kg in 2010-11.

The average yield of principal crops have increased during the last thirteen years. This has been due to an increase in irrigation facilities in the village.

CONCLUSION :-

The entire cropping pattern seems to be controlled by agro-climatic condition. However the advent of irrigation has changed the cropping pattern. The percentage of area under wheat and Bajara has increased But area under Jowar rice and othe cereal etc. has decreased. Jowar ranks first in the irrigated cropping pattern followed by wheat, bajara etc. The area under sugarcane cultivation also shows increasing trend. The yield of wheat, Jowar, cotton and sugarcane have increased with the development of irrigation facilities. Therefore it can be concluded that the development of agriculture in the village is commensurate with development of irrigation.

REFERENCES :-

1) Ali, Mohamad (1978)- Studies in Agricultural Geography, Rajesh Publication, New Delhi, pp 73-80.
2) Ahmed, E. (1971-72)- Geography of Irrigation in India Geographical outlook, vol- VIII pp. 9-12.
3) Bhat, L.S. (1975)- A micro-Level planning-A case study of Karnal. Indial Statistical Institute New Delhi.
4) Census of India (1991)- Part XII A and B village and Town directory village and town wise primary census Abstract of Beed District.