ISBN : 978-81930943-0-3

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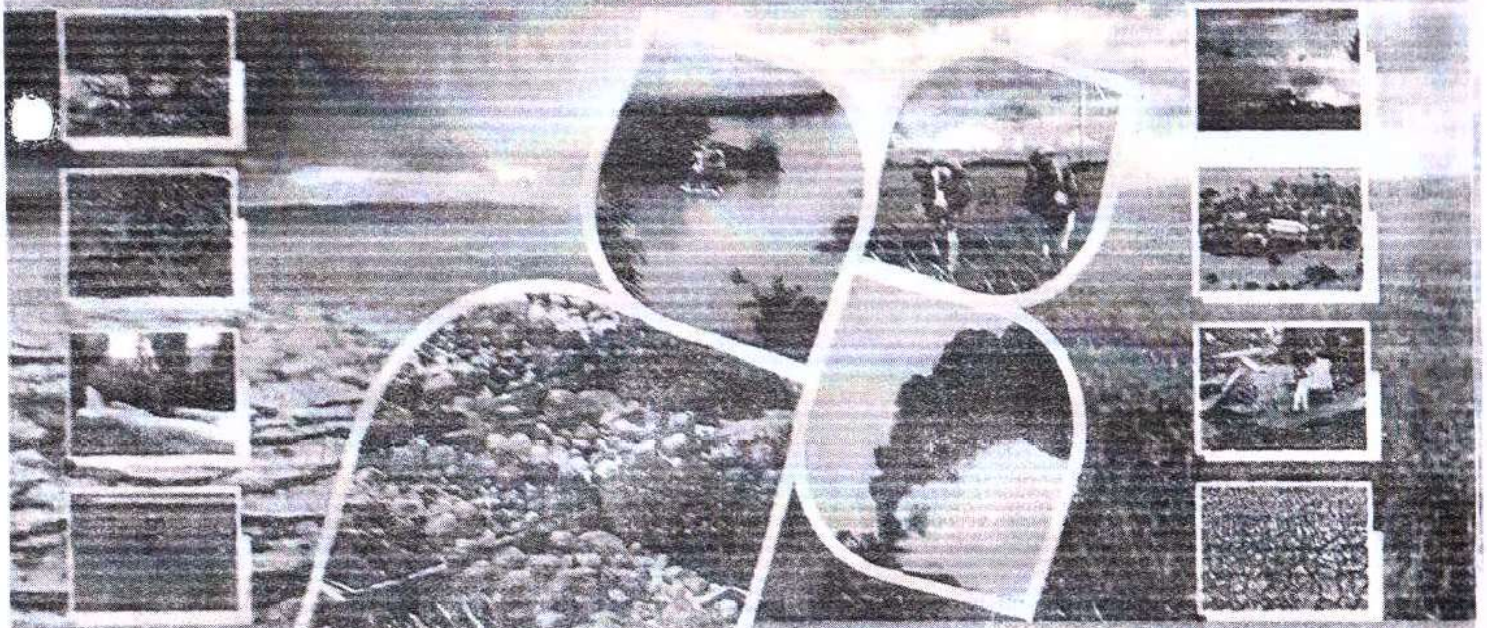

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NATIONAL CONFERENCE ON

"ENVIRONMENTAL ISSUES OF AGRICULTURE DEVELOPMENT IN INDIA"

11th & 12th August, 2016

Editor,

Dr. Arun B. Patil

Organized by

Department of Geography

ARTS & COMMERCE COLLEGE, ASTHA

In Association with

Shivaji Vidyapeeth Bhoogol Shikshak Sangh, Kolhapur.

ISBN 978-81-930943-0-3

INDEX

AN ANALYTICAL STUDY OF AGRICULTURAL TRANSFORMATION IN KOLHAPUR DISTRICT

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ABSTRACT

India is country, which have an agrarian economy. Agriculture, therefore, became a backbone of India's economy. But since independence, particularly after the first green revolution, agriculture sector in India has enormous change, cropping pattern of many regions of India also changed accordingly. This research paper tries to throw a light on this issue, with the study of agricultural transformation in Kolhapur district particularly in the last decade. Only secondary source of data has been considered for last 14 years (i.e. 2001 to 2014) for this study. The commercial crop of sugarcane impacted the agricultural landuse of the district. The transformation in sugarcane is +1.90 per cent, while in the other hand transformation in cereals is -2.24 per cent in the study period. This transformation has take place due to the increasing irrigation, communication, transport and market facilities. This agricultural transformation has also impacted on the cropping intensity in the Kolhapur district.

Keywords : Agriculture, Landuse, Transformation, Cropping Pattern, Crop Intensity

Introduction

Agriculture plays a vital role in India's economy. Over 58 per cent of the rural households depend on agriculture as their principal means of livelihood, while 70 per cent population is directly or indirectly depends upon agriculture for their survival. Agriculture, along with fisheries and forestry, is one of the largest contributors to the Gross Domestic Product (GDP) of India (IBEF, 2016). But since independence, with increasing advance means of agriculture, agriculture transformation takes place. Similarly, with increasing population crop intensity also starts increasing. Agricultural transformation is the process by which individual farms shift from highly diversified, subsistence-oriented production towards more specialized production oriented towards the market or other systems of exchange (Staatz, 1998). In this particular study, has attempted to study the agricultural transformation in the Kolhapur district during the last decade (i.e. 2001 to 2014).

Objective

The only objective of this paper is to analyse the agricultural transformation and crop intensity in the Kolhapur district during 2001 to 2014.

Database and Methodology

The present paper is entirely based on the secondary data, which is collected from the Socio-Economic Abstract of Kolhapur district of 2001 and 2014. The simple techniques like percentage, average are used for analyse the agricultural landuse and cropping pattern. Some

cartographic techniques like choropleth map to understand decadal variation in crop intensity of Kolhapur district. Crop intensity is calculated with the help of following formula –

$$\text{Crop Intensity} = \frac{\text{Gross Cropped Area}}{\text{Net Sown Area}} \times 100$$

Study Area

The area undertaken for the present paper is Kolhapur district, which situated in the extreme southern part of Maharashtra state. It lies between 15° 43' and 17° 17' north latitude and 73° 40' and 74° 42' east longitude. It surrounded by Sangli district to the north, Belgaum district (Karnataka State) to the east and south and Ratnagiri and Sindhudurg districts to the west. The Sahyadri ranges to the west and zigzag Warana River to the north form the natural boundaries.

Discussion

The discussion pertaining to main objective of this paper is as follows –

Agricultural Landuse Pattern in Kolhapur District

The agricultural landuse is depending upon many geographical aspects of the particular region, such as topography, climatic conditions, drainage pattern etc. Besides, some cultural aspects like irrigation, transport, communication, market, etc. are also affect agricultural landuse of that region. Accordingly in the following discussion, agricultural landuse and changes in the cropping pattern in Kolhapur district were studied for the 2001 to 2014.

Table 1 : Agricultural Transformation in Kolhapur District (2001 to 2014)

Cropping Pattern	2001		2014		Transformation
	Area	%	Area	%	
Cereals	177220	37.98	171531	35.74	-2.24
Pulses	27947	5.99	31390	6.54	+0.55
Sugarcane	96800	20.74	108669	22.64	+1.90
Spices	5534	1.19	5334	1.11	-0.08
Fruits	13012	2.79	17060	3.55	+0.76
Vegetables	5587	1.19	6138	1.28	+0.09
Fiber Crops	402	0.09	660	0.14	+0.05
Oilseeds	134042	28.72	134153	27.95	-0.77
Medicinal & Intoxicant Crops	5864	1.26	4537	0.95	-0.31
Other Non-Food Crops	238	0.05	459	0.10	+0.05
Gross Cropped Area	**466646**	**100.0**	**479931**	**100.0**	

Source : *Socio-Economic Abstracts of Kolhapur district in concern years*

In the year 2001, most of the cropped area was under the cereal crops (37.98%), besides commercial crops like oilseeds (28.72%) and sugarcane (20.74%) mostly dominated the cropping pattern of the district. Cropped area under pulses was only 5.99 per cent. Remaining crops like various spices, fruits and vegetable, fiber corps, medicinal and intoxicant crops and other non-food crops covered only small part of the total cropped area.

In the year 2014, the total scenario was almost same as considering the highest area covered by various corps, but some ups and downs were found in the area covered by them. As per the year 2001 in this year also most of the cropped area was under the cereal crops (35.74%), besides commercial crops like oilseeds (27.95%) and sugarcane (22.64%) mostly

dominated the cropping pattern of the district. Cropped area under pulses was only 6.54 per cent.

Agricultural Transformation

As per the above table (Table 1) it was clearly found that, most of the positive agricultural transformation found in the sugarcane crop (+1.90%), while on the other hand most negative transformation was found in the cereals crops (-2.24%). It means during the investigation period (i.e. 2001 to 2014) most of the area was shifted from the cereal crops to sugarcane. Apart from that some positive transformation was found in the crops like fruits (+0.76%), pulses (+0.55%), vegetables (+0.09%), fiber crops (+0.05%) and other non-food crops (+0.05%). While negative transformation found in the corps such as oilseeds (-0.77%), medicinal and intoxicant crops (-0.31%) and spices (-0.08%).

Intensity of Cropping

Intensity of cropping depends upon irrigation facilities, favourable climatic conditions, type of soil, etc. On the other hand, rising population and lack of irrigation facilities minimize the cropping intensity. In the following discussion tahsil-wise cropping intensity in the Kolhapur district was analysed.

Table 2 : Tahsil-wise Crop Intensity in Kolhapur District (2001 to 2014)

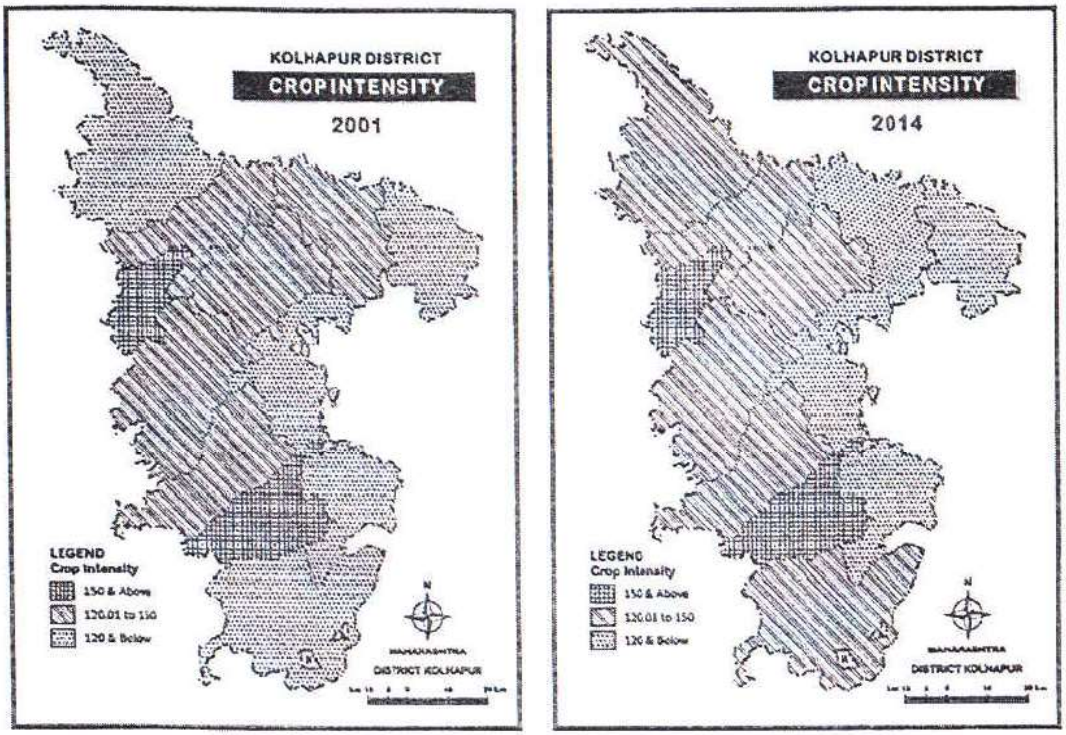
Sr. No.	Tahsil	Crop Intensity	
		2001	2014
1	Shahuwadi	118.04	131.21
2	Panhala	125.20	123.15
3	Hatkanangale	122.40	119.44
4	Shirol	116.63	113.37
5	Karvir	134.34	139.23
6	Gagan Bavada	243.05	204.47
7	Radhanagari	121.44	125.26
8	Kagal	116.49	114.42
9	Bhudargad	131.14	128.80
10	Ajara	167.56	168.86
11	Gadhinglaj	112.60	108.05
12	Chandgad	116.11	121.54
Kolhapur District		**126.85**	**126.06**

Source : Socio-Economic Abstracts of Kolhapur district in concern years

The overall cropping intensity was decreased from 126.85 per cent to 126.06 per cent during the period 2001 to 2014. In the year 2001, Gagan Bavada (243.05%) and Ajara (167.56%) tahsils have highest cropping intensity. Followed by Karvir (134.34%), Bhudargad (131.14%), Panhala (125.20%), Hatkanangale (122.40%) and Radhanagari (121.44%) have medium cropping intensity. Remaining tahsils like Shahuwadi (118.04%), Shirol (116.63%), Kagal (116.49%), Chandgad (116.11%) and Gadhinglaj (112.60%) have lowest cropping intensity as compare to other tahsils.

In the year 2014, except some changes the trends in the cropping pattern was almost same. Again Gagan Bavada (204.47%) and Ajara (168.86%) tahsils have maximum crop intensity in the year 2014. Besides, Karvir (139.23%), Shahuwadi (131.21%), Bhudargad (128.80%), Radhanagari (125.26%), Panhala (123.15%) and Chandgad (121.54%) have

moderate crop intensity. The lowest crop intensity found in the Hatkanagale (119.44%), Kagal (114.42%), Shirol (113.37%) and Gadhinglaj (108.05%) tahsils.



Concluding Remark

The advance facilities like irrigation, transport, communication, market are the main causes behind the agricultural transformation in the Kolhapur district. Apart the advanced and modern agricultural means and tools also affected the cropping pattern as well as crop intensity in the Kolhapur district. The cropping pattern of the district has transforms towards the commercial crops such sugarcane, and therefore the cropped area under food crops is continuously decreasing. Hence, the district needs to adaption of decentralisation of cropping pattern, increasing crop intensity, aforestation, etc. to maintain and restore the agricultural balance and avoid major agricultural problems in upcoming period.

References

1. Government of Maharashtra (2001), *District Socio-Economic Review of Kolhapur District – 2001*, Directorate of Economics and Statistics, Planning Department Maharashtra
2. Government of Maharashtra (2014), *District Socio-Economic Review of Kolhapur District – 2014*, Directorate of Economics and Statistics, Planning Department Maharashtra
3. India Brand Equity Foundation (2016), "Indian Agriculture Industry : An Overview", retrieved from www.ibef.org on July 2016
4. Khusro, A. M. (1969), *Agricultural Transformation in India*, Hyderabad : Allied publishers
5. Staatz, John M. (1998), "What is Agricultural Transformation?", *Agricultural, Food, and Resource Economics*, Michigan State University