

Agricultural Transformation in Drought Prone Region : A Case Study of Jat Tahsil in Sangli District

Dr. Sachin Hudale

Assistant Professor & Head

Department of Geography

Yashwantrao Chavan Arts and Commerce College, Islampur

sachinhudale@gmail.com

Ph. No. 8308538769

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 Sangli district particularly in the drought prone region like Jat tahsil. Only secondary source of data has been considered for almost last 50 years (i.e. 1964-65 to 2013-14) for this study. A major transformation is found in the production of cereals in the tahsil. The transformation in cereals is -23.71 per cent, while in the other hand transformation in non food crops is +28.01 per cent. This transformation has take place due to the less rainfall as well as lack of irrigation facilities. This agricultural transformation has also impacted on the cropping intensity in this drought prone area.

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. In context to the drought prone region agricultural changes also take place, with increasing crop intensity, but the impact of drought is also found in these particular regions. 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 drought prone region in Sangli district during almost last fifty years (i.e. 1964-65 to 2013-14).

Objective

The only objective of this paper is to analyse the agricultural transformation and crop intensity in the drought prone region in Sangli district with the case study of Jat tahsil during 1964-65 to 2013-14.

Database and Methodology



The present paper is entirely based on the secondary data, which is collected from the Socio-Economic Abstract of Sangli district of 1964-65 and 2013-14. The simple techniques like percentage, average are used for analyse the agricultural landuse and cropping pattern. 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 Jat tahsil in Sangli district, which situated in the extreme eastern part of Sangli district, and experiencing worst drought condition every year. Hence, this tahsil is considered as drought prone region for present study. Jat tahsil lies on 17.05 N latitude and 75.20 E longitude, and surrounded by Karnataka state to the east and south, Kavathemahankal tahsil to the west and Solapur district to the north.

Discussion

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 Jat tahsil of Sangli district is studied for the 1964-65 to 2013-14.

Agricultural Landuse Pattern

The agricultural landuse pattern and transformation in landuse from 1964-65 to 2013-14 of Jat tahsil as follows -

Table 1 : Agricultural Transformation in Jat Tahsil

| Cropping Pattern | Jat Tahsil | | | | |
|---------------------------|---------------|---------------|---------------|---------------|-----------------|
| | 1964-65 | | 2013-14 | | Trans-formation |
| | Area | % | Area | % | |
| Cereals | 124279 | 76.38 | 111981 | 52.67 | -23.71 |
| Pulses | 13481 | 8.28 | 12392 | 5.83 | -2.45 |
| Sugarcane | 374 | 0.23 | 1560 | 0.73 | 0.5 |
| Spices | 914 | 0.56 | 556 | 0.26 | -0.3 |
| Fruits & Vegetables | 915 | 0.56 | 5332 | 2.51 | 1.95 |
| Fibres | 2305 | 1.42 | 1959 | 0.92 | -0.5 |
| Oilseeds | 17424 | 10.71 | 15409 | 7.25 | -3.46 |
| Drug and Narcotics | 81 | 0.05 | 0 | 0.00 | -0.05 |
| Other Non Food Crops | 2947 | 1.81 | 63404 | 29.82 | 28.01 |
| Gross Cropped Area | 162720 | 100.00 | 212593 | 100.00 | |

Source : Socio-Economic Abstract of Sangli District of Concern Years

In the year 1964-65, most of the cropped area was under the cereal crops (76.38%), after that commercial crop like oilseeds (10.71%) are mostly dominated crops in the cropping pattern of the Jat tahsil. Cropped area under pulses was only 8.28 per cent. Remaining crops like various spices, fruits and vegetable, fibre crops, drug and narcotics crops and other non-food crops covered only small part of the total cropped area.

In the year 2013-14, the area covered by cereals is remain highest with 52.67 per cent. but there is very excessive increase found in the area under the non food crops (29.82%). Afterward some ups and downs were found in the area covered by remaining crops.

Agricultural Transformation

As per the above table (Table 1) it was clearly found that, most of the negative agricultural transformation found in the cereals crop (-23.71%), while on the other hand most positive transformation was found in the non food crops (+28.01%). It means during the investigation period (i.e. 1964-65 to 2013-14) most of the area was shifted from the cereal crops to non-food crops especially fodder crops. Apart from that some positive transformation was found in the crops like sugarcane (+0.5%), fruits and vegetables (+1.95%). While negative transformation found in the crops such as pulses (-2.45%), spices (-0.3%), fibres (-0.5%), oilseeds (-3.46%), drug and narcotics crops (-0.05%).

Intensity of Cropping

Intensity of cropping of Jat tahsil were discussed and analysed in the following discussion.

Table 2 : Crop Intensity in Jat Tahsil (1964-65 to 2013-14)

| Tahsil | 1964-65 | | | 2013-14 | | |
|--------|---------------|--------------------|----------------|---------------|--------------------|----------------|
| | Net Sown Area | Gross Cropped Area | Crop Intensity | Net Sown Area | Gross Cropped Area | Crop Intensity |
| Jath | 160365 | 162720 | 101.47 | 188180 | 212593 | 112.97 |

Source : Socio-Economic Abstract of Sangli District of Concern Years

The overall cropping intensity in the Jat tahsil was increased from 101.47 per cent to 112.97 per cent during the investigation period including the area sown more than once.

Concluding Remark

It is clearly found that the agriculture landuse transform from cereal crops to non-food crops such as fodder crops. It is only due to the less rainfall, and lack of irrigation facilities. The area particularly lies in the drought prone area experiencing a severe drought almost every year. Apart from that lack of transport and communication, lack of modern agricultural means and tools also affected the cropping pattern. There is negligible change in area under sugarcane also associated with the lack of irrigation facilities and lack of rainfall. Crop intensity shows some increase but again the increase in the area of non-food crops such as fodder crops is the main reason behind it. It means, almost last fifty years these drought prone regions experiencing lack of planning and also deprivative by government.

References

1. Government of Maharashtra (2014), District Socio-Economic Review of Sangli District - 2014, Directorate of Economics and Statistics, Planning Department Maharashtra
2. Government of Maharashtra (1965), District Socio-Economic Review of Sangli District - 1964-65, 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