

In this investigation an attempt is made to examine the spatial variation in agricultural productivity of Satara district. The objectives are three fold, namely, to observe the physical and demographic elements that have shaped the agriculture of the region, to analyse the agricultural framework as a basis for assessing the agricultural productivity and to recon the imbalances in the agricultural productivity in the study area. From the preceding analysis the following conclusions have emerged.

The Satara district, one of the well watered and relatively developed part of state, is characterised by the variations in physical factors. It is divided into three physiographic units which have governed the agriculture of the region. The Krishna, Yerala, Nira and Man, the major rivers drain the entire region.

Climatically, the district is a part of the great monsoon land and the monsoon affects every aspects of our life. Though, the region is dominated by the monsoon regime, there are strong contrast between the climatic conditions of western and eastern parts. Temperature and sunshine are available throughout the year and provide ripening conditions of crops within the district. Weather conditions show local variations. The weather is cool and healthy in the hot season in the western part and chilly during the rainy season.

In Satara district highest rainfall is recorded (5000 mm) in western part at Mahabaleshwar and lowest below 500 mm in Khandala, Phaltan and Man talukas. The variability of rainfall increases with decreasing rainfall from the west to east and from south to north.

The western part of the region has laterite soil cover, which is generally infertile, usually covered by forest and poor in potash content. The brown medium and deep black soils have covered central-eastern and western parts of the district. These soils are usually infertile, fairly high in potash content, but poor in phosphorous. They have covered large area of the eastern and central parts. The medium and deep black soils are mainly found along the river valley which are fertile in phosphorous and potash content, but poor in nitrogen. These soils have considerable potentials for agricultural crops.

The demographic aspects are also responsible to some extent in influencing the agriculture. The cultivator constitute the maximum share in total farm workers and agricultural labours constitutes smaller share of the total farm workers. The operational land holdings by tenure system reveals that about 99 percent of the total holdings are wholly owned by cultivators and very insignificant land is under wholly rented. The size of operation holdings in general is small. The use of traditional implements is widespread, however, use of modern implements is confined more in canal irrigated tracts.

The special variation in the environmental and demographic setting have led to the regional imbalances in the development of irrigation facilities. As such it is evident that well irrigation sharing about 52.86 percent of total irrigated area is pre-dominant, particularly in the eastern part of the region. This is followed by canal irrigation (37.51 percent) in the north and south. The remaining irrigated area is shared by other sources, however, the dominance of individual sources varies spatially. About 23 percent net area sown is facilitated by irrigation in the region.

It is evident that landuse is strongly controlled by the environment. There are substantial variation in the area under different landuse categories in the western-central and eastern part of the region. In the west, due to the rugged relief and poor upland soils proportions of area under forest (13.86%) and land not available for cultivation (11.87%) is higher than the western part. The cultivated land of the region occupies 54.82% of the total geographical area which is significantly high in eastern part (> 70 percent) and low (< 50 percent) in the western part.

Although, the entire cropping pattern seems to be governed by agro-climatic conditions, irrigation has also played an important role in extent of cropping pattern (e.g. talukas of Karad and Phaltan). Jowar (35.63%) and Bajara (15.13%) the most drought resistance crops are dominant in the eastern

drier parts (Khatav and Man). By contrast rice and Nagali cultivation prevail in western heavy rainfall zone. The central zone relatively, well facilitated by irrigation and fertile soils are suitable for growing several crops. Among the irrigated crops total cereals shares about 58.20% area in which jowar (28.50%) is important followed by wheat (10.26%) and rice (10.76%).

Among the cash crops sugarcane is one of the important crop practised in Karad, Wai and Phaltan talukas. Whereas, groundnut is the major non-food crop reported in the Patan and Satara talukas. Cotton is practiced in eastern drought prone talukas, particularly in Phaltan, Man and Khatav where irrigation facilities are available.

The high intensity of cropping is recorded in central and eastern parts of the region, comprising Wai and Koregaon talukas. Whereas, Khandala and Man talukas have moderate intensity of cropping. By contrast the Phaltan, Khatav, Satara and Jaoli have noted low intensity of cropping.

It is evident that in the region ranking of crops varies. In first three ranking some cereals have joined. Jowar rank first in seven talukas namely Satara, Wai, Khandala, Koregaon, Phaltan, Karad and Jaoli. The picture becomes more complicated in fourth ranking, some cash crop and pulses have also joined.

The number of crops in the regions crops combination varies from 3 to 11. It is reflection of the variation in

physical and non-physical determinants of the region. It is also observed that number of crop involved in combination are low along Krishna Valley which goes on increasing towards east and west, where unpredictable rainfall and inadequate irrigation facilities prevail.

The agricultural productivity is an interplay of physical, economic and agricultural attributes. As such three zones can be identified on the basis of agricultural productivity. First, the western-southern zone which comprises 39.36% of cultivated area from talukas of Karad, Satara, Wai and Jaoli having high productivity of agriculture. This can be attributed to favourable environmental and cultural factors. The river Krishna and Koyana provide water for irrigation. The river basins have fertile alluvial soils rich in organic matters. Majority of farmers are conversant with recent developments in agriculture which have been adopted by them. Use of different machines and implements, farm operations and other inputs have been widely accepted.

The moderate level of productivity is confined in three talukas viz. Patan, Mahabaleshwar and Koregaon comprising 24.76% of total cultivated area. On the contrary, about 35.88% of total area has recorded low level of productivity from Khandala, Man, Phaltan and Khatav talukas. These are the 'weaker areas' which are characterised by relatively inadequate irrigation facilities and poor soils. Similar facts have come up through micro-level analysis. These taluks need to be considered as a first priority area for enhancing agricultural productivity in the region.