Original Resear	Volume - 13   Issue - 03   March - 2023   PRINT ISSN No. 2249 - 555X   DOI : 10.36106/ijar Economics
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Agriculture is the major source of food, fibre and raw materials essential to human life. Consequently agriculture has been ABSTRACT one of the basic occupations of man throughout the world. Interest in the economic aspects of production, distribution and economic policy relating to agriculture and to the use of farm products is therefore, worldwide. The principle of agriculture is that it deals with life, and with living substances. Its products are the results of processes of life and its means of production is the living soil. A cubic centimeter of fertile soil contains million of living organisms, the full exploration of which is far beyond the capacities of man. Man's management of the land must be primarily oriented towards four goals-health, beauty, permanence and productivity. Agricultural Cropping pattern means the proportional are wider different crops at a particular point of time. The cropping pattern of any region is the outcome along process of historical evaluation. In the present paper attempts to analysea the trends of cropping pattern and appraises the impact of cropping pattern on agricultural development in Andhra Pradesh.

**KEYWORDS**: Cropping Pattern, Agriculture Development, Andhra Pradesh

# **INTRODUCTION**

Agriculture still forms the backbone of Indian Economy. In spite of concerted efforts towards industrilisation in the last three decades, agriculture contributes a high share of net domestic product to Indian economy. Farmer's grow numerous crop in the field rather than single crop. The distributional pattern of crops in any region is an outcome of predominance of certain crop or combination of crops. Cropping pattern in the study region has undergone an evolutionary process. The soil and other natural environmental factors, along with the socioeconomic factors, affect the cropping pattern in the study area. Agriculture is the most fundamental activity of mankind. Agriculture refers to the art of raising plant from soil. It is carried out throughout the world. In many Asian Countries more than 60 per cent of population of depends upon agriculture. Even in industrialized Countries, agriculture is an important activity because it provides food crops like paddy and wheat, industrial raw materials like sugarcane and rubber and many other products. Population explosion necessitated an increase in food requirements. In order to meet the basic requirements, the government has planned to increase the irrigation facilities and the agricultural inputs.

Agricultural production is intimately related to the harnessing of favourable weather conditions during every cropping season. It is an established fact that crop yield is the integral result of a number of mutually interacting physical and physiological processes that take place during the crop growth period. The prevailing weather conditions along with soil and water management practices constitute the physical part of the process; whereas, the physiological aspect deals with the seed from germination to reproduction. Water plays an important role in influencing the physiological process and in most of the times, it conditions the growth of the plant depending upon its erratic behaviour. For proper planning of any crop, a better understanding of rainfall, which is the only source of moisture.

The concept of cropping system is as old as agriculture. Farmers preferred mixed cropping, especially under dry land conditions, to minimise the risk of total crop failure. Even in Vedas, there is a mention of first and second crops, indicating the existence of sequential cropping. A system is defined as a set of components that are interrelated and interact among themselves. A cropping system refers to a set of crop systems, making up the cropping activities of a farm system. Cropping system comprises all components required for the production of a particular crop and the interrelationships between them and environment. Creating the ideal root environment is an essential component of increasing crop yields.<sup>2</sup>

Agricultural Cropping pattern means the proportional are wider different crops at a particular point of time. The cropping pattern of any region is the outcome along process of historical evaluation. Cropping systems of a region are decided by and large, by a number of soil and climatic parameters which determine overall agro-ecological setting

for nourishment and appropriateness of a crop or set of crops for cultivation. Nevertheless, at farmers' level, potential productivity and monetary benefits act as guiding principles while opting for a particular crop/cropping system.3

## **GUIDING FACTORS FOR CROPPING PATTERN**

The choice of crop cultivation of farmer is guided by Physical, Social and Economic. Factors. Sometimes they cultivate a number of crops at their farms and rotate a particular crop combination over a period. NAEducation And Ca935But it is noteworthy that the best farming practices always followed by certain cropping patterns as well as cropping system for raising their productivity and also for maintaining the fertility of soil.4

### **CROPPING SYSTEM IN INDIA**

The Indian agriculture is decided by the soil types and climatic parameters which determine overall agro-ecological setting for nourishment and appropriateness of a crop or set of crops for cultivation. There are three distinct crop seasons in India, namely Kharif, Rabi and Zaid. The Kharif season started with Southwest Monsoon under which the cultivation of tropical crops such as rice, cotton, jute, jowar, bajra and tur are cultivated. The Rabi season starts with the onset of winter in October-November and ends in March-April. Zaid is a short duration summer cropping season beginning after harvesting of Rabi crops.

Agricultural diversification is considered to be the most appropriate strategy that augments growth, stabilizes farm income especially. of the small and marginal farmers, generates full employment, protects natural resources and attains the goals of food security. Such patterns of diversification have contributed towards attainment of food selfsufficiency in the country, increase in export earnings and employment opportunities, higher rate of agricultural growth, especially of cereals and better growth performance of regions that specialize in activities other than cereals. While area changes within the cropping sector are stated to have induced by favourable price structure, adoption of high yielding varieties. Technology, Mission Programme on oilseeds and a restrictive trade policy, a move towards horticultural crops and allied activities has got instigated by liberal external trade policies under the structural adjustment programme.

There are four cropping systems in India which is discussed below:

1. Rainy Season Cropping Systems: In this system of cropping, Rice, Sorghum, Pearl Millet (Bajra), Maize, Groundnut and Cotton are grown.

2. Winter Cropping Systems: In this system, wheat, barley and oats, sorghum and chickpea are grown.

3. Plantation and other commercial crops: Sugarcane, Tobacco, Potato, Jute, Tea, Coffee, Coconut, Rubber, Spices and condiments are

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#### important crops are grown in this system.

**4. Mixed Cropping:** In this system, pulses and some oilseeds are grown with maize, sorghum and pearl millet.<sup>5</sup>

The cropping patterns in India can be presented by taking the major crops into consideration as the base crop and all other possible alternative crops. It is very important to identify crops and their showing agro-climatic condition so that they can be categorized. For example, wheat, barley and oats, are taken as one category(Table 1). The regional distribution of crops in India are presented in Table 2

## Table 1 Food Grains and their required agro-climatic condition

Sl. No.	Food Grains	Agro-Climatic Condition		
1	Rice	Temperature: 22 -32 degree Celsius Rainfall: 150-300 cm Soil Type: Deep clayey and loamy soil		
2	Wheat	Temperature: 10-15 degree Celsius (Sowing time) Temperature: 21-26 degree Celsius (Ripening & Harvesting) Rainfall: 75-100 cm Soil Type: Well-drained fertile loamy and clayey loamy		
3	Millets	Temperature: 27-32 degree Celsius Rainfall: 50-100 cm Soil Type: They are less sensitive to soil deficiencies. They can be grown in inferior alluvial or loamy soil		
4	Grams	Temperature: 20-25 degree Celsius (Mild cool & Dry Climate) Rainfall: 40-45 cm Soil Type: Loamy Soil		
5	Sugar Cane	Temperature: 21-27 degree Celsius Rainfall: 75-150 cm Soil Type: Deep rich loamy soil		
6	Cotton	Temperature: 21-30 degree Celsius Rainfall: 50-100 cm Soil Type: Black soil of Deccan and Malwa Plateau. However, it also grows well in alluvial soils of the Sutluj-Ganga plain and red and laterite soils of the peninsular region		
7	Oilseeds	Temperature: 20-30 degree Celsius Rainfall: 50-75 cm Soil Type: Well drained light sandy loams, red, yellow and black soils are well suited for its cultivation.		
8	Tea	Temperature: 20-30 degree Celsius Rainfall: 150-300 cm Soil Type: Well drained, deep friable loamy soil.		
9	Coffee	Temperature: 15-28 degree Celsius Rainfall: 150-250 cm Soil Type: Well drained, deep friable loamy soil.		

Table 2 Regional distribution of crops in India

Cereals	Wheat	Uttar Pradesh, Punjab and Haryana	
	Cereals	Rice	West Bengal, Andhra Pradesh, Chhattisgarh and Tamil Nadu
		Gram	Madhya Pradesh and Tamil Nadu
		Barley	Maharashtra, Uttar Pradesh and Rajasthan
		Bajra	Maharashtra, Gujarat and Rajasthan
1 Ca Ci	Cash	Sugarcane	Uttar Pradesh and Maharashtra
	Crops	Рорру	Uttar Pradesh and Himachal Pradesh
2		Coconut	Kerala and Tamil Nadu
	0.1.0.1	Linseed	Madhya Pradesh and Uttar Pradesh
	Oil Seeds	Groundnut	Andhra Pradesh, Gujarat and Tamil Nadu
		Rape & Mustard	Rajasthan and Uttar Pradesh
		Sesame	Uttar Pradesh and Rajasthan
		Sunflower	Maharashtra and Karnataka

3	Fibre	Cotton	Maharashtra and Gujarat
	Crops	Jute	West Bengal and Bihar
		Silk	Karnataka and Kerala
		Hemp	Madhya Pradesh and Uttar Pradesh
4	Plantatio ns	Coffee	Karnataka and Kerala
		Rubber	Kerala and Karnataka
		Теа	Assam and Kerala
		Tobacco	Gujarat, Maharashtra and Madhya Pradesh
5	Spices	Pepper	Kerala, Karnataka and Tamil Nadu
		Cashew Nuts	Kerala, Tamil Nadu and Andhra Pradesh
		Ginger	Kerala and Uttar Pradesh
		Turmeric	Andhra Pradesh & Odisha

### **Types of Cropping System in India**

There are three types of cropping system followed in India which is below:

1. Mono-Cropping or Monoculture: In this system, only one crop is grown on farm land year after year.

 Multiple-Cropping: In this system, farmers grow two or more crops on farm land in one calendar year with intensive input management practices. It includes inter-cropping, mixed-cropping and sequence cropping.

3. Inter-cropping: In this system, farmers grow two or more crops simultaneously on the same field in one calendar year.

The Indian agricultural practices are still lacking by intensive planning because India has diversified agro-climatic zone, which is unfortunately not giving sufficient production. If our farming system relied on modern cropping pattern and cropping system, then we have a predominance of food grain crops, our farming will also inclined towards commercial crops and most importantly it will noticeable increase in the production of individual crops.<sup>6</sup>

## CONCLUSION

Cropping systems of a region are decided by and large, by a number of soil and climatic parameters which determine overall agro-ecological setting for nourishment and appropriateness of a crop or set of crops for cultivation. Nevertheless, at farmers' level, potential productivity and monetary benefits act as guiding principles while opting for a particular crop/cropping system. The main changes in the cropping pattern occurred in Andhra Pradesh. Depending upon the natural water resources, each region has certain area under irrigated agriculture. But, broadly considering, two distinct irrigated ecosystems emerge. One is Indo-Gangetic Plain region comprising the states of Punjab, Haryana, plains of Uttar Pradesh, Bihar and plains of Jammu & Kashmir. The other ecosystem may be carved out of coastal areas of Andhra Pradesh and Tamil Nadu.

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