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## **CHANGING CROPPING PATTERN IN INDIA - A STUDY**

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### **ABSTRACT**

*Changes in cropping pattern crop peat incidence and type of farming were studied in twelve Indian states over a five year period. Agriculture is one of the core sectors in Indian Economy large number of the population depends on agriculture for food, fodder and livelihood. Agriculture provides the country but in these days people are lowering interest in Agriculture sector for many reasons and depend on other sector for livelihood with changing their offering pattern there is a permit to work in other sector of the economy this trend directly has adverse effect on countries food production. The important objectives of the present study are as follows to analyze the area of all crops in India, to analyze the trend of the area under cultivation of rice, banana, tapioca, coconut, cereals, total pulses, food grains, onion, cotton and sugarcane in the study area and to understand the percentage change of the area under ford grains in India. Even though the trends of important food crops are rising, agriculture sector needs a great attention. Otherwise in future food security will be the great problem in India.*

**KEY WORDS:** Food Crisis, Agriculture and Cropping Pattern

## INTRODUCTION

Cropping pattern refers to the proportion of area under various crops at a point of time as it changes over space and time. The cropping pattern of a region is closely influenced by the geo-climatic, socio-economic, historical and political factors. Weather plays a decisive role in determining the existing cropping pattern. Cropping pattern is also depending on terrain, topography, slope, soils and availability of water for irrigation, use of pesticides, fertilizers and mechanization.

Agriculture continues to be the backbone of Indian economy. Agriculture's instrumental role is that it serves the ends of development by assisting the growth of other sectors, in particular, manufacturing which have, in turn, been viewed as the locomotives of economic wide development. Three critical roles of agriculture are product contribution, market contribution and factor contribution. In early stage of economic development agriculture held away over much of the economic fortunes. It may be mentioned that the bulk of state income originated in agricultural sector up to 1980s. Over the years the share of agricultural income in total economic pie has diminishing at a faster pace. During 2015 – 2016 the share was as low as 8.81 per cent.

## CHANGING CROPPING PATTERN

A study of changing cropping pattern brings out the proportion of area under different crops at a point of time in the study region. The cropping pattern in the study region keeps on changing from time to time in consonance with change in agricultural prices, government policies and other physical factors. These cropping patterns are also governed by economic, social and personal factors while the natural factors stand for physiographic and climatic condition.

There has been some indication of spatial change in cropping pattern particularly in the hilly mountain areas of Himachal Pradesh. The traditional regions of apple and other temperate crops which were earlier found suitable for the cultivation of such crops because of flowering and fruiting of these temperate crops at such places, but these regions are gradually becoming warmer due to global warming and may likely to become unsuitable for the cultivation of these temperate crops which require chilling for flowering. Successful cultivation of maize in Bihar during winter season and substituting wheat crop clearly indicates the possibility global warming and climate change as maize is a C4 plant and generally performs better under higher temperature.

## OBJECTIVES OF THE STUDY

Following are the important objectives of the present study. They are as follows:

1. To analyze the area of all crops in India.

2. To analyze the trend of the area under cultivation of rice, banana, tapioca, coconut, cereals, total pulses, food grains, onion, cotton and sugarcane in the study area.
3. To understand the percentage change of the area under food grains in India

**Singh (2017)** say's that, drip irrigation is one of the components of precision farming. There has been an opinion to cover most of the water guzzling crops such as sugarcane under drip and irrigation in states like Maharashtra and Karnataka. Similarly, cotton and even rice and wheat area may shift towards this technology in future. Therefore keeping in view the benefit of drip irrigation steps need to be taken for its integration in different cropping system.

**Ghuman (2016)** say's that, the cropping pattern in Punjab has undergone a sea change since 1960's especially since the advent of green revolution in mid 1960's. Paddy accounted for merely 6% of the area in 1960 - 61. Its shares increased 48% in 1990 - 91 and further 69% in 2012 – 13. The shares of area under rice increased from 33% in 1961 to 96% in 2013. Wheat account for 99% of the area under ragi cereals.

**Das (2015)** says that National Food Security mission launched by the government in the year 2009 envisaged increase in the annual rice production by at least 10 million tons by the end of eleventh five year plan which could be successfully achieved by focusing on hybrid rice as one of the strategies.

**Murugaval (2015)** brings to light the problems of paddy cultivation in Erode district in Tamil Nadu. Paddy is one of the important crops of India. Factor analysis technique has been used to analyze the cultivation problems of both traditional and systems of Rice Intensification (SRI) method of paddy cultivation. Results revealed that pest and disease attack and lack of improved varieties are the major cultivation problems in traditional method of paddy cultivation. Results also revealed that lack of awareness among the labourers was the major cultivation problem in SRI method of paddy cultivation.

**Srivasarao (2015)** says that use of Gliricidia as green manure in crop production systems provides a sustainable means of maintaining soil fertility and improves productivity of rain fed crops. From field experiences in tribal rain fed districts it is learnt that regular application of leaf manure has significant beneficial effects on organic carbon stocks in soils. Therefore, Gliricidia planting needs to be promoted systematically through proper technical guidance at the village level up-scale this technology on large scale.

## METHODOLOGY OF THE STUDY

The analysis on the change in cropping pattern in India requires a scientific methodology. In this section, it is proposed to deal in detail, the types of

data needed and the method by which the data is to be collected and analyzed so as to have the trend in the cropping pattern. The study is mainly based on the secondary data. The secondary data has been collected

from the official records, magazines, journals, books and from published and unpublished sources.

The first objective of the study is to analyze the area of all crops in India.

**Table No: 1**  
**Area of Food Grains in India from 2006 to 2016**

Year	Rice	Wheat	Coarse Cereals	Ground Nut	Cotton
2006-07	43.81	27.99	28.71	5.62	9.14
2007-08	43.91	28.04	28.48	6.29	9.41
2008-09	45.54	27.75	27.45	6.16	9.41
2009-10	41.92	28.48	27.68	5.48	10.13
2010-11	42.86	29.07	28.34	5.86	11.24
2011-12	44.01	29.86	26.42	5.26	12.18
2012-13	42.75	30.00	24.76	4.72	11.98
2013-14	44.14	30.47	25.22	5.51	11.96
2014-15	44.11	31.47	25.17	4.77	12.82
2015-16	43.39	30.23	23.78	4.56	11.87

Source: Agricultural Statistical at a Glance 2016-17

The above table shows that the area under rice in India shows not a steady change. It shows some fluctuations over the period taken for analysis. During 2006-07 it is 43.81 million hectares and during 2010-11 it declined 41.92 million hectares in between these two periods the fluctuations are depicted from the percentage change. Area of wheat 2006-07 it is 27.99 during 2015-16 it is increase the level 31.47 in between the period there little changes in the percentage. The

area of coarse cereals year of 2006-07 and fall the percentage 28.71 during 2016-17 it is decreased the percentage of 23.78 and under the area of Ground Nut 2006-07 their percentage of 5.62. This is the lowest percentage of that year and under the area of cotton the year of 2006-07 the percentage of 9.14 and between the years of cotton increase the level of percentage in 11.87 percentages to the year of 2016-17.

**Table No. 2**  
**Percentage Change under Food Grains in India**

Year	Oilseeds	Pulses	Sugarcane	Food Grains
2006-07	26.51	23.19	5.15	123.71
2007-08	26.66	23.63	5.06	124.07
2008-09	27.56	22.09	4.42	122.83
2009-10	25.96	23.28	4.17	121.33
2010-11	27.22	26.40	4.88	126.67
2011-12	26.31	24.46	5.04	124.75
2012-13	26.48	23.26	5.00	120.78
2013-14	28.05	25.21	4.99	125.04
2014-15	25.59	23.55	5.07	124.30
2015-16	26.13	25.26	4.95	122.65

Source: Agricultural statistics at a glance 2016-17

The Table No.2 shows that the increase and also their decreases for between the year. The area under the oil seeds in that year of 2006 – 07 per cent 26.51. This is steady the level in between the year of 2015-16 the percentage of 26.13 and the area of pulses year of 2006-07 the percent of 23.19. 2015-16 pulses were lot of increases of that year the percentage in between the year 25.06. The area of sugarcane 2006-07 the percent of 5.15 in between the year of 2015-16 there was decreased in the percentage of 4.95 and the

area of food grains 2006-07 the percentage of 123.71. The medium level of decreasing the year 2015-16 percent of 122.65.

### Findings of the Study:

Following are the important findings of the study. They are as follows:

- ❖ The study explained that during the period 2006-2016 the area under the cultivation of

Rice, Wheat, Cereals, Ground Nut and cotton shows a positive change.

- ❖ The area under the cultivation of rice during the period 2006-07, 43.81 million hectares and during 2010-11 it declined 41.92 million hectares.
- ❖ Under the area of Wheat 2006-07 it is 27.99 during 2015-16 it is increase the level 31.47 in between the period there are little changes in the percentage.

## CONCLUSION

The study clearly shows that the year 2006 – 2007 is the great challenge for Indian farmers. It is because in this period a tremendous fall in the area under cultivation of Rice, Wheat, Coarse cereals, pulses, Ground Nut, Sugar cane, Oil seeds and cotton was recorded. This is due to the change in climate and weather. The exponential trend of the area under the food grains Pulses, Wheat, Cotton and Sugar cane is increasing especially the banana shows a heavy increase. The exponential trend of the area under Oil seeds, Coarse cereals, is falling especially the decrease fastly during the study period. Moreover the area under crops shows no steady rise or fall. This is a great threat to Indian agriculture until immediate steps are taken. Even though the trends of important food crops are rising, agriculture sector needs a great attention. Otherwise in future food security will be the great problem in India.

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