



SUSTAINABLE AGRICULTURE – CHALLENGES AND STRATEGIES



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CLIMATE CHANGE AND ITS IMPACT ON FOODGRAINS PRODUCTION IN INDIA

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Introduction

Agriculture is the backbone of Indian economy according to *Mahatma Gandhiji*. Agricultural development is a pre-requisite of our national prosperity. It is the main source of livelihood of the people. Nearly two-thirds of its population depends directly on agriculture. Agriculture provides direct employment to 70% of working people in the rural India. Besides, a large number of the population is also engaged in agro-based industries. Agriculture meets the food requirements of the large population of India. It ensures food security for the country. Substantial increase in the production of foodgrains like paddy, wheat and other non-foodgrains like tea, coffee, spices, fruits and vegetables, sugar, cotton, etc. have made India self-sufficient. Agriculture also contributes little to the national income of our country. The growth of most of the agro-based industries depends on agriculture. It produces several inputs for industries. It forms the basis for many industries like cotton, textile, jute, sugar industries, etc. by providing cotton, sugarcane and oilseeds.

Agriculture activities mostly depend on climatic factors such as rainfall, temperature and humidity. The climatic change is the very important environmental problem in the globe and particularly in India, which is very closely associated with the global warming. They are very significant on the ground that they have number of evil consequences on more or less all the spheres of the environment. It is not only India, but all the countries have been facing from the evil impacts of the climate change. It is adversely affecting the segments of the environments such as atmosphere, land, water and biotic factors. Besides this, the climate change is also adversely affecting the productive activities and sectors in the economies of the developing countries in the world as whole.

Variation in climate will have a direct impact on the majority of the livelihood of the people. Food production in India is sensitive to climate change like variations in temperature and monsoon rainfall. Rise in temperature has a direct impact on the Rabi crop and every 10°C rise will reduce wheat production by 4 to 5 million tonnes. Every small change in temperature and rainfall has significant effect on the quality and quantity of agriculture production

Climate Change and Foodgrains Production

Due to natural variability or as a result of human activity, climate has been varying day to day. Agricultural activities mainly depend on climatic factor such as rainfall, temperature and humidity. Many studies revealed that changes in climatic factors affect the production and yield of crops.

Objectives of the Study

1. To analyze the growth rate of rainfall, production and yield of foodgrains in India between 2008-09 and 2017-18 and
2. To find the correlation between rainfall, production and yield of foodgrains in india between 2008-09 and 2017-18.

ABOUT THE COLLEGE

Mount Carmel College Autonomous, Bengaluru is a reputed educational institution dedicated to the cause of "Empowerment of Women through Education" since 1948. The college is owned and managed by Carmelite Sisters of St. Teresa (CSST) and over the decades has set the benchmark in quality education. Generations of women have passed through their corridors as empowered agents of change in society.

Mount Carmel College is affiliated to Bangalore University and Bengaluru Central University, and is recognised under 2(f) and 12(b) of the UGC Act. The college was granted autonomous status in 2005. MCC has successfully completed 4 rounds of Accreditation by NAAC and was awarded 'A+' grade in the last round of accreditation in 2019. The Research Centres are recognised by IGNOU and Bangalore University.

The college offers undergraduate and postgraduate programs in Arts, Science and Commerce. It offers 36 UG programs and 12 PG programs. With a student strength of nearly 5,000, Mount Carmel College is ranked among the top 20 colleges at the all India level in all the streams.

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