

# Crop Yield Prediction using Machine Learning

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**Abstract:** In India, agriculture is the main occupation. It is the primary source of income of the population. 60% of the population is dependent on agriculture related to employment. Thereby, agriculture is considered as the backbone of the country and helps in economic growth. Agriculture is a primary sector occupation and provides raw materials to secondary sector which includes food factories, textile industry, food security, etc. So, agricultural productivity is largely dependent to increase the economy of the country, leading to the business growth and provide employment to most of the population. Productivity largely depends on climatic factors and environmental conditions such as rainfall, temperature, humidity, soil type, etc. Due to unfavourability, the crop yield production gets affected thereby harming the economy. Using appropriate machine learning models helps to predict the crop yield considering climatic conditions. This paper is based on three algorithms viz. polynomial regression i.e., linear regression, support vector regression and random forest regression. These algorithms will help in suitable crop selection to grow. The selecting of crop is very important because it will provide us the most productivity hence increasing profit. This research work will help the farmers and producers increase the productivity and boost the economy.

**Keywords:** Agriculture, Economy, Productivity, Machine Learning Algorithms, Predict Crop Yield.

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