

# **A LITERATURE SURVEY FOR CROP YIELD PREDICTION BY USING DATA ANALYTICS.**

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# **ABSTRACT**

Agriculture is important for human survival because it serves the basic need. A well-known fact that the majority of population ( $\geq 55\%$ ) in India is into agriculture. Due to variations in climatic conditions, there exist bottlenecks for increasing the crop production in India. It has become challenging task to achieve desired targets in Agri based crop yield. Various factors are to be considered which have direct impact on the production, productivity of the crops. Crop yield prediction is one of the important factors in agriculture practices. Farmers need information regarding crop yield before sowing seeds in their fields to achieve enhanced crop yield. The use of technology in agriculture has increased in recent year and data analytics is one such trend that has penetrated into the agriculture field. The main challenge in using big data in agriculture is identification of effectiveness of big data analytics. Efforts are going on to understand how big data analytics can agriculture productivity. The present study gives insights on various data analytics methods applied to crop yield prediction and also signifies the important lacunae points' in the proposed area of research.

S.No	TITTLE	PROPOSED WORK	TOOLS / ALGORITHMS	ADVANTAGES/ DISADVANTAGES
1.	ESTIMATION OF CROP YIELD PREDICTION	To Estimate the annual crop yield analysis to increase efficiency for more and more years by using data analytics.	COGONOS ANALYTICS IBM WATSON IBM CLOUD STORAGE ACCESS	To achieve nearly Higher state of efficiency.
2.	To implement the Estimation of annual crop yield prediction based on day to day activities of agriculuture.	Implementation of project developing and the ideation of the project by using data analytics domain	COGONOS ANALYTICS IBM WATSON IBM CLOUD STORAGE ACCESS	Takes time complexity of data collection.

At present we are at the immense need of another Green revolution to supply the food demand of growing population. With the decrease of available cultivable land globally and the decreased cultivable water resources, it is almost impossible to report higher crop yield. Agricultural based big data analytics is one approach, believed to have a significant role and positive impact on the increase of crop yield by providing the optimum condition for the plant growth and decreasing the yield gaps and the crop damage and wastage. With this aim the present paper reviews about the various advances, design models, software tools and algorithms applied in the prediction assessment and estimation of the crop yield. India is basically agriculture based country and approximately 70% of our country's economics is directly or indirectly related to the agricultural crops. The principal crop which occupies the highest (60-70%) percentage of cultivable land in the Indian soil is the paddy culture and it is the major crop especially in central and south parts of India. Rice crop cultivation plays an imperative part in sustenance security of India, contributing over 40% to general yield generation. The enhanced yield of the rice crop depends largely on the water availability and climatic conditions. For example, low precipitation or temperature extremes can drastically diminish rice yield. Growing better strategies to foresee yield efficiency in a mixture of climatic conditions can help to understand the role of different principal factors that influence the rice crop yield. Big data analytic methods related to the rice crop yield prediction and estimation will certainly support the farmers to understand the optimum condition of the significant factors for the rice crop yield, hence can achieve higher crop yield.

THANK YOU.