

ESTIMATE THE CROP YIELD USING DATA ANALYTICS

INTRODUCTION

Crop yield prediction is one of the challenging tasks in agriculture. It plays an essential role in decision making at global, regional, and field levels. The prediction of crop yield is based on soil, meteorological, environmental, and crop parameters. Crop prediction attributes are defined by multiple factors such as genotype, climate and the interactions between the two. Accurate crop prediction needs a fundamental understanding of the functional relationship between cultivation and interactive factors like the genotype and climate.

LITERATURE SURVEY FOR CROP YIELD PREDICTION

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 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 principle 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 principle factors that influence the rice crop yield. Data analytics 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.

References

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