

## **IDEATION PHASE LITERATURE SURVEY**

Date	3 SEP 2022
Team ID	PNT2022TMID48352
Project Name	Estimation of crop yield

**1.**

**TITLE :** Agriculture Data Analytics in Crop Yield Estimation: A Critical Review.

**AUTHOR :** B.M.Sagar, Cauvery N K

**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. Factors like climate, geographical conditions, economic and political conditions 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 being used for management of crop yield and monitoring crop health. The recent trends in the domain of agriculture have made the people to understand the significance of Big data. The main challenge using big data in agriculture is identification of impact and effectiveness of big data analytics.

**PUBLISHED YEAR : 2018**

**REFERENCE LINK :**

<https://ijeecs.iaescore.com/index.php/IJEECS/article/view/13056>

**2.**

**TITLE :** Machine learning approach for forecasting crop yield based on climatic parameters

**AUTHOR :** S.Veenadhari, Dr. Bharat Misra&Dr. CD Singh

**ABSTRACT :**

In this paper, the study was aimed to develop a website for finding out the influence of climatic parameters on crop production in selected districts of Madhya Pradesh. The selection of

districts has been made based on the area under that particular crop. Based on this criteria first top five districts in which the selected crop area is maximum were selected. The crops selected in the study were based on the predominant crops in the selected district. The selected crop included: Soybean, Maize, Paddy and Wheat. The yield of these crops was tabulated for continuous 20 years by collecting the information from secondary sources. Similarly for the corresponding years climatic parameters such as Rainfall, Maximum & Minimum temperature, Potential Evapotranspiration, Cloud cover, Wet day frequency were also collected from the secondary sources.

**PUBLISHED YEAR : 2014**

**REFERENCE LINK:** <https://ieeexplore.ieee.org/document/6921718>

**3.**

**TITLE :** A Survey on Crop Yield Prediction based on Agricultural Data

**AUTHOR :** Dhivya B H, Manjula R , Siva Bharathi S, Madhumathi R

**ABSTRACT :**

Agriculture is one of the major revenue producing sectors of India and a source of survival. Various seasonal, economic and biological factors influence the crop production but unpredictable changes in these factors lead to a great loss to farmers. These risks can be quantified when appropriate mathematical or statistical methodologies are applied on data related to soil, weather and past yield. With the advent of data mining, crop yield can be predicted by deriving useful insights from these agricultural data that aids farmers to decide on the crop they would like to plant for the forthcoming year leading to maximum profit. This paper presents a survey on the various algorithms used for crop yield prediction.

**PUBLISHED YEAR : 2017**

**REFERENCE LINK:**

[http://www.ijirset.com/upload/2017/march/53\\_13\\_A%20Survey.pdf](http://www.ijirset.com/upload/2017/march/53_13_A%20Survey.pdf)

**4.**

**TITLE :** ANALYSIS OF CROP YIELD PREDICTION USING DATA MINING TECHNIQUES

**AUTHOR :** D Ramesh ,B Vishnu Vardhan

**ABSTRACT :**

Agrarian sector in India is facing rigorous problem to maximize the crop productivity. More than 60 percent of the crop still depends on monsoon rainfall. Recent developments in Information Technology for agriculture field has become an interesting research area to predict the crop yield. The problem of yield prediction is a major problem that remains to be solved based on available data. Data Mining techniques are the better choices for this purpose. Different Data Mining techniques are used and evaluated in agriculture for estimating the future year's crop production. This paper presents a brief analysis of crop yield prediction using Multiple Linear Regression (MLR) technique and Density based clustering technique for the selected region.

**PUBLISHED YEAR : 2015**

**REFERENCE LINK:**

<https://ijret.org/volumes/2015v04/i01/IJRET20150401071.pdf>

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**5.**

**TITLE:** A LITERATURE STUDY ON APPLICATION OF DATA MINING TOOLS FOR RICE YIELD PREDICTION

**AUTHOR :**Aishwarya. B.R.

**ABSTRACT :**

Data Mining is Knowledge Discovery in Databases. Collection technique for efficient automated discovery of understandable patterns in large databases. Data mining extract knowledge from historical data. Agriculture crop production depends on biology, climate, economy and geography. Crop yield prediction helps in food security. Different varieties of rice are grown in different time schedule of year. Crop need different cultivation plan for ensuring maximum output. Agricultural crop production depends on various factors such as biology, climate, economy and geography. Also, Scientific and policy communities have recognized the susceptibility of crop agriculture to climate change and questioned the ability of farmers to adapt because of direct and strong dependence of crop agriculture on climate. Several factors have different impacts on agriculture, which can be quantified using appropriate statistical methodologies. Applying such methodologies and techniques on historical yield of crops, it is possible to obtain information or knowledge which can be helpful to farmers and government

organizations for making better decisions and policies which lead to increased production. Here our focus is on the literature study on application of data mining techniques to extract knowledge from the agricultural data to estimate crop yield for major cereal crops.

**PUBLISHED YEAR : 2016**

**REFERENCE LINK: <https://www.ijitr.com/index.php/ojs/article/view/791>**