Literature Survey

1.Title : Prediction of Crop Yield using Regression Analysis

   Author : V. Sellam and E. Poovammal

      Yield prediction benefits the farmers in reducing their losses and to get best prices for their crops. The objective of this work is to analyze the environmental parameters like Area under Cultivation (AUC), Annual Rainfall (AR) and Food Price Index (FPI) that influences the yield of crops and to establish a relationship among these parameters. In this research, Regression Analysis (RA) is used to analyze the environmental factors and their infliction on crop yield. RA is a multivariate analysis technique which analyzes the factors, groups them into explanatory and response variables and helps to obtain a decision. Linear Regression (LR) is used to establish a relationship between explanatory variables (AR, AUC, FPI) and the crop yield as response variable.

2.Title : An incorporative statistic and neural approach for crop yield modeling and forecasting

   Author : William W. Guo Heru Xue

      An incorporative framework is proposed in this study for crop yield modeling and forecasting. It is a complementary approach to traditional time series analysis on modeling and forecasting by treating crop yield and associated factors as a non-temporal collection. Statistics are used to identify the highly related factor(s) among many associates to crop yield and then play a key role in data cleaning and a supporting role in data expansion, if necessary, for neural network training and testing. Statistical analysis plays a key role in identifying the most related factor, detecting outliers, determining the general trend of wheat yield with respect to plantation area and supporting data expansion for neural network training and testing. The combination of these two methods provides both meaningful qualitative and accurate quantitative data analysis and forecasting. This incorporative approach can also be useful in data modeling and forecasting in other applications due to its generic nature.

3.Title : Analysis Of Crop Yield Prediction Using Data Mining Techniques

   Author : D Ramesh , B Vishnu Vardhan

      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 i.e. East Godavari district of Andhra Pradesh in India. The statistical model Multiple Linear Regression technique is applied on existing data. The results so obtained were verified and analyzed using the Data Mining technique namely Density-based clustering technique.

4.Title : Crop Yield Prediction Using Deep Neural Networks

   Author : Khaki, Saeed, and Lizhi Wang

      A machine learning approach was proposed for crop yield prediction.The approach used deep neural networks to make yield predictions (including yield, check yield, and yield difference) based on genotype and environment data. The carefully designed deep neural networks were able to learn nonlinear and complex relationships between genes, environmental conditions, as well as their interactions from historical data and make reasonably accurate predictions of yields for new hybrids planted in new locations with known weather conditions. Performance of the model was found to be relatively sensitive to the quality of weather prediction, which suggested the importance of weather prediction techniques.

5.Title : Crop Yield Prediction In Agriculture Using Data Mining Predictive Analytic Techniques

   Author : P.Surya, Dr. I.Laurence Aroquiaraj

      Data Mining is an emerging research field in Agriculture especially in crop yield analysis and prediction. As early into the growing season as possible, a farmer is focused on perceiving how much yield they are about to expect. As with many other sectors the amount of agriculture data is increasing on a daily source. In the proposed work, a collected agriculture dataset was used to get a crop yield prediction model using various regression techniques. Regression analysis was tested for the effective prediction or forecast of the agriculture yield for various crops in Tamilnadu state.

References:

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[2] Guo, William W., and Heru Xue. "An incorporative statistic and neural approach for crop yield modelling and forecasting." *Neural Computing and Applications* 21.1 (2012): 109-117.

[3] Ramesh, D., and B. Vishnu Vardhan. "Analysis of crop yield prediction using data mining techniques." *International Journal of research in engineering and technology* 4.1 (2015): 47-473.

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[5] Surya, P., and I. Laurence Aroquiaraj. "Crop yield prediction in agriculture using data mining predictive analytic techniques." *International Journal of Research and Analytical Reviews* 5.4 (2018): 783-787.