

# Intelligent Crop Recommendation System using Machine Learning

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**Abstract:** *Intelligent crop recommendation systems have gained significant attention in modern agriculture for their potential to optimize crop selection and enhance agricultural productivity. This report aims to provide a comprehensive analysis of existing intelligent crop recommendation systems and propose a novel framework for future system development. The report explores the current state-of-the-art in the field, identifies the key components and functionalities of existing systems, and evaluates their strengths and limitations. Building upon this analysis, a proposed system framework is presented, encompassing data acquisition, preprocessing, machine learning algorithms, recommendation generation, and user interface. The proposed system addresses the limitations of existing systems and leverages emerging technologies for improved accuracy, scalability, and sustainability. The report concludes with a discussion on the potential impact of the proposed system on agricultural practices and highlights future research directions*

**Keywords:** *Agriculture, Maximum Crop Yield, Fertilizer Suggestion, Environmental Factor, Economic Factor, Machine Learning(ML), Plant Disease Classification*

## REFERENCES

- [1]. Shilpa Mangesh Pande, Prem Kumar Ramesh, Anmol, B R Aishwarya, Karuna Rohilla and Kumar Shaurya, Crop Recommendation using Machine Learning Approach, Proceedings of the Fifth International Conference on Computing Methodologies and Communication (ICCMC 2021).
- [2]. [https://www.researchgate.net/publication/331426761\\_Crop\\_Recommendation\\_System\\_to\\_Maximize\\_Crop\\_Yield\\_in\\_Ramtek\\_region\\_using\\_Machine\\_Learning](https://www.researchgate.net/publication/331426761_Crop_Recommendation_System_to_Maximize_Crop_Yield_in_Ramtek_region_using_Machine_Learning)
- [3]. Haedong Lee and Aekyung Moon, "Development of Yield Prediction System Based on Real-time Agricultural Meteorological Information", 16th International Conference on Advanced Communication Technology, 2014
- [4]. Pudumalar, S., E. Ramanujam, R. Harine Rajashree, C. Kavya, T. Kiruthika, and J. Nisha. "Crop recommendation system for precision agriculture." In 2016 Eighth International Conference on Advanced Computing (ICoAC), pp. 32-36. IEEE, 2017.
- [5]. T.R. Lekhaa, "Efficient Crop Yield and Pesticide Prediction for Improving Agricultural Economy using Data Mining Techniques", International Journal of Modern Trends in Engineering and Science(IJMTES), 2016, Volume 03, Issue 10
- [6]. [https://www.researchgate.net/publication/335799151\\_Crop\\_Recommendation\\_System\\_for\\_Precision\\_Agriculture](https://www.researchgate.net/publication/335799151_Crop_Recommendation_System_for_Precision_Agriculture)