

AgriField - An Agricultural Initiative

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Abstract:-The AgriField - A Agricultural initiative is an first application based on crop productivity and soil fertility. The application contains a unique idea. Our application will give all the facilities to the farmer at one place. Farmers can access the application easily. It is user friendly. Nowadays, the world is connected through the online networking. The farmer is only person who is depending on others for the online application so we are trying to connect the farmer to the global networking. Soil Testing is well recognized as a sound scientific tool to assess inherent power of soil to supply plant nutrients. The benefits of soil testing have been established through scientific research, extensive field demonstrations, and on the basis of actual fertilizer use by the farmers on soil test based fertilizer use recommendations. Soil testing was initiated in the country in beginning of planning era by setting up of 16 soil testing laboratories during 1955. Government of India has been supporting this program during different plan periods to increase the soil analyzing capacity in the country. The numerical strength does not, however, decisively indicate the quality and success of the program. Planners and agriculturalists have recognized the utility of the service fully but it suffers due to inadequate scientific support in its execution. They can get the information about the agricultural field of every type at one place, such as the schemes and recent technology. The Proposed model may give brief idea about our Project AGRIFIELD.

I. INTRODUCTION

The AgriField - an agricultural initiative is a system application which is trying to give the best solutions to the agricultural problems based on their components of the soil. The Components of soil i.e. the nutrients of soil which are responsible for the soil fertility and crop productivity of the farm sector. The farmers need to aware about the status of the soil. The Soil Status given after soil test report generated after testing of soil. The Soil test report gives the amount of nutrient present in the soil i.e. amount of nitrogen(N),Phosphorus(P),Potassium(K) present in the soil has been stated by the soil status report.

This is an Agricultural based application named as “**AgriField - An Agricultural Initiative**”. This is an first working application on the manipulation techniques of the soil and giving output of soil fertility on their available soil status. This application will provide farmers a quantity of fertilizers required to give in the soil by calculating on the basis of soil test report. The AgriField provides the information about the fertilizers trade according to the present soil status and also quantity of the fertilizer trade. As there are no current technique available for this so we are trying to develop such technique.

The *AGRIFIELD* - An Agricultural Initiative is an application and it tries to give the best agricultural solutions and good agricultural practices. In AgriField the crop productivity of the all the species of the cotton crop are successfully given on the basis of the present soil status. The aim of developing the application of AgriField to give the

updated knowledge to the farmers and ensure the good practices of agriculture among the farmers.

II. LITERATURE REVIEW

The basic idea of this concept has been reviewed through the various research papers available on the web. The research papers are providing information that what a micronutrient affects the crop in each condition. There are 16 micronutrients which affect the crop in excess, in less or in equal proportion. There are various crop analysis research papers on the internet. We studied them and work by on it. Dr. PanjabraoDeshmukhKrushiVidyapeeth(PDKV), Akola, Maharashtra published a diary named as “Krushi-Sanjeevani” each year. The diary contains the information about the crops and the standard values or quantities needed by the crops of specific types. The websites such as CICR(Nagpur),IISS(Bhopal) are also providing the information.

III. PROBLEM DEFINITION

The problem statement is very simple and clear that we have to find out the quantity of fertilizers required for soil on the available nutrients in the soil and provide a best solutions for their agricultural practices though which they can improve their soil fertility and crop productivity. The soil fertility is the most important factor in the crop productivity and it affects lot when it comes to it. So we are trying to give best practices for agriculture.

IV. PROPOSED MODEL

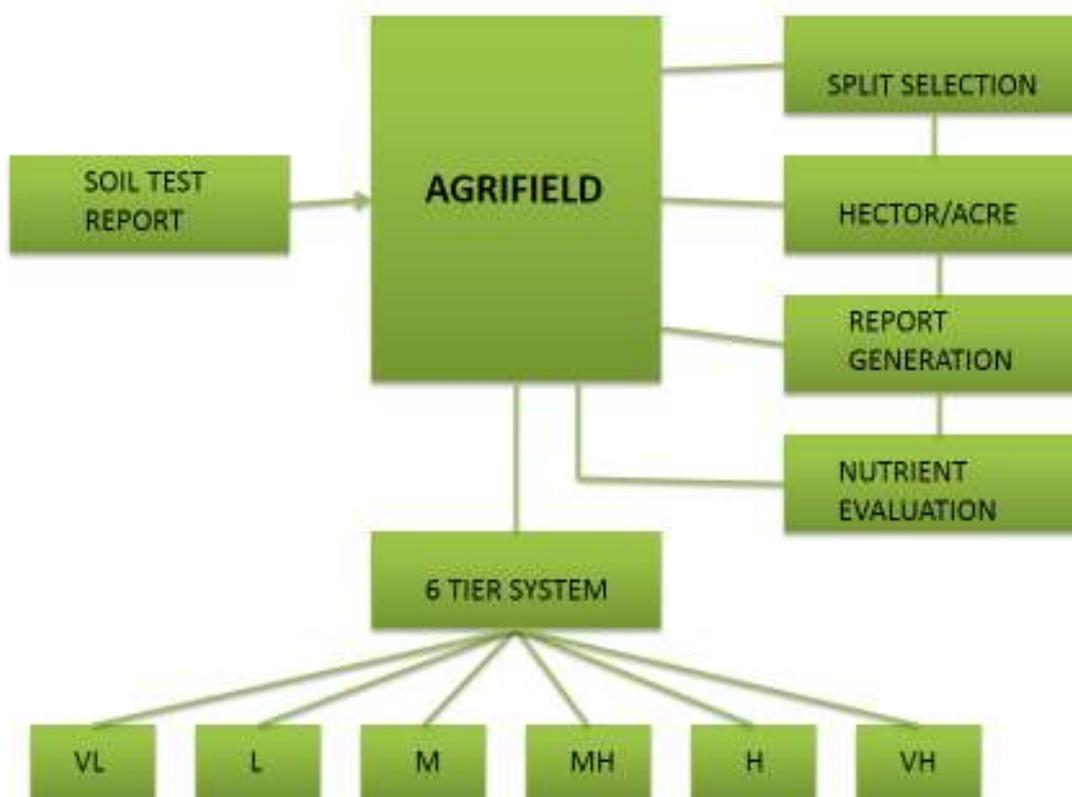


Fig. Agrifield Architecture

The above shown figure is the main architecture of AgriField Project. It mainly consist of what input and output will be given by the system. The project mainly runs on the concept of 6 tier system given in the dairy of the E-krisi University Akola.[4] The main modules we are going to implement are MN evaluation, NPK ratio calculations, fertilizer grading and report generations.

The AgriField system deals with the present soil status of the farm based on the soil test report. The present soil status of the soil in terms of N,P,K are evaluated in such a way that it gives the proportion of the recommended fertilizer trade in the amount of which they have to be applied.

The Six tier system shown in above figure , the soil test report is based on the six tier system, according to soil test report the soil is categorized in the six tier system and after categorization of soil the AgriField system starts performing operation on the amount of nutrient of soil. The operation gives the output in terms of the amount of fertilizers to be applied for yielding best crop productivity.

V. ADVANTAGES

- The farmer will get accurate report after soil testing about what and the proportions of applied fertilizer.
- The calculations of fertilizer recommendation will be error free.

VI. CONCLUSION

A fertility testing program that monitors nutrients and pH management can help you save money. Soil testing is the only way to determine the available nutrient status in soil or soilless media and the only way you can develop specific fertilizer recommendations. Yield and economic return can be optimized when fertilizer rates accurately address the needs of a crop. Potential soil and water pollution can be minimized when nutrient application is geared to the needs of a particular crop. It is necessary to have a system that can examine how much fertilizers we need to put into the soil to make it better. AgriField is an initiative in the direction of this domain.