Android Based Solution for Indian Agriculture Management
A Design Paper

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Abstract—The Agriculture business domain, as a vital part of the overall supply chain, is expected to highly evolve in the upcoming years via the development, which are the taking place on the side of the future application. Smart phone technology creates new opportunities for farm management application in small farms. Farmers working on small farm are now able with a low cost smart phone and the specialized application to obtain facilities the couldn't have on their hands before.

The use of this application in a smart phone can overleap the high difficulties of farm management requirements which were stand as obstacle for many years so far. Tasks such as field definition, task operation, lists and report and all farming use data can be submitted and carried on together in a smart phone at any farm working condition. This application suitable for farmers. Many times farmers are confused to take decision regarding selection of fertilizer, pesticide and time to do particular farming action. So to avoid this problem this application is very useful. Fertilizer schedule of each type of crop will get registered. Based on sowing date of crop, farmers will get reminders about fertilizer as per schedule.

Keywords—*Android, Mobile Application, Mobile Computing, Smart phones, Agriculture Management*

I. INTRODUCTION

India is an agricultural country. About seventy percent of our population depends on agriculture. One-third of our National income comes from agriculture. The development of agriculture has much to do with the economic welfare of our country. Now our country is self-sufficient in food-grains. It is now in a position to export surplus food-grains and some other agricultural products to other countries.

At present in the world in agriculture position India has the one of fastest growing service sector in the world. Our farmers have been using old methods and old implements for farming. Our farmers have been using wooden plough for centuries. It could not plough the land quite deep. Now iron ploughs are being used. These ploughs can till the land deeper and prepare the field for sowing in lesser time. The farmers have bought new implements, fertilizers, improved seeds and farm machinery with these loans. A large number of farmers now use tractors for plugging, sowing and reaping the crops. They have bought new implements for farming. The farming has become more easy and convenient. This has given a forward push to the agriculture production in our country.
Agriculture the backbone of Indian economy contributes to the overall economic growth the country and determines the stranded life for more than 50% of Indian population.

Also Information and Communication Technology (ICT) in agricultural is an emerging field focusing on the enhancement of agricultural and rural development in India. It involves innovative application using ICT in the rural domain. [1]

Rapid growth in the field of ICT helps in basic aspects of mankind like-agriculture, education, healthcare, etc. However, the moderate technical growth if ICT application is confined to the community of a limited number of people, who live in digital pockets. The illiterate people like-farmer, shopkeeper etc. are unable to take the advantage of the ICT revolution. According to the UNESCO report, population of such people is 64% who are unable to use the technology either language or technical barrier. The advancement if ICT can be utilized for providing accurate and

timely relevant information and services to the farmers, thereby facilitating an environment for remuneration agricultural.

The essential agriculture information is very useful to farmer for taking effective decision. When farmers were using the platform, they would still request the ability to print out their schedule so they could bring it out into the field. Now, things have changed dramatically. More farmers are using technology than even two years ago and most of every farmer is using smart phones. Smart phones used by them is mostly only for conversion and entertainment.

II.   NEED

Indian farmers are never uses proper management for crop cultivation. A further problem is the lack of co-ordination along the agricultural value chain from farm inputs to farm processing, which increases the cost of production and lowers revenue for farmers. If there is proper management and organization then that will show very good result in crop yields and hence gives more income to farmers.

To take advice from expert farmer for any type of crop is sown or plantation. This specific information of the crop gives to farmer to get more yields. For getting advice, farmers need to visit local Agriculture - office or visit other expert farmer.

III.   PROBLEM STATEMENT & OBJECTIVE

3.1. Problem Statement:

To develop an Android application to manage agricultural activities those are done on daily, weekly and monthly basis in the farm.

3.2. Objective:

The main objective of this project is that, it is to maintain agricultural activities and user can easily interact with it is in a local language such as Marathi language.

1. To create profile of farmer, farm and crop in that farm.
2. Weather information on the basis of village registered.
3. Prepare financial budgets and monitor its execution.
4. Keep records for all assets of farm (fields, machines, raw-materials).
5. Maintain expenditure record.
6. Generate revenue on the basis of expenditure record and income generated.
7. Information of different government of India scheme for Indian farmers.
8. Get access to pesticides, fertilizers and seed databases

IV.   PROPOSED WORK

This project included basic framework of "agriculture management" which will be very helpful for farmers for decision making. Application allows to quickly seeing what is happening on the farm and what needs to happen next

The aim of the project is to provide farmers with an effective and reliable tool or information for managing agriculture. Allows users to plan activities, organize staff, monitor agri - inputs and agricultural machineries use, undertake economic and financial analysis of activities i.e. allows farmers to record cropping, machinery procedures and access this information. Users can record full history of crops from when they are sown through to harvested, record chemical and fertilizer use; including type, rate and date applied and keep track of machinery maintenances.

Many times farmer is confused to take decision regarding selection of fertilizer, pesticide and time to do particular farming actions. Based on sowing date of crop, farmer will get reminders about

application of fertilizer as per schedule and tentative cultivation schedule which is designed by crop expert.

This application will solve a critical problem for crop producers as many of farmers currently record their harvests on paper if at all. While paper is convenient because it is always on hand, there are serious drawbacks to using it for record keeping, since paper record can be lost or destroyed and are difficult to organize.
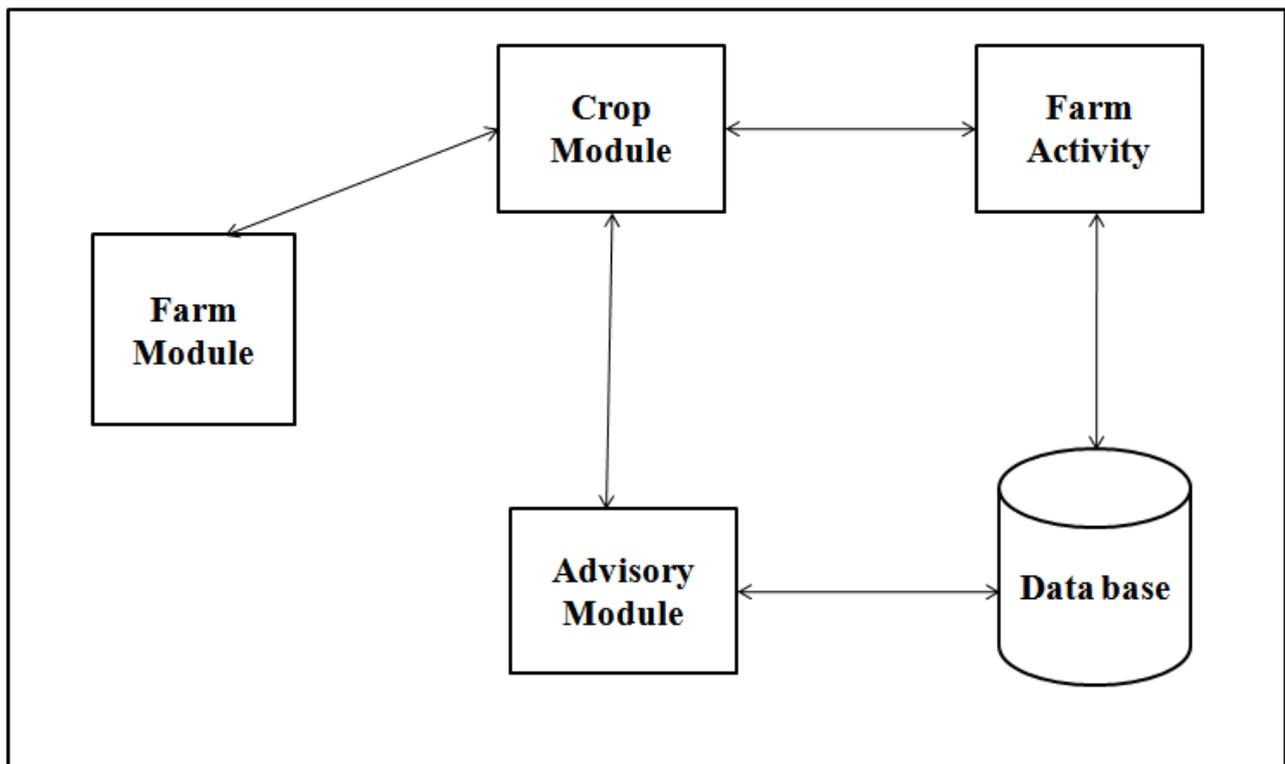
4.1. Working Methodology:

Figure 1. Working methodology of proposed system

V.   CONCLUSION

This "Android Based Solution for Indian Agriculture Management" will be useful to give solution for Indian agricultural management to improve their crop yield. The application would be a boon to the Indian farmers as it addresses the key problems of getting the market updates of different products.

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