GoOrgano: An Agro Marketing Portal

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Abstract: **Agriculture is one of the most important sectors in India. The project aims to make lives of farmer better and easier in such a way that the farmer can deal with the consumers directly. This will serve as a way for the farmers to sell their products across the state just with some basic knowledge about how to use the mobile application. In this application, there would be three type of users: The Farmer, the Admin and the Consumer. The consumer can log in as a farmer and vice versa. Consumers can directly order the organic product by checking the list of products available. Once the consumer places the order, the request would be sent to the admin. The farmers can also specify the products they have using this app. The farmer and the consumer can contact using the same. Once the order is placed a bill would be generated automatically. The transport agency under the admin section would facilitate the transportation of the produce.**

Keywords: **Organic farming, Firebase, Agriculture, Admin**

1. Introduction

The majority of the poor in developing countries like India depend on agriculture for their livelihoods. Improving the efficiency of agricultural markets is therefore a priority. Agricultural supply chains are often dominated by middlemen with substantial market power. Their high margins distort the market by driving a wedge between the price paid to farmers and by final consumers. One source of market power lies in the fact that middlemen are better informed about market conditions, especially the prices further down the supply chain.

The Advanced techniques and the Automated machines which are leading the world to new heights, is been lagging when it is concerned to Farming, either the lack of awareness of the advanced facilities or the unavailability leads to the poverty of farmers. One of the major reasons for this is that the middle men are eating most of their income/money. The Traders manipulate the agriculture commodity prices, not allowing them to get the benefits. Even though the Agricultural Produce Marketing Committee (APMC) ensures that farmers are not exploited by intermediaries (or money lenders) who compel farmers to sell their produce at the farm gate for an extremely low price. But still the farmers are exploited in some or the other way. Agro-marketing would serve as the best solution to all the problems.

Our Project "GoOrgano-An Agro-Marketing app" would be a new system based on agro-marketing which will be helpful for farmers and consumers to sell and buy agriculture products easily and efficiently. Our system intends to provide reliable and efficient communication and interaction platform between different farmers and consumers. GoOrgano will serve as a way for the farmers to sell their products just with some basic knowledge about how to use the mobile application. The site will guide the farmers in all the aspects. Since the middlemen exploit the consumers the most, this project would be developed in such a way that the farmers and the consumers could contact directly without the interference of a middleman. The admin would handle all the requests of the consumers and forward it to farmers. Thus, a farmer can sell his produce directly to the consumers. The farmer will upload the quantity and price of the product that he has. The customer can check which organic products are available at which price. The order will be placed by customer and online payment will be done to admin. Thus, this project will act as a unique and secure way to perform agro-marketing. This project would help the farmers to perform the agro-marketing leading to achieve success and increase in their standard of living.

2. Related work

During the survey, we did go through a few papers. The papers surveyed are as follows:

A. E-farming

M. R. Sindhu, Aditya Pabshettiwar, Ketan. K. Ghumatkar, Pravin. H. Budhehalkar, Paresh. V. Jaju, "E-Farming," Here, an Authorized-agent would serve as a way for the farmers to sell their products in the market. The Centralized market committee will have control on the Agents through business activities review. Website will also provide market-wise, commodity wise report to the farmer in interactive way. In rural area, the SMS facility would give the required market information where internet cannot be availed. Government will put forward the new schemes for the farmers. Compensation will be provided for the farmers in case of any loss to the production due to some natural calamities.

B. E-Agriculture Information Monitoring System using Data Mining

Dhakne Aniket, Deshpande Mayur, Patharkar Mayur, Rathod Aakash, "E-Agriculture Information Monitoring System using Data Mining," Here, the main aim of E-agriculture system is to provide easy interactive platform for communication and information exchange between farmer, merchant and government. All these three users will have their

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unique log in. All the system related transactions are done using this login ID will make easy to keep watch on overall processes between different entities. Farmers can add information about their crops and crops quantity on this basis they search merchants from nearest APMC markets. List of merchants will be displayed on screen with prices offered by merchants. From this list farmer can send selling request to highest price offering merchant and if merchant accept request transaction can be performed. In similar way merchant can also search for farmers from database with required crops and send request to them for buying purpose. Prices offered by different merchants to different agriculture product will be displayed to farmers as per their request. Government defined base prices of crops and timely weather updates will be displayed at home pages of both farmers and merchant. This will helpful to assure that farmer will get fair prices for his products.

C. Krishi-Mitra: Expert System for Farmers

[3] Prachi Sawant, M.A.Shaikh, Aarti Thorat, Arti Mhaske, Samruddhi Ghanwat, "Krishi-Mitra: Expert System for Farmers," This System is defined in the way the application developed can be maximum utilized. This product is intended to use for fast and updated information delivering system for farmers. Also we intend to use native language support to understand and voice help for certain modules so that farmers or personnel who are not aware with English can also utilize the features provides by application. So project scope can be summarized as:
- Fast and efficient support for newer information available
- Weather reports according to position of the user

D. Raising Farm Efficiency Through the Use of ICT

[4] Kote Dhonat, "Raising Farm Efficiency through the Use of ICT," This system use is as it follows:
- Every visitor of this web application has the possibility to create accounts.
- The manager user imports / changes / deletes products, product categories and plantations
- Each farmer may have one or more fields.
- Each field produces a product.
- In a "measurement" table the average moisture and temperature measurement of the field recorded on a day can be found.
- Each customer can buy products and see the name of the farmer and the location of product.

Purchases, farmers' records, records of customers, products are stored in a database

3. Proposed methodology

The GoOrgano project will have same login page for both buyer and seller which will be managed by an admin and the team. This application will have a form for registration. Any user whether it be a seller i.e. farmer or buyer i.e. consumer will have to register himself/ herself using that form into the system. All the essential information about the user will be saved into database. A single user can act as both farmer as well as consumer.

The registration form will contain fields such as full name of the user. The contact details such as phone number. Also the address details of the user will be stored according to the location, areas, landmark, road, city and district of the user. This will be helpful in knowing how many orders are from a specific region and how many sellers are ready to sell their produce from particular area.

After the registration process is completed, user will have an access to application. For the farmer's login, the farmer can announce the products that will be available with him. Admin will make sure that transport team will follow all the rules and the product delivered to buyer. The admin will provide his transportation team. Along with the list and quantity of product every farmer can specify the selling price at which he wants his product to be sold. For customer who will be using the app for buying purpose, there will be a notification on the app where all the announcements made by sellers will be showed. Hence the user will know which products are available at what price and the quantity of the products available. All the orders will be redirected to admin. The orders will be saved in the same sequence as they were received in database of the system. Such list will be maintained and modified with every entry.

The final step of buying a product will be to pay for it via internet banking. The total cost includes cultivation cost, transportation cost and other expenses. This cost would be displayed to the consumer. Here the payment would be done to the admin and then the admin would bifurcate the amount. 80% of the cost would be sent to the farmer whereas 20% would be the service charge which will be taken by admin. The amount will be transferred from user's bank account to admin account. The 20% charge will be deducted and remaining would be transferred from admin's account to farmer's account.

4. Go Organo Interface Implementation

A. Application based interface

The methodology discussed above in system approach for an application is implemented in Android studio with Java coding.

1) Shows splash screen display at the start of app

Fig. 1. Splash Screen

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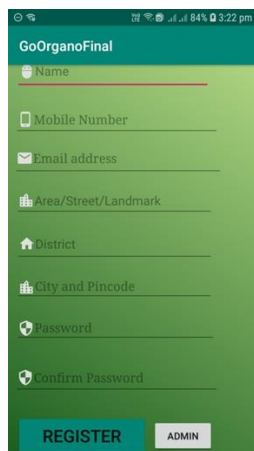*2) Shows registration page for new user in application*

Fig. 2. Registration page

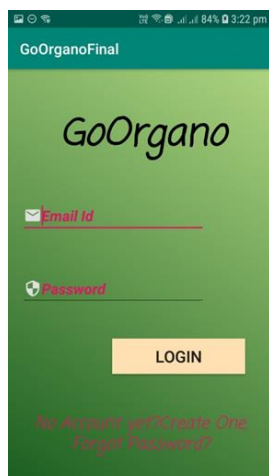*3) Shows login page for already registered user of go organo app*

Fig. 3. Log in screen

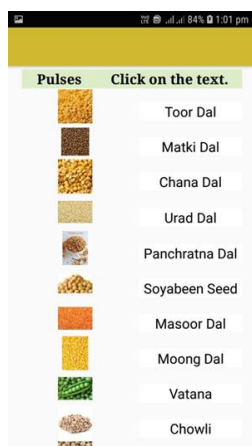*4) Shows menu list for pulses that can be bought by customer*

Fig. 4. Menu list of pulses

5. Conclusion

Agriculture is a vital sector of our country's economy and 25% of Indian population is in farming. Still farmers don't get sufficient amount of income because of presence of middlemen. In this paper we propose app GoOrgano app will help bridge the gap between farmers and actual market. The coding is done in java in Android Studio. Firebase database is used which uses cloud technology. The design was set up with the waterfall model. The main advantage of GoOrgano is that it is user friendly and economically beneficial to use for both farmers and customers. Wide variety of organic products will be made available to both types of users.

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