

A Proposed Model for Online Solution for APMC

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Abstract— Agricultural Produce Market Committee ensures that farmers are not exploited by intermediaries who compel farmers to sell their produce at the farm gate for an extremely low price. All food produce should first be brought to a market yard and then sold through auction. Over a period of time, these markets have acquired the status of restrictive and Monopolistic markets, harming the farmers rather than helping them to realize remunerative prices. We need to develop an application to ensure transparency between farmers and merchants. In this regards this application will provide the important information about agricultural products to merchants and updates of rates of the grains. This application is centralized as farmers can interact with APMC directly with this application in main hub. Farmers can also get updated rates and merchant information in this application. Most of the time farmer cannot contact to merchants directly to sell their products. They contact to middle men which leads to loss. This application provides direct communication between farmer and merchant.

Key words: Agricultural Produce Market Committee, Intermediaries, Farmers, Merchant Information

I. INTRODUCTION

India is a country of villages and farmers and more than 60 percent of its population lives in rural areas. Agricultural marketing in olden days meant farmer sold his produce directly to the consumer on a cash or barter basis. But in today's time, modern marketing, agricultural produce has to undergo a series of transfer or exchanges from one hand to another before it finally reaches the consumer. Presently, the farmers get their produce and sell them to merchants through middlemen at low rates. Therefore, there should be a convenient way for the farmer to sell their produce and get correct rates. Agricultural marketing involves three important functions namely assembling, processing and distribution. Agricultural produce marketing in India typically involves major stakeholders like farmers, agents, and traders. The regulated markets have helped in mitigating the market handicaps of producer's sellers. These have also provided physical facilities and institutional environment to the wholesalers commission agents. It was envisaged that these regulated markets will provide facilities and services which would attract the farmers and buyers creating competitive trade environment thereby offering best of prices to the producer- sellers.[1][2]

Direct marketing of the agricultural produce is the need of the hour. Efforts may be made to provide facilities for lifting the entire stock that farmers are willing to sell with incentive price. There should be provision for storing the stocks such as go downs and warehouses. It helps the farmers to hold the stocks till the prices are stabilized. Usually immediately just after the harvest the prices would

be low and if the farmers are patient in holding the same for some time it would fetch better prices. The brokers play the games during the trading of the agricultural stocks which the farmers do not know and realize because of improper information about the market prices. The brokers without any investment and with their negotiation skills transfer stocks by buying at low prices and selling at higher prices to the other end. The farmers need to be educated in this regard. There should be all-round rationalization and standardization of the prices through legislative means. Presently there is vast gap between the marketing strategies of agricultural produce in India and abroad and the same needs to be bridge. Remove the various malpractices prevalent in the present system. There is need to set up marketing committees which has the representation of growers, merchants, local bodies, traders and nominees from the govt. There should be collective and integrative efforts and energies from all quarters for ensuring just and price for farmers.[3]

II. EXISTING SYSTEM

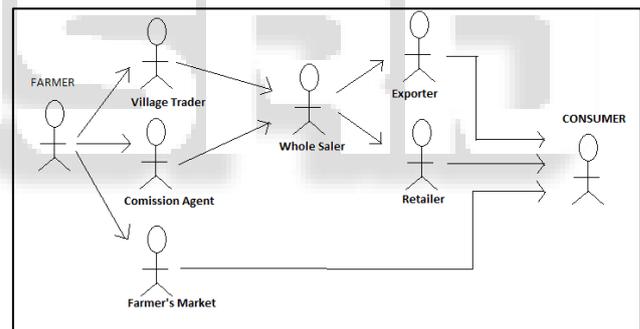


Fig. 1: Present system in agriculture marketing process

In the present system, farmers get a very low share of the rupee due to a long chain of intermediaries at the physical marketplace, which adds two major costs: the intermediary's margins as well as multiple handling costs[4] as shown in Figure 1. Most of the time, the farmers cannot contact the merchant directly to sell their products. They contact to middle man which leads to corruption.

A. Disadvantages

- Take more times to get information about any activities.
- It needs more man power.
- It does not give proper information.
- It deprives farmers from better customers, and consumers from original suppliers.[5]
- It is seen that agents in an APMC get together to form a cartel and deliberately restraint from higher bidding. Produce is procured at manipulatively discovered price and sold at higher price. Spoils are

then shared by participants, leaving farmers in lurch.[6]

- Unorganized, inefficient.
- High transaction costs and losses.

III. PROPOSED SYSTEM

The proposed application provides the information about agriculture crop rates. Further it may be developed to provide information like weather forecasting, government facilities, and government activities. This application may also take feedbacks, complaints, problems from people directly. It also provides the good suggestion for specific problems from the specialist of those fields. It is more helpful especially for farmers because it provides the information regarding to agriculture. It is also helpful for local people that provide the information about government facilities. It also provides the facilities that the people can directly communicate to government and give suggestions and complaints to higher authorities. It is specially made for the farmers because it provides all the information regarding to agriculture. It'll give market price of vegetables, seeds. It also provides a solution for specific problems from the specialist of agriculture.

A. System Architecture

Figure 2 shows the proposed architecture is a centralized architecture. The application will be installed at the APMC office and the chosen admin from APMC has the right to operate it. On conducting auctions, the APMC admin will send the SMS of updated rates to the farmers. So, farmers can sell their products to merchants with APMC fixed rates, because of which corruption by middle agent is eliminated.

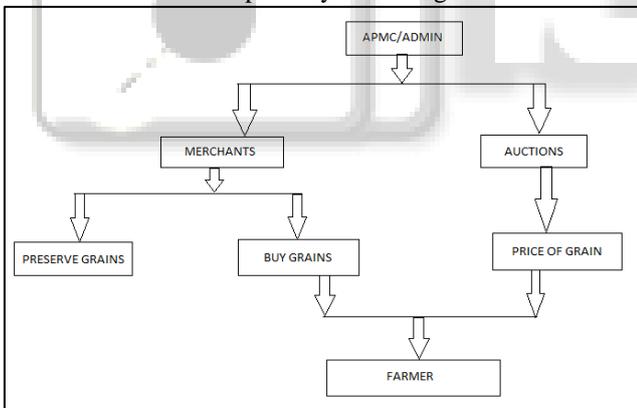


Fig. 2: The proposed system architecture

B. System Design

The system design of this application involves three main modules, namely APMC admin, farmer and merchant. They are connected to each other as shown in Figure 3. The APMC admin has direct access to the database. So he can modify the data and also can retrieve any data from the database.

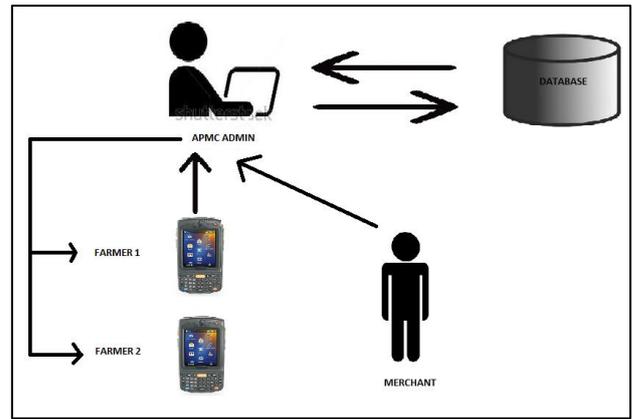


Fig. 3: System Design

Farmer can communicate with APMC by registering himself through registration form provided by this application. The registered farmers will then get the SMS of agriculture products rate by the APMC to their registered number.

APMC admin can add new merchant and merchant will be given a new username and password. Merchant can login through his username and password and can access the agriculture products information provided by the APMC admin.

C. Advantages

- Provides information about agriculture.
- Provides updated price list to registered farmers.
- Direct communication between government and people.
- Providing guidance about education, agriculture.
- Short Message Service (SMS) information system is user friendly as it allows the farmers to access the prices of selected agriculture products
- By providing a simple and inexpensive way for traders and farmers to share and access timely and reliable price information, the SMS system helps users make better-informed decisions, bargain more effectively, increase their professional network, and expand the scope of their business.
- The system also provides information about traders who are interested in purchasing commodities in specific markets.
- SMS system is reliable and is an easier way to get prices rather than going to the market.

IV. IMPLEMENTATION

This application is implemented using HTML and Java Server Pages(JSP) as front end and Database SQL Server Management Studio as back end. Validation is taken care by using Java Script. The system must have Net beans IDE and JDK 1.6 installed in it and should have a browser–Mozilla Firefox 9.2.0 or above.

This Web application displays login page as a home page. It has three different modules Farmer, Merchant and Admin as shown in Figure 4. An user can login as either of the above three modules with the given username and password or he can even reset the password. SMS module is implemented using SMS API. An URL is included in the

JSP code which is an API through which http request is sent to JSP server which sends the SMS to farmers.

Fig. 4: Login form.

The farmers are first registered and given username and password for login through new farmer registration form as shown in Figure 5.

Fig. 5: Farmer registration form

The admin plays a vital role because he has the rights to add new merchants, add grains and update the prices which will be SMSed to farmers by the admin. The feature “Add new merchant” contains merchant details like shop name, shop number, contact number so that it will be helpful for farmers. The admin can add new grains as well as updated rates as shown in Figure 6.

Item	Price	Edit	Delete
Rice	19.0	Edit	Delete
White Onion	12.5	Edit	Delete
Ragi	16.5	Edit	Delete
Whiteet	16.25	Edit	Delete
Potato	20.0	Edit	Delete
beans	15.0	Edit	Delete
Red Onion	14.0	Edit	Delete
carrot	20.0	Edit	Delete
aubas	21.0	Edit	Delete
apple	20.0	Edit	Delete

Fig. 6: Admin page with SMS option

Figure 7 shows the screen shot of SMS received on registered phone number of the farmer. It contains updated APMC rates of the grains added by the farmers. The SMS of updated rates of the products is sent to the farmers on timely manner as and when the database is updated. The application is further developed by implementing timer to the database.

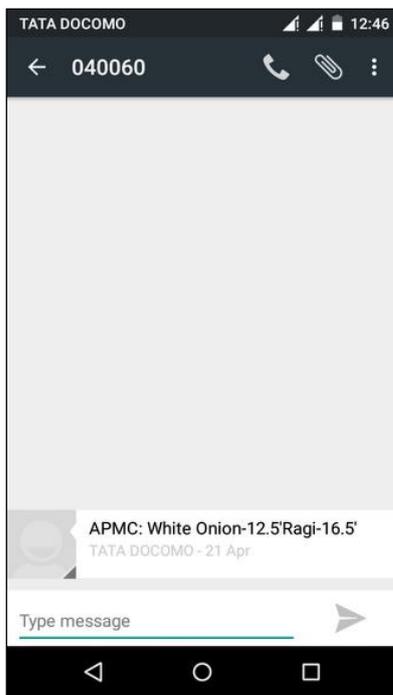


Fig. 7: Screen shot of SMS received

V. CONCLUSION

This paper intends just to propose a step in the recent developments in the field of agriculture. Market information is essential for agricultural development and to improve economic conditions of the producer. The proposed architecture provides good market information to ensure transparency, competitiveness and the more equitable sharing of benefits. The proposed system helps farmers in all manners, that is, in education, weather forecasting, information sharing, expert advice, crop analysis and understanding it more clearly in future.

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