IJCRT.ORG ISSN : 2320-2882

INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

AGROCRAFT AN E-COMMERCEWEBSITE FOR FRESH FARM PRODUCEVEGETABLES AND FRUITS MASTER

Ms.SHOBHA ,M. Krishna, C. Rana Prathap, G. Abhi Ram, Bharathi S K

ABSTRACT

Agriculture is the main occupation in India as it has major contribution in Indian economy as well as it is a primary source of livelihood of common masses. Farming contributes around 18% of the India's GDP and half of the population depends on it . Farmers are the backbone of the Indian economy, still they suffer from poverty, poor agricultural marketing, and many other problems. Our aim is to introduce the concept of digital marketing in the field of agriculture. We are trying to eliminate the role of middlemen from agricultural marketing in order to insure fair price to farmers. Though farmers try to sell their products on online platforms, due to quality and freshness issue many consumers did not buy them. Our proposed system will overcome both the problems of farmers as well as consumers.

Keywords: Android Application, Consumer, Digital Marketing, Deep Learning, Farmer, Graphical User Interface, Image Processing, Middlemen, Object Detection, Quality Detection.

• INTRODUCTION

India is a global agricultural powerhouse. Agricultural marketing in India still continues to be in a very bad shape in rural area. There is also the corruption that is increasing now a day. Farmers didn't get proper marketing facilities so, they have to depend upon local traders and middlemen for the disposal of their farm produce which is sold at very low price. The Rural Credit Survey Report stated that, the

producers or farmers sell agriproducts at an unfavourable place and at an unfavourable time and get unfavourable terms.

To carry on distress sale of their produce ,these farmers are forced under economic conditions. The earning of the services provided by the middlemen increases the load on the consumer, although the farmers doesn't get fair price. By promoting agricultural marketing, we can provide many opportunities to farmers. The facilities that can be provided are:

- e-farming is one of the way which will help the farmers to perform the agro-marketing.
- Detecting freshness of fruit and vegetables using images captured with a video camera attached to the system.
- Provides privilege for both farmers and consumers to buy and sell the required farm products without the involvement of a middleman at its right profitable price.
- To enhance the share of farmers in the ultimate price of his agriproducts.

In order to avoid this, there has to be direct relationship and communication between farmers and consumers. Because of great technology revolution, smart phones become the essential part of life even in rural areas. Farming community also realize the importance of digital marketing in field of agriculture. Implementing new technologies will help to reduce pre and post-harvest losses through appropriate methods and encourage value addition.

• LITERATURE REVIEW

A considerable amount of research has been done on the working a performance of agricultural marketing in India, by the academicians & researchers. The literature obtained by the investigator, in the form of reports and research studies, is briefly reviewed in this part.

• Hoff et al. (1993) in their research paper documented that in response to the de-institutionalization of rural areas that followed state compression, the reconstruction of new agrarian institutions complementary to the market and the state is thus a fundamental element of rural development. This has taken the form of either private or cooperative organizations.

• Grosh (1994) believed that since the turn of the millennium, attention has shifted toward more micro level and institutional policies. In particular, contractual arrangements with downstream processors, agro exporters and retailers, often or chest rated through farmer groups, are increasingly seen as a means of overcoming the market imperfections that led to the failure of macroeconomic and sect oral adjustment policies.

• Reardon and Barret (2000) in their study suggest that when market reforms the commodity prices raise, stimulating an increase in production, especially of the export crops.

The rise in price facilitates the establishment of super market chains, cooperatives, export oriented schemes, processing zones and general stimulation of agro industrialization in developing countries.

• Sivanappan (2000) in his study stated that with moderni zation of existing post-harvest processing, establishment of suitable infrastructural facilities, huge amount of countries exchequer can be saved and further helps in feeding the teeming population in the country .

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• Ramki Shen (2004) in his research paper argued that because of the lack of food processing and storage, the grower is deprived of a good price for his produce during the peak marketing season while the consumer needlessly pays a higher price during lean season.

• PROPOSED MODEL AND EXPERIMENTAL ANALYSIS

The supply chain of agriculture is worked as follows:

Farmers→ Small Traders→ Larger Trader→ Commission agent→ Wholesaler→ Retailer→ Consumer

There is a huge difference in the profit margin when this application is used and when not as shown in Fig 1. Through this application we achieve our main objective, which is to increase the profit margin of the farmers and make sure they get the right price for their efforts. In the absence of a direct link with the consumers, the farmers are at the mercy of the middlemen who occupy the entire space between the production and the ultimate sale of the produce. This makes farmers often find themselves at a disadvantage despite being the producers.

The following graph clearly indicates difference in prices through Middlemen and application.

Chart-1: price using middleman and price using app

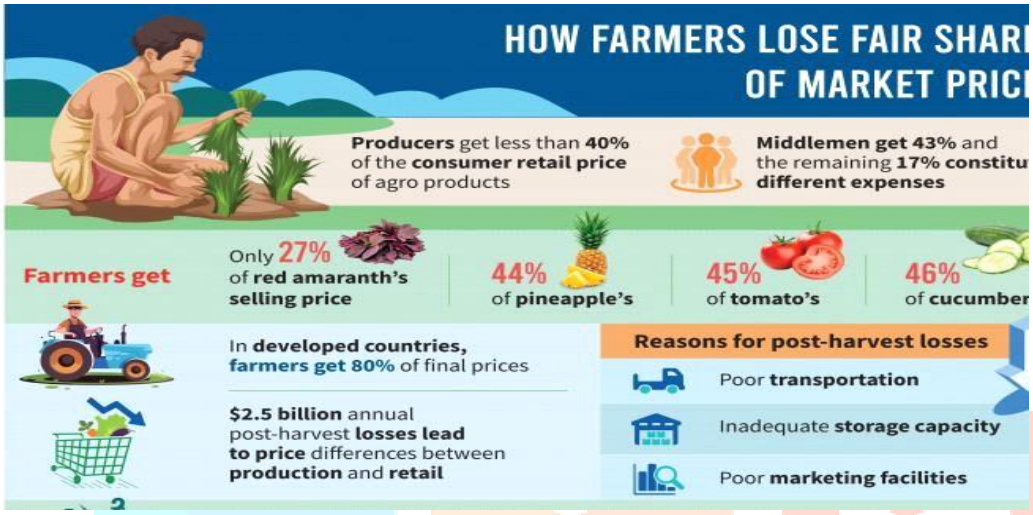

Fig 1. farmers lose fair shares of market prices

The proposed android application will be useful to society. The ultimate aim is to connect farmer directly to consumer by Eliminating middlemen from the process. Basically this model will work as following:

- Getting the image and details of products from farmers/consumers.
- Detect the class of clicked image to check whether the image is of Fruit or Vegetable Class.
- Detect freshness of product using proficiency of Deep Learning.
- Analyse the products added, considering the various criteria of examination required for it to meet the quality expectation of consumer.
- Get the fair price of the verified product and uploading it in the application for selling

The details of the products as given by the farmer should be proper. Depending on the quality, prices are decided for particular product. The products are estimated based on its quality, quantity and price following certain criteria. Due to this system, there is no need to send products to agricultural experts for quality checking

- OBjECTIVES

- User-Friendly Interface: Create an intuitive and easy-to-navigate interface for users to browse through various products seamlessly.
- Product CatLog: Develop a robust catalog system that allows for easy addition, modification, and removal of products. Include high-quality images and detailed descriptions for each product.
- Search Functionality: Provide a powerful search feature enabling users to quickly find specific products or categories, enhancing user experience.

• User Accounts and Profiles: Enable users to create accounts, manage their profiles, track order history, and save their favourite products for future reference.

• Continuous Improvement: Gather user feedback, conduct usability tests, and iterate on the website's design and functionality to continuously enhance the user experience.

• Accessibility: Ensure that the Farmer Web Portal is accessible to farmers with varying levels of technological expertise and resources. This may involve designing a user-friendly interface that is compatible with mobile devices and catering to farmers in areas with limited internet connectivity

• Crop Management: Assist farmers in optimizing their crop yields by offering detailed information on crop varieties, planting techniques, fertilization, and pest control.

• Knowledge Dissemination: The primary objective of the Farmer Web Portal is to disseminate valuable agricultural knowledge, best practices, and information to farmers. This includes information on crop cultivation, pest and disease management, irrigation techniques, and other farming-related topics.

• Market Access: Facilitate market access for farmers by providing real-time market prices and trends, helping them make informed decisions about when, where, and what to sell, ultimately increasing their profitability

• IMPLEMENTATION AND DESIGN OF PORTAL

ADMIN: Admin is a first step in a process, and the farmer or consumer must be logged in before moving on to the next step. The user is responsible for entering their own user id and password those particulars for the next login they are saved in mySQL Database if the user already has an account they do not need to establish a new one; simply input their username and password.

Fig 2. Registration using web portal

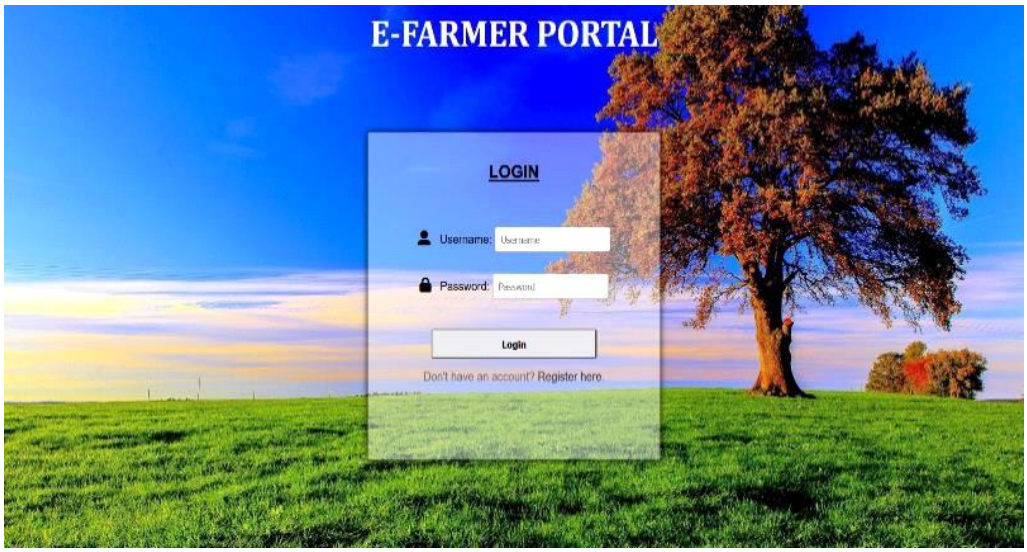

Fig 3.login Page

DASHBOARD:

(For Farmer)

After logging in, the farmer can publish products by providing product data, bank account information, projected price, variety, and status of product as open or closed. They are capable of performing these tasks without the assistance of a third party.

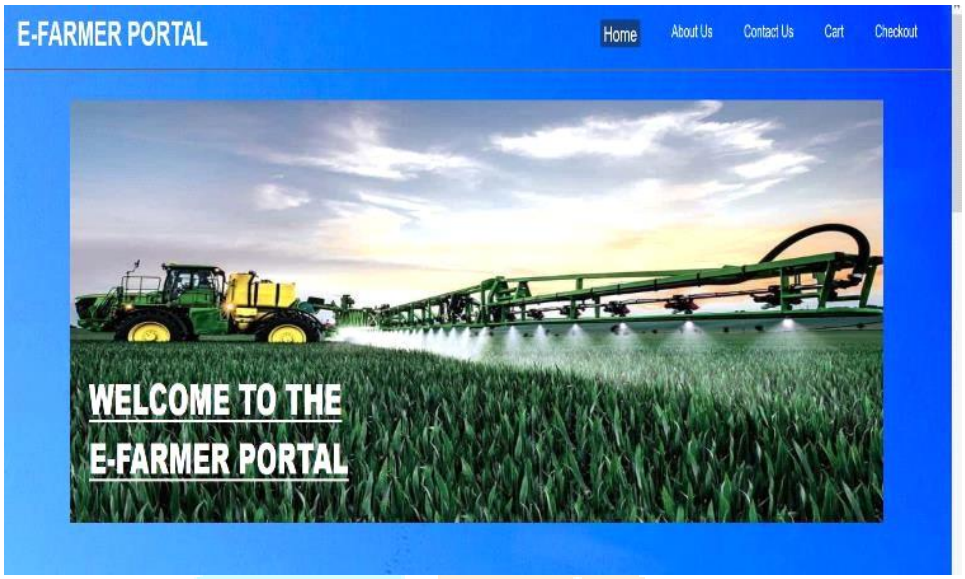

Fig 4. welcome page

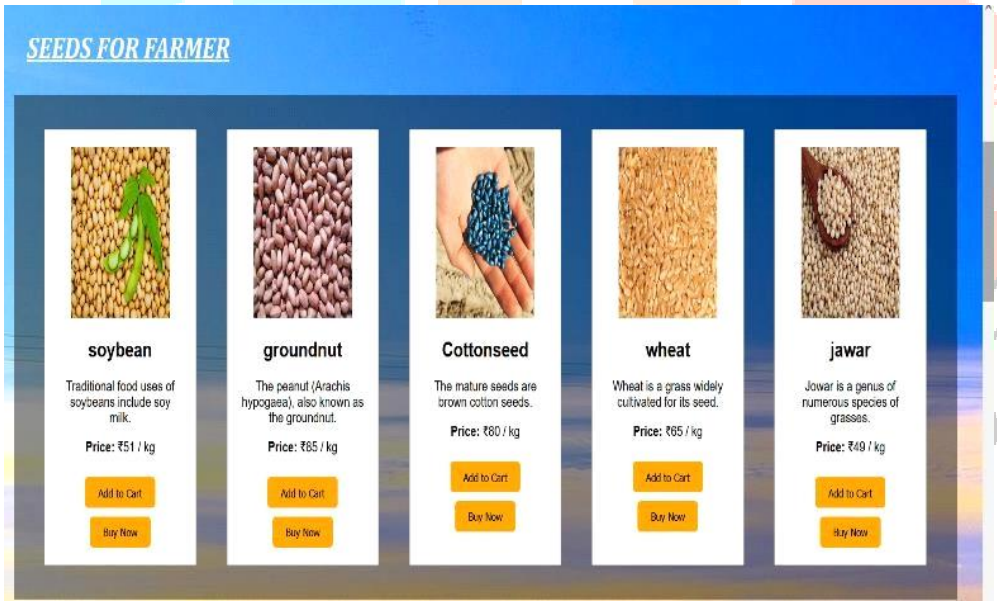

Fig 5. Seeds for farmer

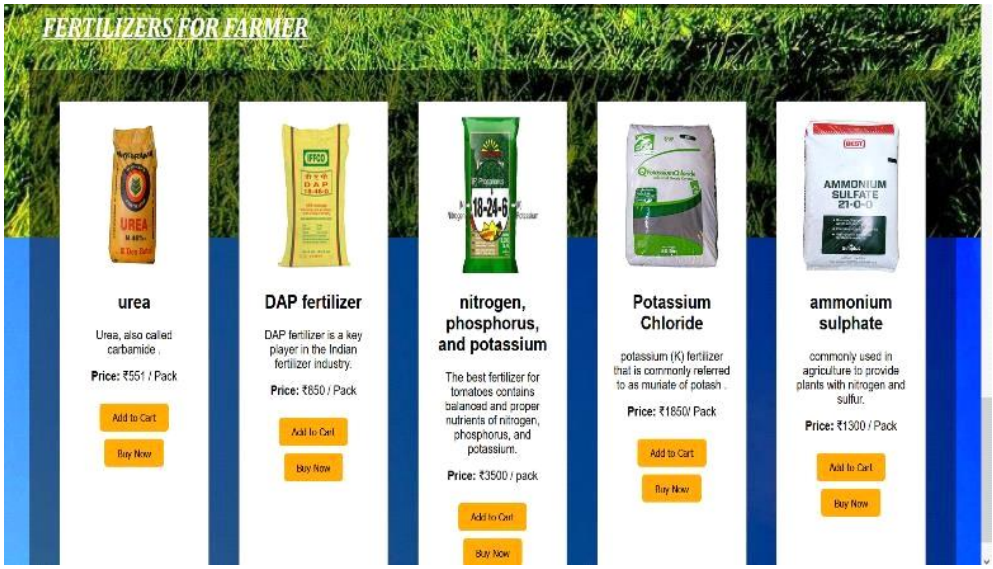

Fig 6.fertilizers for farmer (For Consumers)

Consumers can utilize this to buy seeds posted by farmers and can use a secure online bidding system to do so. If they're seeking a certain sort

of seed, such as ladies finger, they can go through the categories. If there is a ladies finger item added, they can purchase the seeds at the reserved price; otherwise, they will state that

there is no such item.

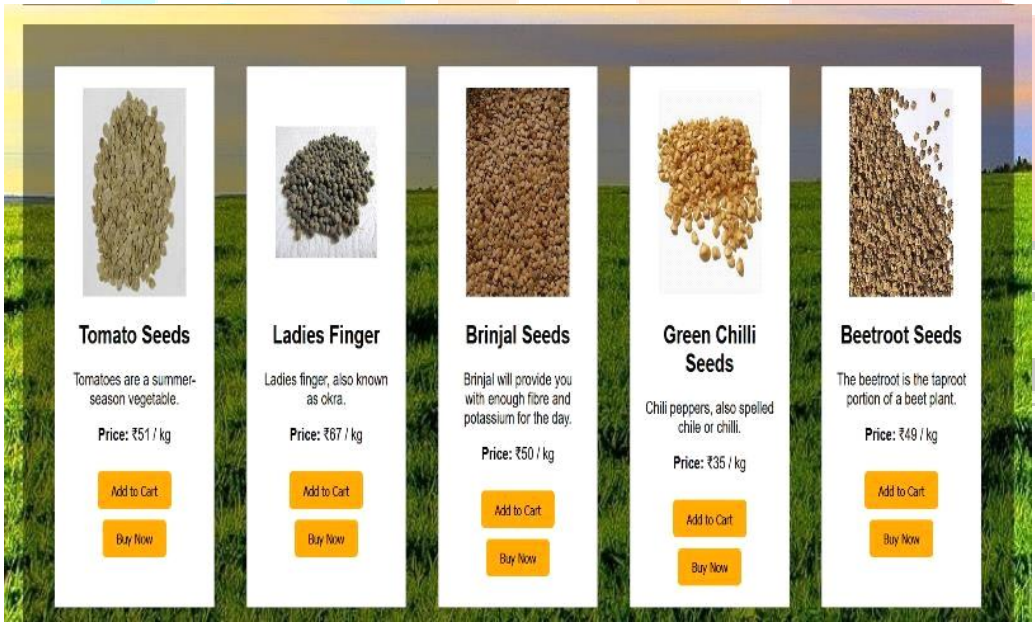

Fig 7.Seeds posted by farmer

• CONCLUSION

The paper represents an easily accessible and user-friendly portal for farmers and consumers to sell and buy agricultural produce. This will also help farmers to sell their products directly to consumers and ensure fair price to the farming community. Facility of checking quality before buying is also provided to consumers so that they get good quality products .To maintain transparency in marketing of agriproducts, system only allows farmers to capture and upload real time images of product on the portal having freshness greater than threshold. The “Ecommerce” is developed according the current need in different Fields. This is Ecommerce Website which provides facility for purchasing Mobiles, Laptops, tabs and many more items.

So by using this system users which want to purchase some products will first Register an account on this portal then Login through their Username and Password, and then Select items which they want to purchase and add them to cart and finally checkout by giving payment details. So by using this portal users can easily purchase products from their home

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