

# Design An E-Marketing Website on Agricultural Products

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**Abstract:** *The objective of the Agricultural Website Design for E-Farming Marketing System is to automate the existing manual system using computerized equipment and software, thereby storing valuable information/data for an extended period and enabling easy access and manipulation. The required hardware and software are readily available and user-friendly. The "Agricultural Website Design for E-Marketing product" is a system associated with E-Farming Management that ensures error-free, secure, reliable, and efficient management. By automating record-keeping tasks, users can focus on other activities, optimizing resource utilization. Computerized records eliminate redundancy and allow users to access relevant information without distraction. Technological advancements have played a crucial role in decision-making across various sectors, including agriculture. However, the agricultural sector has faced challenges due to limited knowledge and environmental changes. This study aims to raise awareness among farmers regarding e-Agriculture and assess their perception and usage of this technology. Statistical survey design was employed to collect data, revealing a low level of awareness and highlighting the need for e-Agriculture as a supportive tool in the farming community. e-Agriculture serves as a platform for marketing agricultural products. The objective is to develop an online platform that facilitates the sale of farmers' agricultural products while providing guidance on best farming practices.*

## I. INTRODUCTION

Farming is currently the predominant occupation in India, with widespread involvement in the agricultural system. The Agricultural Website Design for E-Marketing product aims to enhance the efficiency of cultivation by providing timely and relevant information to farmers. This E-Marketing system allows users, including farmers, to access online information about crops, tools, seeds, and more. It facilitates direct purchases of tools and seeds from sellers, eliminating the need for intermediaries such as agents or wholesalers.

Various initiatives have been implemented to enhance food production and security by establishing better market connections and improving smallholder farmers' access to local and international markets. These initiatives involve multiple levels of information management tasks.

Our application addresses the challenges outlined in the problem statement, providing comprehensive solutions for farmers. Additionally, it offers additional features such as government notifications and bank updates regarding loans.

However, a reliable network connection is necessary for users to receive these notifications.

### Existing System

Currently, there is a lack of an existing system that effectively utilizes previous farmer data based on specific criteria for analysis. E-mandi, an application developed under the Indian Government's initiative, addresses this gap by providing comprehensive crop rate information to farmers. By leveraging this application, farmers gain valuable insights into crop prices across various regions, enabling informed decision-making.

### Need of Project

Many times, farmers are not even aware of the schemes and compensation provided by government. In spite of all the opportunities banging the doors the farmers are not able to benefit out of those. Domestic robots are entering the homes and people's daily lives, but it is yet a relatively new and immature market problem especially agriculture market.

### **Problem Definition**

Farmers often lack awareness regarding government schemes and compensations available to them. Consequently, they are unable to take advantage of these opportunities. While domestic robots have made their way into households and people's daily lives, the agricultural market, in particular, is still a relatively new and underdeveloped segment.

### **Objectives**

- Facilitate Argo-marketing activities for farmers, leading to increased success and improved standards of living.
- Mitigate business malpractices and instances of cheating that farmers commonly face in the market. By enabling direct selling of their products or crops in the open market, this platform eliminates the need for intermediaries.
- Aid farmers in enhancing productivity and profitability through the utilization of the article and blog section, which offers valuable insights and guidance.
- Enable online Argo-marketing purchases, providing a unique and secure platform for farmers to engage in such transactions.
- Promote sustainable production practices, ensuring the long-term viability of agricultural activities.

## **II. LITERATURE REVIEW**

### **E-Agriculture**

Electronic agriculture, also known as e-Agra, is an innovative approach aimed at advancing agricultural information systems and fostering agricultural modernization. Serving as a comprehensive platform, it facilitates the seamless sharing of valuable information among farmers. Leveraging advancements in science and technology, e-Agra ensures the provision of accurate, timely, and authoritative agricultural information, taking full advantage of features such as timeliness and convenience. This approach heavily relies on modern information technology infrastructure, including state-of-the-art network facilities and communication tools, to integrate diverse types of information and resources. Key components of e-Agra encompass rural electronics, electronic farmers, and agricultural electronics.

### **IT in Agriculture**

Information technology advancements have significantly influenced the adoption of automation in various business processes. The agricultural sector has also witnessed the impact of modern process automation driven by information technology. Numerous activities in this sector have been automated, including soil sampling, variable-level fertilization, field mapping, crop scouting, harvesting, data management, and traceability. The successful development of the agricultural sector is attributed to the widespread implementation of IT

applications throughout the farm management process, spanning from soil preparation, planting, irrigation, pest management, to harvest. Key IT tools utilized in this context include decision support systems, sensors, data inventory systems, and expert systems. Furthermore, IT plays a crucial role in the marketing of agricultural crops through the utilization of e-commerce platforms, enhancing sales and expanding market reach for agricultural products.

### **Impact of SMS-Based Agricultural Information on Indian Farmers**

In a study conducted by Marcel Fafchamps in 2012, the potential benefits of delivering market and weather information to Indian farmers via mobile phones were examined. The research employed a randomized experiment involving 100 villages in Maharashtra. Treated farmers were provided with RML (Rainfall-Market Linkage) information, and their decision-making in agriculture was closely monitored. The findings indicate that the treatment had some impact on spatial arbitrage (buying and selling in different markets) and crop grading. However, the observed effects were relatively small in magnitude. The study did not find any statistically significant average effect of the treatment on the price received by farmers, crop value-added, crop losses resulting from rainstorms, or the likelihood of altering crop varieties and cultivation practices.

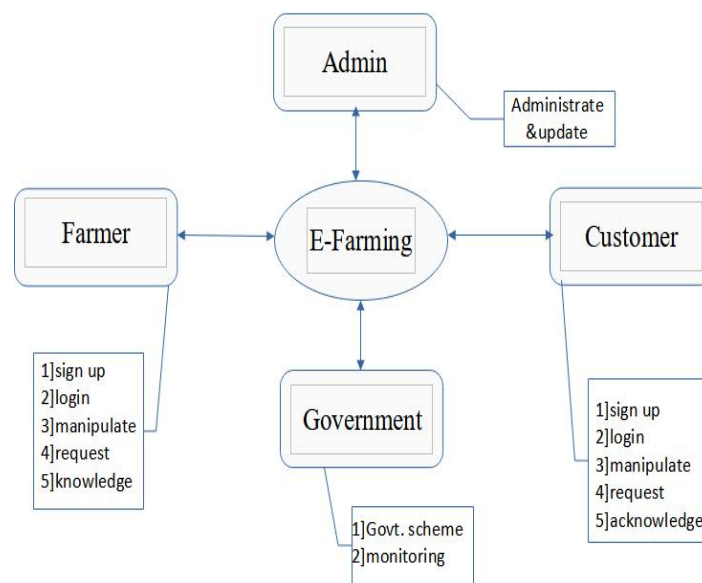
**Informative Learning of Agricultural Environment: A Brief Survey**

In their work published in 2010, Nizar Grira and Michel Crucianu emphasized the significance of relevant and high-quality information in enhancing the efficiency of various activities undertaken by Indian farmers. They recognized that the evolving landscape of deregulated agriculture necessitates the integration of such information into the decision-making process. Consequently, there is a growing need and urgency to leverage information technology (IT) as a strategic tool to benefit rural India. Recognizing the importance of IT in empowering farmers and driving agricultural development, it becomes crucial to explore its potential and incorporate it effectively into the agricultural sector.

**E-Agricultural Developments AgroVan 2012**

Recent publications highlight the importance of providing clear and unambiguous interpretations and implications of various articles and jargon used by the Financial Action Task Force (FATF) for the benefit of ordinary individuals. It is imperative for experts to distill the complex language and terminology used in FATF documents and clearly articulate the implications for all segments of Indian agriculture and allied activities. This process ensures that the information is easily understandable and accessible, enabling stakeholders in the agricultural sector to comprehend and effectively respond to the requirements and guidelines set forth by the FATF.

**III. PROPOSED METHODOLOGY**



Block Diagram 2: Data flow

**Admin:**

The administrator serves as the main caretaker of the site, responsible for both administrative and technical tasks, ensuring smooth functioning and maintenance of the platform.

**Farmer:**

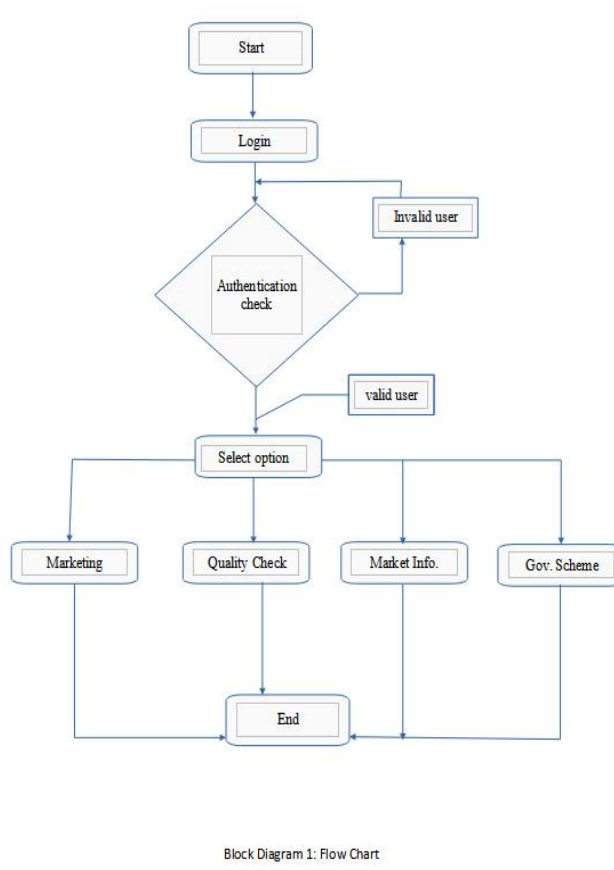
The farmer is a crucial participant in our system, acting as a supplier. They have limited authorities within the site, including functions such as logging in, engaging in trading activities, listing their products, and raising grievances, among others.

**Customer:**

The customer or retailer plays a vital role as the buyer in trading through our platform. They also have limited authority within the site, similar to the farmers, allowing them to participate in transactions and access necessary functionalities.

**Government:**

The government possesses limited authority within our system, primarily focused on monitoring activities to detect and eliminate any malpractices that may occur during trading. Their role involves ensuring the integrity and fairness of the platform's operations.



**The Overview of Site-**

- Site offers a sign-up and log-in option for both new and existing users, providing a seamless experience for all users.
- To ensure security and authentication, users are required to enter a password along with a captcha code during the log-in process. Additionally, new users receive an OTP (One- Time Password) as an extra layer of verification during the sign-up process.
- Once the authentication process is successfully completed, users gain unrestricted access to all blocks and sections of site, allowing them to navigate freely.
- To safely exit from site, users can simply click on the log-out option, ensuring a secure and smooth logout process.

**Algorithm/Steps to Developed the Site**

- Step 1: Back-end framing
- Step 2: Insert Database
- Step 3: Operate Device as Server
- Step 4: Design front end User Interface

- Step 5: Add independent Feature Blocks
- Step 6: Train machine learning

**Components**

1. Server
2. User device
3. Peripheral Components(Camera)
4. Internet connection

**IV. ADVANTAGES**

- Fast and secure trading.
- Quality check.
- Dynamic prizes.
- Large variety of crop.
- Optimize for all devices.
- B-B & B-C trading option as well as Reverse trading option.

**V. APPLICATIONS**

1. Site is designed to be user-friendly, specifically tailored for marketing purposes.
2. Users can easily access up-to-date and accurate market information with just one touch.
3. Our platform aims to minimize corruption, inconvenience, and uneasiness associated with accessing market information, ensuring a smooth viewing experience.
4. Users can conveniently access and apply for schemes and compensation provided by the government, reducing any complications or difficulties.
5. We offer agriculture education through E- learning, providing a valuable resource for individuals to enhance their knowledge and skills in the agricultural field.

**VI. FUTURE SCOPE**

In the future, our site will continue to evolve and gain additional features as we, the administrators, frequently update it. The site has the capability to integrate numerous blocks specifically related to e-farming, limited only by the storage capacity of our server.

The Machine Learning block we have implemented to assess the quality and freshness of vegetables is becoming increasingly accurate over time, thanks to robust and efficient ML algorithms and a vast database. This enhancement undoubtedly boosts the potential of the site.

Aligned with our ambitions, we strongly advocate for a free and open market accessible to all. As a result, we are currently working on an updated and improved version of the site with new features, enhanced hardware, and various advancements.

Upon achieving success with this site, we plan to approach the state government with the proposition of merging our platform with another government site, such as MahaDBT. This collaboration aims to enhance the digitization of agriculture in our home state.

If our vision comes to fruition, the nation will soon witness the emergence of Green Revolution 2.0, encompassing e-Agro product trading and free marketing, contributing to the growth and prosperity of the agricultural sector.

**VII. CONCLUSION**

This project serves as a valuable resource for farmers to access market information, acting as a unique interface for schemes and compensation. It ensures that farmers stay informed about the latest techniques and trends in farming. However, new users may initially experience some difficulty in navigating and utilizing the site. Nonetheless, the system as a whole is designed to be fast, secure, and user-friendly, providing a comfortable and efficient experience for farmers.

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