

# ShivKrushi: A Simple Web-Based Platform for Farmers and Traders

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**Abstract:** Agriculture plays a crucial role in the rural economy, yet many farmers struggle to sell their produce at fair prices due to limited access to direct markets and the heavy dependence on middlemen. The Farmer Portal is a web-based platform designed to connect farmers directly with traders, helping reduce the influence of intermediaries and improve market transparency. The system allows farmers to register, upload product details such as crop name, category, quantity, expected price, and images, and manage their listings easily. Traders can browse available agricultural products, search or filter crops based on categories, and directly contact farmers using the provided contact information.

The portal is developed using CodeIgniter (CI) framework with PHP, HTML, CSS, and MySQL database, providing a structured, secure, and scalable development environment. The system follows a three-tier architecture consisting of the presentation layer, application layer, and database layer to ensure efficient data management and smooth operation. An Admin module is implemented to manage users, monitor product listings, and share important updates related to agricultural schemes. The platform intentionally avoids complex features such as payment gateways and logistics integration to maintain simplicity and accessibility for users with basic digital literacy. Overall, the Farmer Portal provides a transparent and user-friendly digital solution that enhances farmers' market visibility, enables direct farmer-trader communication, and contributes toward improving the agricultural marketing ecosystem.

**Keywords:** Farmer Portal, Digital Agriculture, CodeIgniter Framework, PHP, MySQL, Agricultural Marketplace, Farmer-Trader Platform, Online Crop Listing, Rural Technology, Agricultural Marketing System

## I. INTRODUCTION

Agriculture is an important sector of the economy, especially in rural areas where many people depend on farming for their livelihood. Farmers produce crops such as grains, vegetables, and fruits, but they often face difficulties in selling their produce at fair prices. Most farmers depend on local markets and middlemen to sell their crops. These intermediaries usually control the pricing and take a large share of the profit, which results in lower income for farmers. In the traditional marketing system, farmers take their products to local markets where traders purchase them through intermediaries. This system often lacks transparency, and farmers may not know the actual market demand or price of their crops. Because of this, they are forced to accept lower prices. Small-scale farmers also face challenges in reaching larger markets due to limited resources and lack of information.

To solve these problems, a Farmer Portal is developed as a simple web-based platform that connects farmers directly with traders. Farmers can register on the portal and add details of their crops, such as name, quantity, expected price, and images. Traders can search for products and contact farmers directly using the provided contact information.



## **II. PROBLEM STATEMENT**

Farmers play a vital role in the agricultural economy, but they often face many difficulties while selling their agricultural products. In the traditional marketing system, farmers usually depend on local markets and intermediaries to sell their crops. These middlemen control the pricing and take a significant share of the profit, which results in lower income for farmers. Due to the lack of direct communication with buyers, farmers are not always aware of the actual market demand or fair price of their produce.

Many small-scale farmers also face challenges in reaching larger markets because they have limited resources, transportation facilities, and marketing knowledge. As a result, they are forced to sell their crops at lower prices in local markets. Although digital platforms can help connect farmers directly with traders, many existing systems are complex and difficult for rural farmers to use.

Therefore, there is a need for a simple and user-friendly platform that allows farmers to display their agricultural products and connect directly with traders. Such a system can reduce the dependence on middlemen, improve transparency in the agricultural market, and help farmers get better opportunities to sell their produce.

Another problem is that small-scale farmers have limited access to larger markets. They may not have enough knowledge, resources, or transportation facilities to promote and sell their products beyond their local area. Due to these limitations, farmers are unable to find better buyers and fair market prices for their produce.

Therefore, there is a need for a simple and efficient system that can help farmers connect directly with traders. Such a platform can reduce the role of middlemen, improve transparency in the agricultural market, and provide farmers with better opportunities to sell their products at fair prices

## **III. LITERATURE REVIEW**

Agricultural marketing has been an important research area as farmers often face difficulties in selling their crops at fair prices. Many studies have highlighted the problems in traditional agricultural marketing systems where farmers depend heavily on intermediaries and local markets. Researchers have found that the presence of middlemen reduces farmers' profits and creates a lack of transparency in the pricing system. Because farmers do not have direct access to buyers, they are often forced to sell their produce at lower prices.

Several studies suggest that digital technology can improve agricultural marketing by connecting farmers directly with traders and consumers. Online platforms and mobile applications can provide farmers with better market information, price details, and wider market access. These systems help reduce the role of intermediaries and improve communication between farmers and buyers.

However, many existing agricultural e-commerce platforms are complex and require advanced technical knowledge, online payment systems, and logistics management. Such features can be difficult for rural farmers to understand and use effectively. Therefore, many researchers recommend developing simple and user-friendly platforms that focus mainly on connecting farmers with traders rather than handling complicated transactions.

Based on these studies, the Farmer Portal system is designed as a simple web-based platform where farmers can list their agricultural products and traders can easily search and contact them. This approach helps improve transparency, increases market opportunities for farmers, and supports a more efficient agricultural marketing system.

## **IV. OBJECTIVES**

The main objective of the Farmer Portal is to create a simple and effective digital platform that connects farmers directly with traders, reducing the dependence on middlemen and improving transparency in agricultural marketing. The system aims to provide farmers with an easy way to showcase their agricultural products and allow traders to find and contact farmers without complicated procedures.

The key objectives of the project are as follows:

1. To provide a digital platform for farmers where they can easily register and list their agricultural products such as grains, fruits, and vegetables.



2. To connect farmers directly with traders so that both parties can communicate without the involvement of intermediaries.
3. To increase the visibility of farmers' produce by allowing traders from different locations to browse and search available crops online.
4. To simplify the agricultural marketing process by creating a user-friendly web portal that can be used by individuals with basic digital knowledge.
5. To allow traders to easily find products by providing search and filtering options based on crop categories and product types.

## **V. METHODOLOGY**

The methodology of the Farmer Portal project focuses on developing a simple and efficient web-based system that connects farmers with traders. The development process begins with analyzing the problems faced by farmers in traditional agricultural marketing systems, such as dependence on middlemen, lack of market information, and limited access to buyers. Based on these challenges, the system is designed to provide a digital platform where farmers can easily display their products and traders can find and contact them directly.

After analyzing the requirements, the system design is prepared to define the structure of the portal, including user modules, database design, and interface layout. The main modules of the system include farmer registration and login, product listing, trader search functionality, and an admin management module. The database is designed using MySQL to store user details, product information, and other related data.

The implementation phase involves developing the web application using the CodeIgniter framework along with PHP, HTML, and CSS. CodeIgniter helps in organizing the code through the Model-View-Controller (MVC) architecture, which separates the application logic, user interface, and database operations. This structure improves system performance and makes the application easier to maintain.

Once the development is completed, the system is tested to ensure that all modules function correctly. Testing includes checking the registration process, product listing, search features, and admin controls. Any errors identified during testing are corrected to improve system reliability. Finally, the portal is deployed so that farmers and traders can use the platform to connect and communicate directly, helping to improve the agricultural marketing process.

## **VI. PROPOSED SYSTEM**

The proposed system is a Farmer Portal, a web-based platform designed to connect farmers directly with traders. The main objective of this system is to reduce the dependency on middlemen and provide farmers with better opportunities to sell their agricultural products. The portal allows farmers to register on the platform and display details of their crops, such as crop name, category, quantity, expected price, and product images. This information helps traders easily find available agricultural products.

Traders can browse the portal, search for specific crops or categories, and view the details posted by farmers. The system also displays the contact information of farmers, allowing traders to communicate with them directly through phone calls or other offline methods. This direct communication helps both farmers and traders negotiate prices without the involvement of intermediaries.

The system is developed using CodeIgniter framework, PHP, HTML, CSS, and MySQL database. It follows a structured architecture that separates the user interface, application logic, and database management. This improves system performance and makes the application easier to maintain.

The Farmer Portal also includes an Admin module that allows administrators to manage users, monitor product listings, remove inappropriate content, and update important agricultural information. The system is designed to be simple and easy to use so that farmers with basic digital knowledge can access the platform without difficulty. By providing a direct communication platform between farmers and traders, the proposed system helps improve transparency and efficiency in agricultural marketing.



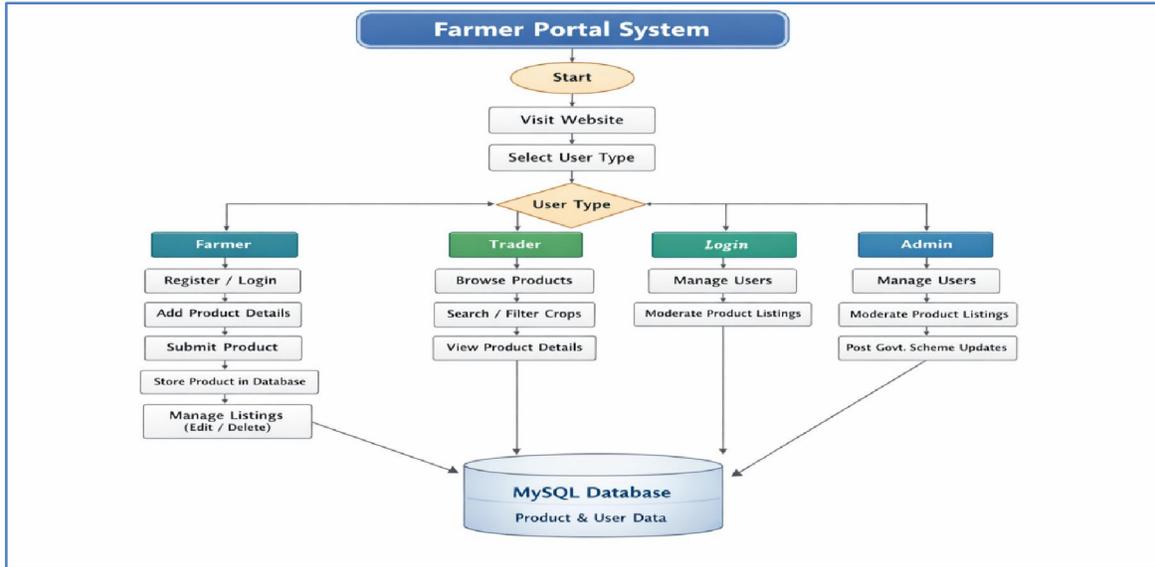
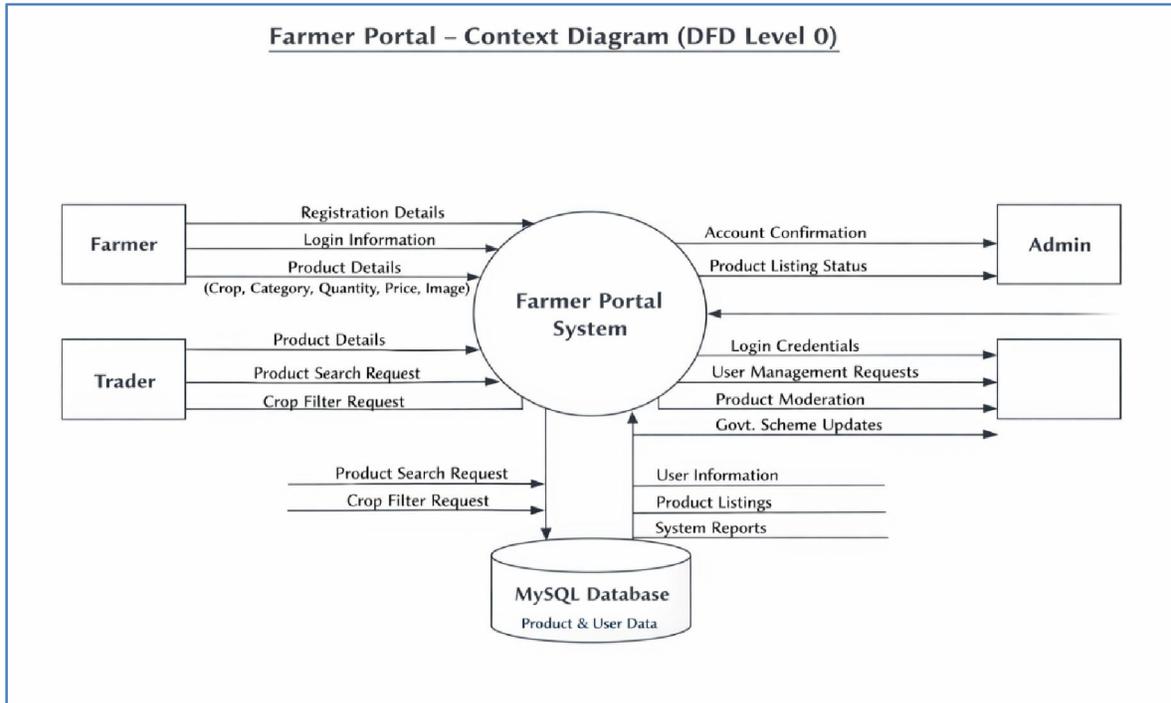


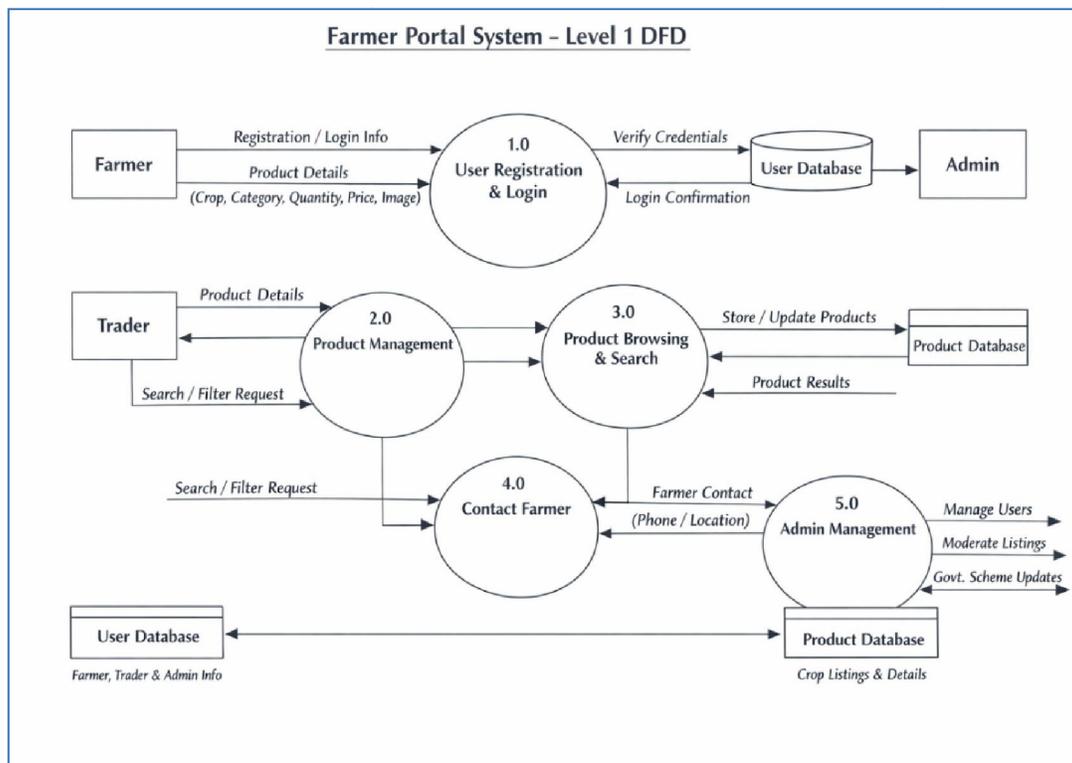
Fig.1 Architectural Diagram of ShivKrushi : A Simple Web-Based Platform for Farmers and Traders.

DFD Diagram :-

Level 0 :-

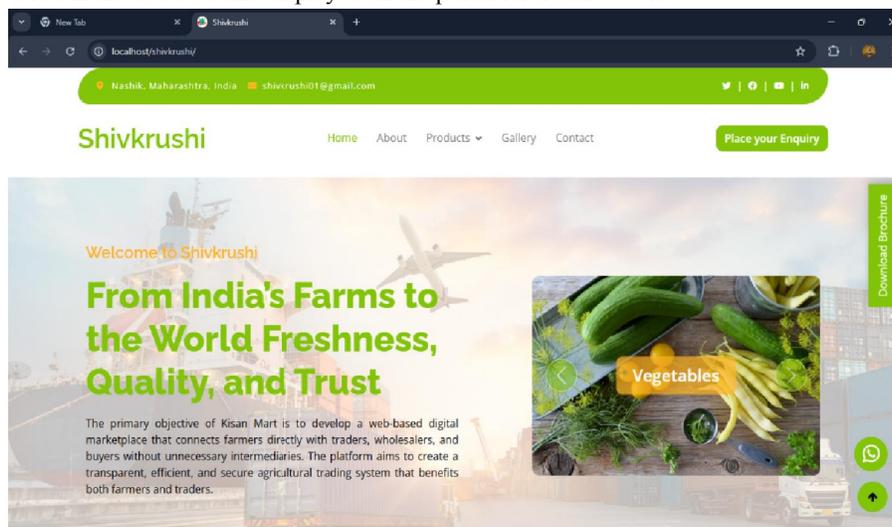


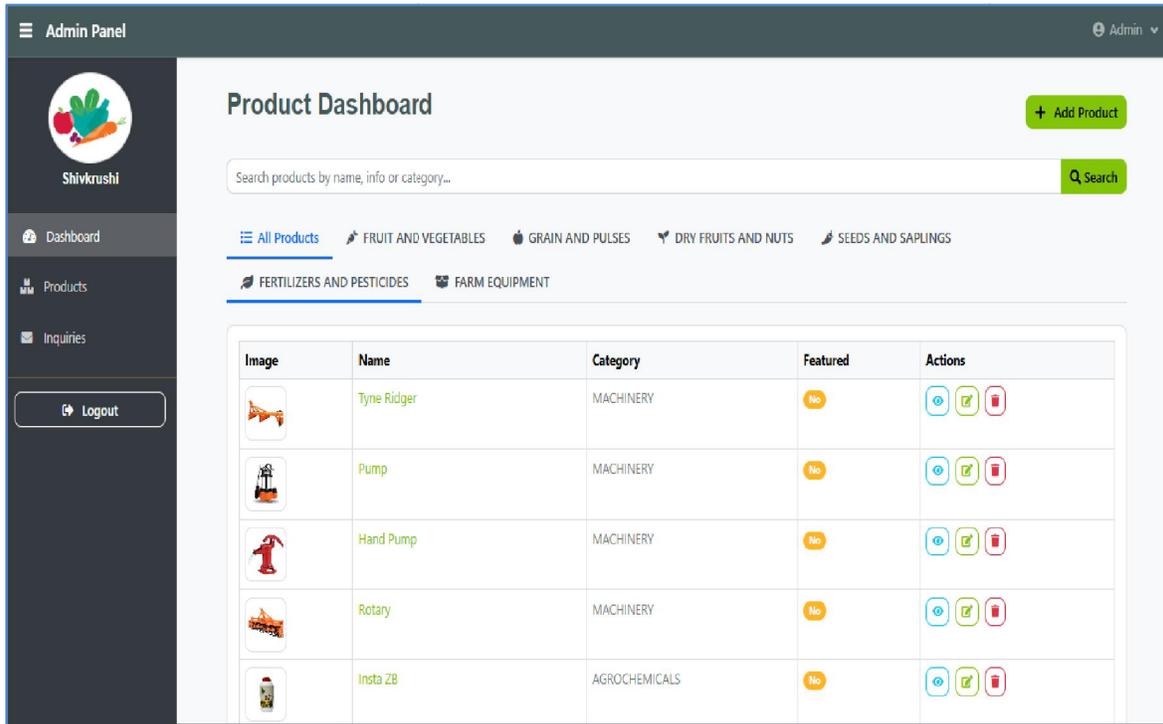
Level 1 :-



## VII. OUTPUT

The Farmer Portal system successfully provides a digital platform where farmers can display their agricultural products and traders can easily search and contact them. After implementing and testing the system, the portal allows farmers to register, log in, and add product details such as crop name, category, quantity, expected price, and product images. This information is stored in the database and displayed on the portal for traders to view.





**Admin Panel** | Admin

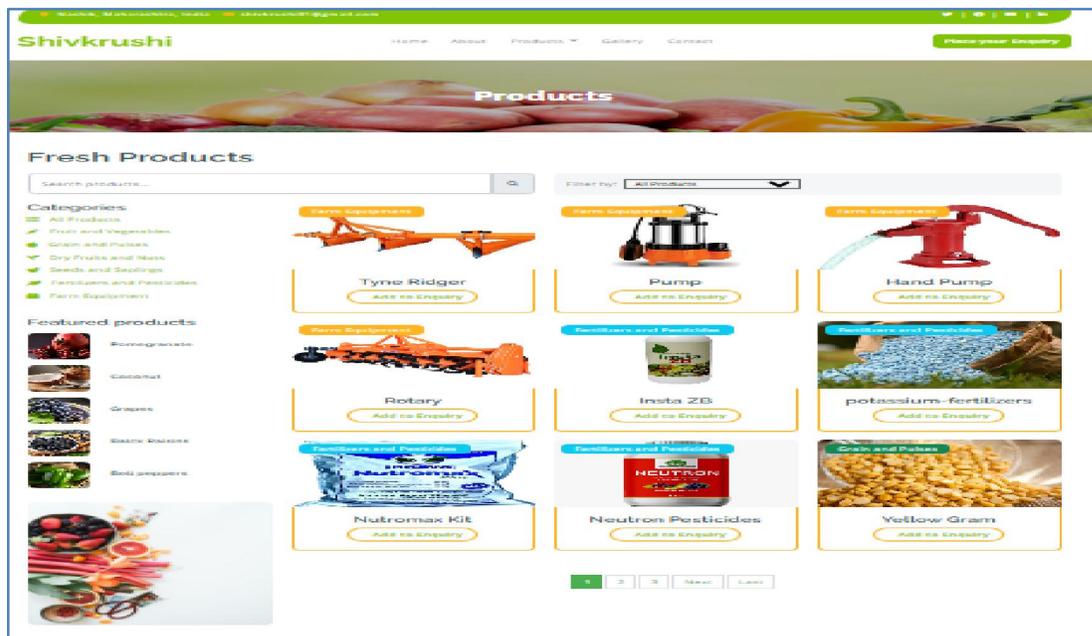
### Product Dashboard

+ Add Product

Search products by name, info or category...

All Products
  FRUIT AND VEGETABLES
  GRAIN AND PULSES
  DRY FRUITS AND NUTS
  SEEDS AND SAPPLINGS
  FERTILIZERS AND PESTICIDES
  FARM EQUIPMENT

Image	Name	Category	Featured	Actions
	Tyne Ridger	MACHINERY	No	<input type="button" value="Edit"/> <input type="button" value="Add"/> <input type="button" value="Delete"/>
	Pump	MACHINERY	No	<input type="button" value="Edit"/> <input type="button" value="Add"/> <input type="button" value="Delete"/>
	Hand Pump	MACHINERY	No	<input type="button" value="Edit"/> <input type="button" value="Add"/> <input type="button" value="Delete"/>
	Rotary	MACHINERY	No	<input type="button" value="Edit"/> <input type="button" value="Add"/> <input type="button" value="Delete"/>
	Insta ZB	AGROCHEMICALS	No	<input type="button" value="Edit"/> <input type="button" value="Add"/> <input type="button" value="Delete"/>



**Shivkrushi** | Home | About | Products | Gallery | Contact |

## Products

### Fresh Products

Search products...

Order by:

**Categories**

- All Products
- Fruit and Vegetables
- Grain and Pulses
- Dry Fruits and Nuts
- Seeds and Sapplings
- Fertilizers and Pesticides
- Farm Equipments

**Featured products**

- Homegrown
- Cheerful
- Green
- Stain Resistant
- Soft texture

**Farm Equipment**



Tyne Ridger

**Farm Equipment**



Pump

**Farm Equipment**



Hand Pump

**Farm Equipment**



Rotary

**Fertilizers and Pesticides**



Insta ZB

**potassium-fertilizers**



potassium-fertilizers

**Fertilizers and Pesticides**



Nulromax GE

**Fertilizers and Pesticides**



Neutron Pesticides

**Grain and Pulses**



Yellow Gram

### VIII. CONCLUSION

The Farmer Portal System successfully addresses one of the major challenges in agriculture: the lack of direct access for farmers to connect with buyers. By providing a simple, web-based platform, the system enables farmers to list their



products, display essential details, and reach traders beyond their local markets. Traders, in turn, can easily search for crops, view product information, and contact farmers directly, reducing the dependency on middlemen and improving transparency in pricing.

Developed using CodeIgniter, PHP, HTML, CSS, and MySQL, the system is lightweight, cost-effective, and easy to maintain. The inclusion of an Admin module ensures proper monitoring, content moderation, and dissemination of important agricultural updates. The system's design emphasizes simplicity and usability, making it accessible to users with basic digital literacy, which is essential for rural adoption.

While the current implementation focuses on a directory-style communication platform, it lays a strong foundation for future enhancements, including mobile integration, secure online transactions, rating systems, and advanced analytics. Overall, the Farmer Portal demonstrates how digital technology can bridge the gap between farmers and market buyers, increase market efficiency, and empower rural producers, ultimately contributing to a more transparent and effective agricultural ecosystem.

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### **REFERENCES**

- [1] M. A. Iqbal, *Digital Agriculture: An Introduction*. Cham, Switzerland: Springer, 2024.
- [2] P. M. Priyadarshan, S. M. Jain, S. Penna, and J. M. Al-Khayri, *Digital Agriculture: A Solution for Sustainable Food and Nutritional Security*. Cham, Switzerland: Springer, 2024.
- [3] J. Dörr and M. Nachtmann, *Handbook Digital Farming: Digital Transformation for Sustainable Agriculture*. Berlin, Germany: Springer, 2022.
- [4] S. Gupta, W. Hasan, S. Singh, D. Kumar, M. J. Ansari, and S. Nisar, *Agriculture 4.0: Smart Farming with IoT and Artificial Intelligence*. Boca Raton, FL: CRC Press, 2025.
- [5] F. Daya J. L., S. G. Jasmine, and U. Kose, *Digital Farming and Smart Agriculture for Sustainable Future*. Boca Raton, FL: CRC Press, 2025.
- [6] H. Niu and Y. Chen, *Smart Big Data in Digital Agriculture Applications*. Cham, Switzerland: Springer, 2024.
- [7] R. R. Shamshiri and S. Shafian, *Digital Agriculture: Methods and Applications*. London: IntechOpen, 2022.
- [8] S. Chaudhary, C. M. Biradar, S. Divakaran, and M. S. Raval, *Digital Ecosystem for Innovation in Agriculture*. Singapore: Springer, 2023.
- [9] S. K. Srivastava, D. Srivastava, K. Cengiz, and P. Gaur, *Smart Agritech*. Hoboken, NJ: Wiley-Scrivener, 2024.
- [10] K. Praveen, *Smart Farming and Digital Agriculture: Technology-Driven Solutions for the Future*. Deep Science Publishing, 2025.

