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Agri-Shop for Farmer Online Shopping Using E-Digital Marketing

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ABSTRACT

Agriculture depends on timely access to quality seeds, fertilizers, pesticides, farming tools, irrigation equipment, and other agricultural supplies. Farmers may face difficulties comparing products, finding reliable sellers, checking prices, and learning about new products through conventional purchasing channels. This paper proposes "Agri Shop," an online shopping platform for farmers supported by e-digital marketing. The proposed system brings agricultural products, product information, price details, order placement, and seller communication into a single digital platform. Digital marketing features such as product announcements, seasonal offers, educational content, search visibility, and opt-in notifications can help farmers discover relevant products. The system workflow includes user registration, product catalogue management, search and comparison, cart and order management, payment or cash-on-delivery options where supported, delivery tracking, feedback, and an administrative dashboard. The paper describes the proposed design and evaluation plan; actual usability, sales, and performance results must be measured after implementation and are not claimed here.

Keywords—Agri Shop, Online Shopping, Farmers, E-Commerce, E-Digital Marketing, Agricultural Products, Digital Platform.

I. INTRODUCTION

Agriculture is an important livelihood and economic activity. Farmers regularly need agricultural inputs and equipment, but availability, distance to shops, limited product information, and price comparison can make purchasing time-consuming. A digital marketplace can provide a convenient way to browse products and contact sellers without requiring farmers to visit multiple shops.

Agri Shop is proposed as an online shopping platform designed around farmers' purchasing needs. It can present products in categories, show descriptions and prices, and support order placement. E-digital marketing complements the shopping functions by helping farmers discover products through digital campaigns, useful farming information, seasonal promotions, and consent-based notifications.

1.1 Importance of E-Digital Marketing

E-digital marketing uses online channels to communicate product information and reach customers. For Agri Shop, it may include a mobile-friendly website, search-engine visibility, educational articles, social media posts, email or SMS updates where users have consented, and seasonal product campaigns. Marketing messages should be relevant, transparent, and easy to opt out of.

1.2 Problem Statement

Farmers may have limited access to consolidated product details and may depend on local availability or word-of-mouth information. Sellers can also find it difficult to reach farmers outside their immediate area. Agri Shop aims to reduce these information gaps by providing a central online catalogue and digital promotion features, while recognizing that delivery coverage, connectivity, language, and trust must be considered.

II. EXISTING SYSTEM

In a conventional purchasing process, farmers often visit local agricultural shops, contact sellers by phone, or rely on printed promotions and personal recommendations. These channels remain useful, particularly where internet access is limited, but product comparison and remote discovery may require additional time.

2.1 Limitations of the Existing System

Farmers may need to visit multiple shops to compare availability and prices.

Product information and stock details may not be available in one place.

Farmers may have limited visibility of offers from sellers in other locations.

Small sellers may find it difficult to promote products to a wider audience.

Order records, customer feedback, and delivery updates may be handled manually.

Digital access, language barriers, and concerns about product authenticity can limit adoption.

III. PROPOSED SYSTEM

The proposed Agri Shop platform provides a digital catalogue of agricultural products and a straightforward process for browsing, ordering, and receiving updates. Farmers can register or browse permitted catalogue information, search by category or product name, review available descriptions and prices, add items to a cart, place an order, and view order status. Sellers or administrators manage product listings, prices, stock information, and order updates.

E-digital marketing features support product discovery through seasonal campaigns, product education, featured listings, and opt-in notifications. Recommendations and promotions should be clearly labelled and should not replace independent agricultural advice. Product claims, usage directions, and regulatory information must be verified by appropriate suppliers or authorities.

3.1 Advantages of the Proposed System

Provides a centralized catalogue for agricultural products.

Helps farmers review product details and compare listed prices.

Allows sellers to share availability and promotions digitally.

Supports order records and status updates in one platform.

Can improve product discovery through educational and seasonal content.

Creates opportunities to collect feedback and improve service.

Can be extended with regional languages and mobile-friendly access.

IV. RELATED WORK

E-commerce platforms demonstrate how digital catalogues, search, shopping carts, order processing, and customer feedback can support online purchasing. Digital marketing practices—including content marketing, search visibility, and permission-based messaging—can help users discover products and services. For an agricultural marketplace, these approaches should be adapted to farmers' practical requirements, including seasonal demand, rural connectivity, local languages, transparent pricing, and confidence in sellers.

The proposed project combines basic e-commerce functions with farmer-focused digital communication. Its contribution is a system design and workflow; claims about improved sales, savings, or farmer adoption require evaluation using real implementation data.

V. METHODOLOGY

The project follows a structured process: requirement collection, system design, database planning, interface development, implementation of shopping and marketing modules, testing, and evaluation. Requirements should be gathered from intended users such as farmers, agricultural product sellers, and administrators.

5.1 Requirement Analysis

Functional requirements include user registration and login, product browsing and search, product details, cart management, order placement, order-status viewing, seller product management, and administrative control. Marketing requirements may include campaign creation, featured products, educational content, and opt-in notifications. Non-functional requirements include usability, security, performance, availability, accessibility, and data privacy.

5.2 Data and Product Management

Product records may include product name, category, description, unit or pack size, listed price, stock status, seller details, delivery area, and relevant safety or compliance information. User records should contain only information necessary for the service. Access to customer and order data must be restricted to authorized roles.

5.3 Shopping Workflow

A farmer opens Agri Shop, searches or browses a category, reviews product details, adds a product to the cart, confirms quantity and delivery information, and submits the order. The system records the order and provides a status update. Payment methods depend on the actual implementation and local availability; they should not be described as supported unless implemented.

5.4 E-Digital Marketing Strategy

Content marketing: publish clear, practical product information and seasonal buying guides.

Product campaigns: highlight relevant products and offers during suitable farming seasons.

Search visibility: organize categories and product titles so users can find items easily.

Social channels: share verified product updates and links through suitable digital channels.

Opt-in messaging: send order updates and optional promotions only with appropriate consent.

Measurement: track visits, product views, cart activity, completed orders, and campaign engagement using privacy-conscious analytics.

5.5 Testing and Evaluation

Testing should cover registration, search, product details, cart calculations, order creation, stock updates, access permissions, and notifications. Usability evaluation can involve representative users completing common tasks and providing feedback. Useful measures include task completion rate, time to find a product, order completion rate, page response time, error rate, customer feedback, and campaign click-through or conversion rates. Values should be reported only after actual tests.

5.6 Possible Implementation Tools

A possible web implementation could use HTML, CSS, and JavaScript for the interface; Python with Flask or Django, or another suitable backend, for application logic; and MySQL or PostgreSQL for data storage. A responsive design can support mobile phones and computers. These are suggested options, not a claim about tools already implemented.

VI. SYSTEM ARCHITECTURE

The proposed system can be organized into presentation, application, data, and marketing layers.

Farmer / Seller / Admin

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Web or Mobile-Friendly User Interface

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Application Layer: Login • Catalogue • Cart • Orders • Feedback

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Database: Users • Products • Inventory • Orders • Campaigns

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Digital Marketing and Reporting: Content • Offers • Opt-in Notifications • Analytics

The interface accepts user requests. The application layer validates requests and applies business rules. The database stores product, user, and order information. The marketing and reporting functions publish approved campaigns and summarize aggregated activity. Role-based permissions and secure communication should protect personal and transaction data.

VII. SYSTEM MODULES

7.1 User Registration and Login Module

Allows farmers and sellers to create accounts and sign in. Authentication and access permissions should protect account information.

7.2 Product Catalogue Module

Displays agricultural products with categories, descriptions, prices, availability, and seller information. Product information should be reviewed for accuracy.

7.3 Search and Cart Module

Lets users search by product name or category, review selected items, adjust quantities, and view the calculated order total.

7.4 Order Management Module

Records orders and supports order confirmation, status changes, and order history. Delivery and payment options depend on the service actually provided.

7.5 E-Digital Marketing Module

Supports approved product campaigns, seasonal promotions, educational content, and permission-based notifications. Campaign content should be truthful, relevant, and manageable by authorized staff.

7.6 Feedback and Review Module

Allows customers to provide feedback on products or service, subject to moderation and safeguards against abusive or misleading reviews.

7.7 Admin and Reporting Module

Allows authorized administrators to manage categories, listings, accounts, campaigns, and orders, and view aggregated reports such as product views and order counts.

7.8 Security and Privacy Module

Uses appropriate authentication, role-based access, secure data transmission, limited data collection, backups, and clear privacy information. Marketing messages should respect consent and opt-out preferences.

VIII. RESULTS AND ANALYSIS

This paper describes a proposed system, and no implementation dataset or test results were supplied. Therefore, numerical performance results are intentionally not fabricated. After development, the following table can be completed with measured findings.

Evaluation Measure	**How to Measure**	**Actual Result**
Product search task completion	Percentage of test users who find a requested product	To be measured
Average search time	Time taken to locate a product during testing	To be measured
Order completion rate	Completed orders divided by initiated orders	To be measured
System response time	Measured response time under defined test conditions	To be measured
User satisfaction	Feedback collected using a stated questionnaire	To be measured
Campaign engagement	Views, clicks, and resulting actions for a campaign	To be measured

The analysis should discuss whether users can find products and complete orders reliably, which features are most useful, and what barriers remain. Results should identify the number and type of participants, test conditions, and measurement method. Campaign engagement should not be treated as proof of increased farmer income or better agricultural outcomes without further evidence.

IX. CONCLUSION

Agri Shop: Online Shopping for Farmers Using E-Digital Marketing proposes a digital marketplace that combines agricultural product browsing and ordering with online product discovery and communication. The main modules include user access, product catalogue, search and cart, order management, digital marketing, feedback, administration, and security. The platform may help make product information easier to access and provide sellers with digital outreach opportunities. Its actual usefulness depends on product accuracy, seller reliability, delivery arrangements, digital accessibility, user trust, and measured evaluation. Implementation and field testing are required before making claims about adoption or business impact.

X. FUTURE ENHANCEMENTS

Add Tamil and other regional-language interfaces and accessible navigation.

Develop an Android application or low-bandwidth version if user needs justify it.

Provide location-aware delivery information where users permit location use.

Add verified seller profiles and a process for reporting inaccurate listings.

Offer seasonal product discovery based on region and crop, with expert-reviewed information.

Integrate secure payment providers only after implementation and compliance review.

Add stock alerts, order tracking, and customer-support options.

Evaluate usability and campaign outcomes with farmers in different settings.

Use privacy-conscious analytics and give users control over promotional messages.

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These links are starting points for technical and background reading. Cite the specific page or publication actually used.