

# System Requirements Specification: Farmer/Administrator Role

This document details the functional and non-functional requirements for the **Farmer/Administrator** role within the Farm Operations Management System (FOMS).

## I. Functional Requirements (FR)

### A. User/Account Management (FR-A)

ID	Requirement
FR-A.1	The system must allow the Farmer/Administrator to <b>register and log in securely</b> .
FR-A.2	The system must allow the Farmer/Administrator (as admin) to <b>approve new user registrations and manage access roles</b> (e.g., set user roles for laborers, buyers).
FR-A.3	The system must allow the Farmer/Administrator to <b>manage user accounts</b> and modify user credentials.
FR-A.4	The system must allow the Farmer/Administrator to <b>update their profile information</b> .

### B. Farm Operations Management (FR-B)

ID	Requirement
FR-B.1	The system must allow the Farmer/Administrator to <b>create, update, and delete farm plans, crop records, and batch schedules</b> .
FR-B.2	The system must allow the Farmer/Administrator to <b>track farm activities</b> such as planting, fertilization, and harvesting.
FR-B.3	The system must allow the Farmer/Administrator to <b>log and view the use of farm resources</b> (e.g., seeds, fertilizer, equipment).
FR-B.4	The system must allow the Farmer/Administrator to <b>log and update harvest data</b> and move rice product to inventory or mark it as wasted.

### C. Inventory and Supply Handling (FR-C)

ID	Requirement
FR-C.1	The system must allow the Farmer/Administrator to <b>manage and manipulate inventory</b> , categorizing items as <b>Farm Supply</b> or <b>Farm Product Items</b> .
FR-C.2	The system must <b>track usage, stock levels, and supply needs</b> for both Farm Supply and Farm Product Items.

FR-C.3	The system must allow the Farmer/Administrator to <b>create and record supply purchase orders</b> .
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#### D. Labor Management (FR-D)

ID	Requirement
FR-D.1	The system must allow the Farmer/Administrator to <b>allocate and assign labor tasks</b> to laborers.
FR-D.2	The system must allow the Farmer/Administrator to <b>record laborer activity and wages</b> .
FR-D.3	The system must <b>generate wage reports and payroll details</b> for laborers.

#### E. Weather Analytics Integration (FR-E)

ID	Requirement
FR-E.1	The system must <b>fetch and display real-time weather data</b> using the OpenWeather API.
FR-E.2	The system must <b>display and update weather forecasts regularly</b> (e.g., 5-day forecasts).
FR-E.3	The system must <b>provide weather-based decision support</b> , such as alerts and recommendations for planting, irrigation, and harvesting.

#### F. Online Product Marketplace (FR-F)

ID	Requirement
FR-F.1	The system must allow the Farmer/Administrator to <b>post rice products for sale</b> with details, pricing, and quality.
FR-F.2	The system must allow the Farmer/Administrator to <b>track orders, and accept or decline client orders/negotiations</b> .
FR-F.3	The system must allow for <b>direct communication/messaging</b> between the Farmer/Administrator (seller) and buyers.
FR-F.4	The system must allow the Farmer/Administrator to <b>manually confirm sales transactions</b> (direct payment processing is not supported).

#### G. Expense Tracking and Reporting (FR-G)

ID	Requirement
FR-G.1	The system must allow the Farmer/Administrator to <b>capture and classify all operation, labor, and supply costs</b> (expenses).

FR-G.2	The system must <b>generate visual analytics and reports</b> of historical farm data, weather trends, sales, expenses, and profit/loss.
FR-G.3	The system must provide the Farmer/Administrator with a <b>dashboard that gives a unified overview</b> of farm schedules, resource usage, and sales performance.
FR-G.4	The system must allow the Farmer/Administrator to <b>track their sales and order records</b> .

## II. Non-Functional Requirements (NFR)

### A. Performance and Reliability (NFR-A)

ID	Requirement
NFR-A.1	Weather data <b>should</b> be processed and displayed quickly after retrieval.
NFR-A.2	Weather data refreshes <b>must</b> occur at least every 10 minutes.
NFR-A.3	The system <b>must</b> maintain high availability with minimal downtime.

### B. Security and Data Integrity (NFR-B)

ID	Requirement
NFR-B.1	Users <b>must</b> authenticate using email and password.
NFR-B.2	The system <b>must</b> ensure secure handling of transaction data and user information.
NFR-B.3	The system <b>must</b> provide protection against unauthorized access.
NFR-B.4	All data entry <b>must</b> be validated to rule out null values and duplication issues to maintain data accuracy.

### C. Usability and Scalability (NFR-C)

ID	Requirement
NFR-C.1	The system <b>should</b> be accessible across various devices (mobile phones to desktop screens).
NFR-C.2	Users <b>should</b> be able to navigate the system with minimal instructions.