

Requirement Gathering

Date: [14-01-2025]

Project Overview:

GrowGuide is a web-based solution aimed at transforming cardamom cultivation by providing precise, data-driven recommendations for fertilizers, pesticides, and agricultural practices. It addresses challenges such as inefficient resource usage, low yields, and outdated farming methods by combining soil and weather analysis with intuitive user interfaces. The main objective is to empower farmers with actionable insights to optimize crop health and yield sustainably.

System Scope:

GrowGuide is proposed as a full-scale implementation aimed at supporting cardamom farmers. The system will cater to real-time usage, enabling ongoing monitoring and updates to meet the dynamic needs of agricultural management.

Target Audience:

- ✓ Primary Users: Cardamom farmers.
- ✓ SecondaryUsers: Agricultural experts, government agencies, and researchers
- ✓ Stakeholders: System developers, administrators, and the agricultural industry

Modules:

- Soil and Weather Analysis: Analyze soil quality and real-time weather conditions to provide tailored recommendations.
- Fertilizer & Pesticide Suggestions: Suggest optimal fertilizers and pesticides based on scientific analysis.
- Task Scheduler: Track and manage important agricultural activities (e.g., watering, fertilization, mulching).
- User Management: Manage users with role-specific access and permissions.

User Roles:

Administrators:

- Oversee system functionality and ensure data accuracy.

- Manage user permissions and system settings.

Employees:

- Enter and verify data.
- Assist in maintaining the system's reliability.

Farmers:

- Input soil and environmental data.
- Retrieve recommendations and manage agricultural tasks.

System Ownership:

The GrowGuide system will be owned by the Agricultural Development Corporation, managed by administrators and developers, collaboratively supported by farmers, experts, and government agencies, maintained by IT teams, and monitored by independent agricultural boards.

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Industry/Domain:

Agriculture, with a specific focus on precision farming and sustainable cardamom cultivation.

Data Collection Contacts:

Name: Jiji Jacob

Role: Cardamom Analyst, Cardamom Farmer, Estate Supervisor (25 years of experience in the cardamom field)

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Questionnaire for Data Collection:

1. What is the average size of cardamom plantations managed by farmers in your area?
2. What are the common soil types found in cardamom-growing regions?

3. What climatic factors significantly affect cardamom cultivation?
4. Fertilizer & Pesticide Practices:
5. What types of fertilizers are commonly used for cardamom plants?
6. How frequently are pesticides applied during the cultivation cycle?
7. Do farmers currently use any digital tools for agricultural management?
If so, which ones?
8. What challenges do farmers face in adopting modern agricultural technologies?
9. How is watering managed for cardamom plantations in varying seasons?
10. Are there specific mulching techniques commonly employed in cardamom farming?