

Requirement Gathering

Date: 02/08/2024

Project Overview:

The Dairy Care System is a comprehensive web application designed to streamline the management and operation of dairy farms. The system aims to enhance efficiency, productivity, and overall management of dairy farming activities by providing tools for managing livestock, tracking milk production, monitoring health records, and overseeing the delivery of products. The primary objectives are to improve operational efficiency, enhance productivity, and increase profitability for dairy farms.

System Scope:

The system is proposed as a full-scale implementation aimed at providing a robust platform for dairy farm management. It is designed for practical use by dairy farmers, farm employees, veterinarians, and customers, ensuring it is not just a prototype or for research purposes but a fully functional solution.

Target Audience:

The primary users of the system include:

- Dairy Farm Owners
- Farm Employees
- Veterinarians
- Customers purchasing dairy products

Modules:

- User Authentication and Management:
 - Secure Login/Register
 - User account management and permissions
- Product and Inventory Management:
 - Product search and purchase
 - Inventory management

- Farm Monitoring:
 - Feeding schedule and nutritional data management
 - Milking equipment maintenance
 - Milk pH level monitoring
 - Animal health management
- Payment Processing:
 - Employee wage payment
 - Customer product payment
- Feedback and Analysis:
 - Feedback submission and analysis
- Machine Learning Integration:
 - Milk production forecasting
 - Disease detection/prediction
- Delivery Management:
 - Milk delivery to society centers

User Roles:

- Owner: Manages the entire system, oversees operations, and has full permissions.
- Employee: Records feeding details, maintains equipment, and monitors milk quality.
- Veterinarian: Monitors animal health, prescribes medications, and assigns diets.
- Customer: Searches for and purchases products, provides feedback on services.

System Ownership:

The system is owned by private dairy farm owners focusing on improving dairy farm management through technological solutions.

Industry/Domain:

Agriculture, specifically dairy farming.

Questionnaire for Data Collection:

- 1) What are the primary challenges you face in managing your dairy farm?
 - Tracking and managing the health records of animals.
 - Monitoring milk production and ensuring quality.
 - Efficiently managing product inventory and sales.
 - Ensuring timely payment processing for employees and customers.
 - Collecting and analyzing feedback to improve services.
- 2) How do you currently track milk production and animal health records?
 - Currently, these records might be tracked manually or through basic digital tools, but the Dairy Care System will provide a centralized platform for more efficient and accurate tracking.
- 3) What methods do you use for product inventory management?
 - Product inventory may be managed using basic inventory management software. The Dairy Care System will enhance this by providing a dedicated module for product and inventory management, allowing for real-time updates and tracking.
- 4) How do you process wages for employees and payments by customers?
 - Payments and wages are processed manually or using third-party payment systems. The Dairy Care System will integrate payment processing for both online (GPay) and offline (Cash on Delivery) transactions, streamlining the process for employees and customers.
- 5) What type of feedback system do you have in place for customer reviews?
 - There might be a basic feedback collection method in place. The Dairy Care System will implement a structured feedback submission and analysis module to gather and analyze customer feedback effectively.
- 6) What are the common health issues you encounter with your livestock?
 - Common health issues include nutritional deficiencies, infections, and diseases. The Dairy Care System's health management module will help in monitoring and addressing these issues promptly.
- 7) How do you manage the delivery of milk and other dairy products?
 - Deliveries may be managed through manual scheduling and coordination. The Dairy Care System will improve this with a delivery management module, integrating location sharing and delivery tracking for efficient management.

- 8) What tools do you use for monitoring feeding schedules and nutritional data?
- Feeding schedules and nutritional data might be tracked manually or using basic digital tools. The Dairy Care System will offer a dedicated module for collecting and managing feeding details, ensuring proper nutrition and health of the livestock.
- 9) How would you benefit from integrating machine learning for forecasting milk production?
- Machine learning integration will enable accurate forecasting of milk yield based on historical data, allowing for better planning and optimization of resources, leading to increased productivity and profitability.
- 10) What improvements do you seek in the existing system for dairy farm management?
- A centralized platform for managing all aspects of the dairy farm.
 - Enhanced tracking and monitoring of livestock health and milk production.
 - Streamlined product and inventory management.
 - Integrated payment processing and delivery management.
 - Effective collection and analysis of feedback for continuous improvement.
 - Advanced forecasting and prediction capabilities using machine learning.