Integrated Android App for Dairy Farmers

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Abstract- ***It is a programme or piece of software that is used to manage chores such as collecting milk from farmers, selling to customers, and other dairy-related activities. Dairy entrepreneurs found it challenging to manage all of their tasks manually. A dairy producer's application can aid in the reduction of physical labour and the facilitation of day-to-day dairy operations. More consumers will buy and sell items as a result of the use of this user-friendly app, resulting in increased income for farmers. The entire procedure might be handled by a single programme.***

Keywords: **Farmers, Dairy, Milk, Dry Grass, Disease, Prediction, Veterinary Doctor.**

1. INTRODUCTION

Managing a dairy farm is difficult since the farmer must oversee the health and nutrition of the cattle as well as provide high-quality milk to attract customers. Currently, a dairy farmer in a rural location must travel a considerable distance to purchase cattle feed and must contact a doctor in the event of a cattle health problem. Furthermore, the farmer will not receive precise information about the amount of milk he has given to the dairy every day, as well as other farm-related information such as dry grass availability, weekly/monthly milk delivered to the milk organization, government subsidy, local milk requirements, and so on. Modules for disease prediction in cattle based on symptoms are available. The application will enable the farmer to place food orders from his preferred stores. In addition, the programmeallows farmers to locate nearby doctors in the event of anemergency. The application also allows farmers to request artificial insemination from a doctor.

The system will include features for buying and selling dry grass from and to farmers. A farmer can buy or sell animals using this system. The system also allows the owner of a dairy farm to store information about his livestock.

LITERATURE REVIEW

DAPS: Dairy Analysis and Prediction System using Technical Indicators. [3]

PAT is a milk yield prediction and analysis tool designed to assist dairy producers, especially those with small-scale milk production, in reliably forecasting future milk yield at both the individual and group level. The Android embedded operating system is used to design and install a dairy cow farm management system as well as mobile terminals for dairy farming businesses.

The proposed technology helps retailers and distributors estimate trends and determine the appropriate pricing for sales and distribution while also reducing human order and processing effort. Sentimental analysis, which uses product reviews from social media to measure market approval, can be improved to include more analysis. Payment methods via website and Android application can be built to keep track of the dairy company's profits and expenses.

Individual farmers' trust and loyalty to the dairy cooperative case study dairy supply chain in Boyolali[5] are influenced by cooperative communication, power reliance, and price satisfaction."

A Scoring System for "Image Geometric Properties of Dairy Cow Body Conditions," IEEE 1st Global Conference on Life Sciences and Technologies (2019 IEEE), Ikuo Kobayashi, Thi Thi Zin, and Pyke Tin (LifeTech).

In business-to-business connections, developing loyalty encourages long-term ties with the exchange partner and contributes to a long-term commercial environment. In the agriculture setting, obtaining, retaining, and maintaining loyal suppliers provided a number of benefits to the processor Accordingto the findings of this study, collaborative communicationand price satisfaction significantly boost individual dairy farmers' trust in the competence-goodwill and producer'scontractual of dairy cooperatives; however, imbalance power dependency has a significant negative impact on the competence goodwill and producer's contractual of dairy cooperatives.

Develop a nighttime video monitoring system for detecting dairy estrus[2].

Milk can be taken raw or processed into different products, making it one of the most vital diets for humans. Dairy cow pregnancy, reproduction, and milking control is a critical problem for ranch owners. Artificial insemination is used to get dairy cows pregnant in today's ranches. Accurate estrus detection is critical to the effectiveness of artificial insemination in dairy cows. Visual observation is the most common approach for detecting estrus in dairy cows, and its success rate is mostly controlled by the observers' experience and frequency of observation. To address difficulties with current cow estrus detection technologies, this study offers a non-contact video monitor system. Infrared cameras are used to snap images during the event.

2.PROPOSED METHOD

Proposed system has following Modules:

Farmer Module: Farmer will use the system using an Android Application. Farmer has following modules:

Registration: This module is for adding a new farmer to the system. Farmers must submit basic information such as their name, phone number, email address, login, and password.

- Login: This module allows the farmer to log into the system.
- Food Module: This module contains information about various cattle feeds. This module also contains information on other farmers with dry grass to sell.
- Disease Module: This module details many diseases and their treatments.
- Prediction Module: This module is used to predict the disease-based onset of symptoms.

Customer Module: Customer will use the system using an Android Application. Customer has following modules:

- Registration: This module is used to register a new customer to system. Customer need to provide their basic data such as name, contact number, emailId, address, username and password.
- Login: This module is used to by the customer to login into the system.
- Farmer Module: This module is used to display nearby dairy farmer to buy milk.
- Payment Module: This module is used to do payment for bought milk on monthly basis.

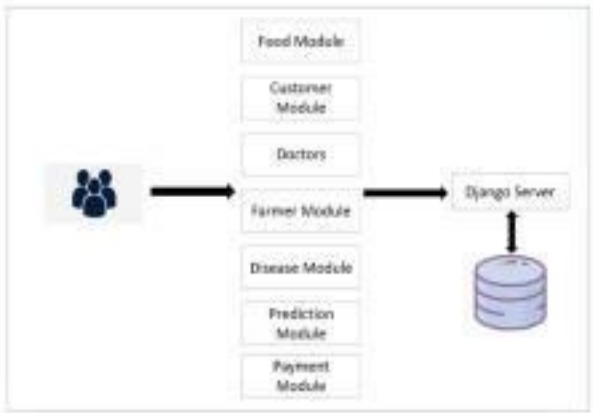

Fig. 1: Block diagram

Admin Module: Admin of the system will use web interface to access the system. He has following modules.

- Login: This module is used to by the admin tologin into the system.
- Manage Food Module: This module is used to keep track of various types of cattle feed.
- Illness Management Module: This module is used to manage various disease modules.
- Training Module: This module is used to train the system with symptom dataset.
- Prediction Module: This module is used to predict disease for given disease symptoms.

3. CONCLUSION

The health of the cattle is extremely crucial in modern precision dairy farming. As a result, this technology will assist cow owners in predicting their herd's condition and contacting neighboring doctors in the event of an emergency.

This Android software makes it simple for dairy farmers to manage their farms. Modules for managing cow diet, health, and milk income will be included in the proposed application. Modules for disease prediction in cattle based on symptoms are available. The application will enable the farmer to place food orders from his preferred stores. In addition, the programme allows farmers to locate nearby doctors in the event of an emergency. The application also allows farmers to request artificial insemination from a doctor.

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