

ABSTRACT

For many years, Kenya has relied on coffee, tea and horticulture for empowerment of small holder farmers in the rural areas. This trend is changing as dairy farming has taken a key role complementing the traditional cash crops in many rural households. The dairy industry is a major source of income and employment to an estimated 1.5 million people mainly in rural Kenya.

Small scale farmers face several challenges some of which include difficulties in accessing credit, in-ability to build milk produce with economic value, marketing, and quality assurance. To overcome these challenges, the farmers have formed dairy cooperative societies, which facilitate milk collection, bulking, processing and marketing for the more advanced ones. In these cooperatives, the small holder farmers benefit from economies of scale, access to credit, and also access to markets.

Dairy cooperatives - the business units - are faced with several challenges and key among those is providing access to credit against milk delivery. Farmers often run into arrears, and spend money and time that could have been spent on other activities such as travelling to cooperative's head office to access information. Suppliers, service providers and shop owners are unable to accurately determine credit to be advanced to farmers. The cooperative management incurs overheads each month from manually reconciling credit information before making payments to members, resulting in delays. The credit process is offline, largely manual, prone to errors and fraud.

Limuru Dairy Cooperative was selected as a case in this research. Focusing on the small holder dairy farmer, the credit process was analyzed and a mobile phone based solution developed using evolutionary prototyping.

Farmers were able to use SMS to access credit information. Shop owners and cooperative management were able to use a smart phone application to advance merchandise to farmers against value of milk delivered.

From the pilot data analysis, the solution showed that if adopted, service delivery at the cooperative would be enhanced, efficiency enhancement in the credit process, and the livelihoods of Limuru Dairy small holder farmers improved.