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# iASK

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## MANAGING A VILLAGE CENTER FOR MILK COLLECTION: The Eastern Primary Multipurpose Cooperative (EPMPC)

VBMCCC is a model that ensures proper handling, collection and processing of milk.

Over the years, the PCC has actively and continuously supported the implementation of the Carabao-based Enterprise Development (CBED) Program in various regions and impact zones. It is a means to provide immediate services to smallholder farmers, paving the way to uplift their lives through carabao dairying and other related livelihood opportunities.

The Eastern Primary Multipurpose Cooperative (EPMPC) is one of the PCC-assisted dairy cooperatives in Nueva Ecija. It was established and recognized by the Cooperative Development Authority (CDA) on September 29, 1992. Its main office is located at 462 Paseo Rueda Corner Veteranos Extension, Barangay Sibut, San Jose City, Nueva Ecija. It has five Board of Director members, one manager, and two hired milk processors, who manage its daily operations.



They operate in the barangays of Sibut, Palestina, San Agustin, Caanawan, Camanacsacan, and Villa Marina of San Jose City.

The EPMPC was established to achieve its mission to “improve the socio-economic welfare of its members and the health status of its community and people.” As a result of their operation, some of the native and crossbred carabao owners and even those who do not have carabaos were encouraged to acquire stocks from the cooperative. At present, the cooperative has 800 carabaos, which are in the hands of its members, and collects at least 780 liters of milk every day.

In its continuous use and application of modern technologies, the number of calves has continuously increased coupled with increasing volume of milk collected, which provides its members with additional income. PCC also supports the cooperative through the establishment of a village-based milk collection and consolidation center (VBMCCC) to further make the dairy industry more vibrant. Such establishment paves the way for the cooperative to have proper milk collection, storage, delivery, and selling of products, which benefit its consumers.

## Procedures

The following are the procedures being implemented by the EPMPC in its VBMCCC:

**1. Milking.** Farmers usually milk their carabaos at four o'clock in the morning and at the same time in the afternoon. They harvest 4-8 liters of milk every day. After milking, they immediately deliver to their VBMCCC using stainless cans and stainless pails.

**2. Milk acceptance and testing:** Two employees are assigned to manage the acceptance of milk. They were trained by PCC on proper milk handling and testing such as the following:

**a. Clot on Boiling (COB) Test-**This involves heating of a small volume of milk in a test tube until it boils. If the milk has 0.1% lactic acid, it will clot and should be rejected.

**b. Alcohol Precipitation Test-** This test is used on fresh milk to indicate whether it will coagulate on thermal processing. This test is more sensitive compared to COB test. It is based on the tendency of milk protein to get unstable as a result of disturbance in the mineral balance of milk. Milk with high developed acidity, or having calcium and magnesium compounds in greater than normal amounts, will coagulate when alcohol is added. Increased levels of albumin (colostrum milk) and salt concentrates (mastitis) may also result in a positive test.



Milk collection is until 7:30 a.m. only. Most of the milk harvest is sold at the Milka Krem, which serves as their top buyer of milk. Others are sold to a private dairy farm while the milk that are left are processed by the cooperative. The milk collected in the afternoon, meanwhile, is placed in a milk cooling tank and sold or processed the next day.

The EPMPC also performs micro milk processing of products under the brand name "San Jose Caramilk." At present, EPMPC sells pastillas (milk candies), buko (young coconut) pie, espasol (a type of rice cake), kesong puti (white cheese), milk-o-gel, macarons and other ready-to-drink milk beverages. The cooperative is a regular supplier of these products in various schools in San Jose City and in Milka Krem in the Science City of Muñoz, Nueva Ecija. The cooperative also partners with the Department of Trade and Industry, LGU-San Jose City and PCC to actively participate in the promotion and selling of products from carabao's milk.

c. **Lactometer Test**- Carabao's milk has 1.030-1.036 specific gravity. Lactometer test is designed to determine changes in specific gravity, which happen when the milk is adulterated with water or other materials.

d. **California Mastitis Test (CMT)**- It is an effective method to determine if the carabao has sub-clinical mastitis. Each well in a four-well plastic paddle is used for each teat of the carabao to be tested. Foremilk is discarded, and then a little milk is drawn into each well. An equal volume of test reagent is added and gently agitated. The CMT test is conducted once a month as an udder health protocol and to reduce milk losses.

## Considerations for the establishment and improvement of VBMCCC:

- Appropriate venue where the cooperative operates
- Leadership capability of the cooperative to supervise its members

- Members of the cooperative is increasing because more and more farmers want to engage in dairying
- Possible expansion of milk processing business
- The cooperative demonstrates effective supervision and coordination
- Herd population of the cooperative is increasing

### Needed equipment by the VBMCCC for milk quality testing:

- *Stainless milk cans – 20 liters*
- *Freezer*
- *Cooling tank-300-500 liter capacity*
- *Stainless milk pails – 10 liters*
- *Bins*
- *Simple milk testing kits such as lactometer, 250 ml graduated cylinder, Alcohol (60%), test tubes, wash bottle, lamp, and four-well plastic milk paddle*
- *Weighing scales*
- *Tables and drain*
- *Milk testing area*
- *Sanitary face mask*

## Benefits and profits

- Collection of high quality carabao's milk for human consumption
- Production of high quality milk and milk products through proper testing and storage
- Prevents pole-vaulting or selling of milk outside the rules of the cooperative
- Provides the needs of the family through income from the cooperative and selling of freshly harvested milk
- Sources of income for the cooperative
  1. Collection of fresh milk – The cooperative generates an income of Php5-Php7 per liter of milk
  2. Processed products from carabao's milk
- Generates job opportunities
- Gets supports and participation from secondary stakeholders such as DTI, DAR, PCC, LGU
- Enhances EPMPC's capability in the aspects of promotion and management of a dairy enterprise

**Keywords:** *village-based milk collection and consolidation center , milk testing procedure*

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#### **ABOUT THE MATERIAL**

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