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**Methods of milk preservation in Egypt and developing countries**

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Post harvest loss of milk is a major concept particularly in small scale dairy production and processing systems in developing countries. Small holder's dairy farms could reduce their losses if they use effective preservation methods. Milk production, processing and marketing operations could be enhanced. This article will discuss several methods of milk preservation used in the rural areas i.e. refrigeration, heat treatment and chemical additives. Among chemical additives, activation of lactoperoxidase system (LPs) may reduce the use of non-approved methods. The use of LPs extends the milk collection distances and improves milk quality due to its bacteriostatic and bacteriocidal effects. Goat and camel milks react with the (LPs) in a different way compared to other milks, since somatic cell counts is higher in normal goat milk and camel milk has a higher content of lactoperoxidase and other natural milk enzymes. The advantages and precautions of (LPs) activation will be discussed. Companies should take care of preparing forms of sachets containing small amounts of chemical used in the (LPs) activation to favor the small holder's uses to the least amount of 5 kg. milk. The cost of additives is significantly lower compared to other preservation methods. The Codex guidelines concerning the use of milk preservatives are needed to match with the recent approaches of milk preservation methods especially the (LPs) activation.

## Session 23

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**Dynamics of pastures and fodder crops for Mirandesa cattle breed – ii Mineral composition**

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Mirandesa cattle are a local breed from the Northeast region of Portugal, playing an important role on the maintenance of the rural spaces, contributing to the fixation of the populations and to the environmental preservation. The aim of this study is to characterise the feed resources (mineral composition available along the year in this farming system. The animals graze natural pastures in Spring and beginning of Summer, being after fed with hays (of natural pasture or oat) and straws (oat, barley or wheat). Samples of feeds were taken from three different farms in two consecutive years and analysed for crude protein (CP), cell wall components, minerals and *in vitro* organic matter digestibility (OMD). Data were evaluated using the ANOVA statistical approach. Results of organic composition of feeds were presented by Galvão *et al.* (EAAP, 2005). For mineral composition, seasonal variations were observed in natural pastures with decreases of K and P (from Spring to Summer 2 to 0.97 and 0.33 to 0.18% DM, respectively). Farm variations were observed for Ca, K and Mg. Regarding hays composition, differences were observed for Ca and Mg contents which was lower for oat hay, compared with that from natural pasture (0.16 vs 0.32 and 0.08 vs 0.15% DM, respectively). The composition of straws varied between farms and type of straw.