

## ABSTRACT

**Ahmed Mohamed Mostafa Abido. Effect of using bacterial inoculates on maize silage quality. Unpublished Master of Science Thesis. Department of Animal Production, Faculty of Agriculture, Ain Shams University, 2005.**

Two weeks from their parturition, nine lactating buffaloes were used in a feeding trial to study the effect of maize silage inoculated with bacteria on their performance. The inoculants were pioneer 1132 which were composed of 100 billion Colony Forming Unit (CFU) per gm of crop specific *Lactobacillus plantarium* and *Enterococcus faecium*. Animals were grouped into 3 feeding treatments, according to their weight and milk yield. They were introduced to rations containing 50%:50% roughage of forage: concentrate ratio as an amount of dry matter equal to 3.5% of their live body weight. The control group G1 was fed concentrate feed mixture CFM which composed of 25% undecorticated cotton seed meal, 35% wheat bran, 30% yellow corn, 3% rice bran, 3% molasses, 2% limestone, 1% urea and 1% mineral salts. and rice straw as the traditional feeding regimen in summer in Egypt, G2 was fed CFM and untreated maize silage and G3 was fed CFM and maize silage inoculated with bacteria. The treatments extended for 3 months after the two weeks of parturition. DM, OM, CP, CF and NFE digestibility coefficients in G3 were higher than those in G1 and G2, while EE digestibility was unaffected by treatments. Milk yield and 4% FCM yield increased significantly with inoculated silage than the other treatments. Milk composition in G3 was higher in TS, Fat, and lactose values ( $P<0.01$ ) than values recorded for G1 and G2. Consequently, G3 produced more TS, SNF Fat, Lactose and Ash ( $P<0.01$ ) than the other Two groups. Some values of blood serum parameters were discussed. The inoculated silage group performed better than the other two groups in feed and economic efficiency.

**Key words:** Inoculated silage, Lactating buffaloes, *Lactobacillus planetarium*, *Enterococcus faecium*.

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