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Efficacy of Microbial Metabolites Obtained from Saccharomyces cerevisiae as Supplement for Quality Milk Production in Dairy Cows

Authors : Sajjad ur Rahman, Mariam Azam, Mukarram Bashir, Seemal Javaid, Aoun Muhammad, Muhammad Tahir, Jawad, Hannan Khan, Muhammad Zohaib

Abstract : Partially fermented soya hulls and wheat bran through Saccharomyces cerevisiae (DL-22 S/N) substantiated as a natural source for quality milk production. Saccharomyces cerevisiae (DL-22 S/N) were grown under in-vivo conditions and processed through two-step fermentation with substrates. The extra pure metabolites (XPM) were dried and processed for maintaining 1mm mesh size particles for supplementation of pelleted feed. Two groups of a cow (Holstein Friesian) having 8 animals of similar age and lactation were given the experimental concentrates. Group A was fed daily with 12gm of XPM and 22% protein-pelleted feed, while Group B was provided with no metabolites in their feed. In thirty-nine days of trial, improvement in the overall health, body score, milk protein, milk fat, ash, and solid not fat (SNF), yield, and incidence rate of mastitis was observed. The collected data revealed an improvement in milk production of 2.02 liter/h/d. However, a reduction (3.75%) in the milk fats and an increase in the milk SNF was around 0.58%. The ash content ranged between 6.4-7.5%. The incidence of mastitis was reduced to less than 2%.

Keywords : microbial metabolites, Saccharomyces cerevisiae, milk production, fermentation, post-biotic metabolites, immunity
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