ABSTRACT

The effects of microbials dietary supplements on performances and health of the animals, in recent is becoming very critical. Consequently, direct-feds microbials (DFM), is an area of interest of several authors, since last few decades. The probiotics usually, used as DFM for animals are lactic acid bacteria; lactobacillus, streptococci, bifidobacterial, enterococcus and anaerobic fungi species; saccharomyces and aspergillus. Normally, the mechanisms of action of DFM, are modulation of microflora balance in gastrointestinal tract and improvements in digestion and nutrients absorption, sustaining the health of the animals (i.e., through competitive exclusion, secretion of the substances that inhibit the growth or kill and altering gene expression of pathogenic agents) and stimulates the immunity of the animals. Generally, though the effects of host species, types of diet, animal physiological conditions, dosage of probiotics or strain, time of probiotic supplementation and variant strains used, are amongst important factors to be considered, DFM often plays an important role in improvements of milk yield and composition of lactating dairy cows. The DFM of Propionibacterium, Saccharomyces cerevisiae, Lactocbacillus acidophilis, the mixture of yeast products and Enterococcus and combination of L. ecidophilus, L. casei and Enterococcus faecium to dairy cows, significantly improves milk yield and well as the composition. Therefore, DFM, is one of the promising areas of ruminant's nutrition in general or dairy cows in specific, not only because of its nutritional and health benefits to animals, but also due to its negligible residual effects to the animal and animal products.