

THE ROLE OF PROBIOTIC LAB IN FEEDSTUFF

Sargsyan A.², Tkhruni F.¹, Agabekyan L.², Sargsyan M.², Israyelyan A.²¹Probiotics Production Sector, Scientific and Production Center "Armbiotechnology" NSPO,
National Academy of Science, Armenia²Laboratory of Microbiology, Artsakh Scientific Center State Non-Commercial Organization (SNCO), Armenia
e-mail: anyuta.sargsyan@mail.ru

CZU:636.084.4+579.64

<https://doi.org/10.52757/imb22.31>**Keywords:** cow, probiotic, LAB, feedstuff, protein nutritional value.

Frequent uncontrolled use of feed antibiotics in intensive production of feedstuff has led to the formation of resistant strains of pathogenic bacteria. The use of feed antibiotics has resulted in increased productivity of farm animals due to the suppression of the pathogenic microflora of the digestive system. The situation is exacerbated by animal stresses due to poor feed quality and poor conditions. Often there are cases of dysbacteriosis, especially in young animals, reduced cows' reproduction, excess live weight of young animals, increased infectious and alimentary (caused by defective unbalanced feeding) origin is growing diseases.

Based on the results of scientific of previous grants supported by the State Committee on Science of the Republic of Armenia and the ANSEF at the laboratory of Artsakh Scientific Center was developed a new technology for enrichment of feedstuff in accordance with the main nutritional resources of Artsakh and with probiotic lactic acid bacteria *Enterococcus durans* KE5, *Lactobacillus acidophilus* 1991, *Streptococcus lactis* and *Streptococcus termophilus*.

The data show that after the use of probiotic bacteria, the quality of the feed increases. The activity of probiotic bacteria suppresses the growth of fungi and pathogenic microflora.

The results of the content of amino acids and protein during silage of the green mass of corn are given in Table 1.

Table 1. The content of amino acids and protein source-grass from the Herher region

Source-corn from the Herher region	Amino acids, mg / ml										The amount of amino acids mg / ml	Protein, %
	Lys	Arg	Ala	Glut	Val	Iso	Tre	Met	Fal	Start		
Control	1,6	1,2	1,6	2,4	2,4	2,4	0,8	3,2	0,4	0,8	16,8	16,5
Consortium LAB	1,6	0,8	1,2	0,4	1,6	2,4	1,2	1,6	0,4	0,8	12,0	28,0
Consortium LAB+yeast	1,6	1,2	1,2	0,8	1,6	2,4	1,2	1,6	0,4	0,8	12,8	24,0

The data obtained show that during silage of the green mass of corn, the addition of a consortium consisting of yeast and LAB or only LAB can increase the protein content by an average of 50%, which is higher than when silaging a mixture of grass, regardless of the source of its use.

Conclusions

The property of lactic acid bacteria to synthesize lactic acid is used for silage of green biomass. However, we have shown that the use of a consortium of LAB strains and yeast with probiotic properties leads to an increase in the content of protein and essential amino acids in silage, a decrease in its infectivity, and the effectiveness of the method used depends on the source and nature of the used method of green biomass and strains. Therefore, the use of starter culture from the consortium of investigated probiotics LAB and yeast in silage should be introduced as widely as possible, as they have a positive effect on the health of animals.

Acknowledgments. This work was supported in the frame of the research projects MESC AR scs 19AA-002, ANSEF biotech 52-52.