Amino Acid Ingredient of Milk Azeri Buffalo

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SUMMARY

This researches has been done on milk of buffaloes which live in the plain and premountaineous areas of Azerbaijan. The main purpose of the researches was studying the amino acid ingredient of milk of Azeri buffalo and comparing it with cows milk. So, data on amino acid ingredient of buffalo milk tells us about the fact that there is a certain difference between buffalo milk and cow milk and it seems it's connected with genetic data of buffaloes.

Keywords: *Amino acid, Azeri buffalo, milk*

Azerbeycan Bizonu Sütünün Amino Asid İçeriği

ÖZET

Bu araştırma Azerbaycan dağ ve ovalarında yaşayan bizonların sütünde yapıldı. Araştırmaların ana amacı, Azeri bizonu sütünün amino asit içeriğini incelemek ve sonuçları inek sütü ile karşılaştırmaktır. Bizon sütünün amino asit sonuçları bize gösterdiki bizon ve inek sütü arasında belirli faklılıklar olduğunu, bunların bizonların genetik yapılarıyla ilişkilendirilebileceğini düşündürmektedir.

Anahtar kelimeler: *Amino asid, Azerbaycan bizonu, Süt*

INTRODUCTION

Our previous study on digestion of some types of feed in rumen of buffaloes by "in situ" method has demonstrated that per unit of digested feed of buffaloes have more fly fat acid than cows. So high level of glucogenesis and high activity of glucogen amino acids with buffaloes becomes an obvious fact. So we take as purpose compare the amino acid ingredients in milk of cows and buffaloes.

MATERIALS and METHODS

The laboratory researches were held in the laboratories of bio-chemistry and agricultural animals of Scientific Research Institution of cattle breeding.

Amino acid ingredient of milk was identified on the amino acid analyzer AAA-T-339 at the base of Russian Scientific Research Institution of physiology bio-chemistry and feeding agricultural animals. The probes have been prepared in the conditions provided by Azerbaijan State Agricultural Academy.

There were 15 heads of buffaloes and 15 heads of sin mental breed of cows in summer period. Milk, productivity and body weight of buffaloes have also been considered. The average milk productive was between 1000 and 1100 kg per one head, and average body weight was 391+ - 11,3 kg.

RESULTS and DISCUSSION

Comparing amino acid ingredient of buffaloes and cows shows that amount of all or almost amino acids being reseached was higher in milk of buffaloes, except for arginin. It's obviously connected with the fact that the cows were simmentalist breed, i.e. meat breed. Arginin is considered to be a type of amino acid which limits meat productivity.

Data on amino acid ingredient of milk of buffaloes and cows are shown in the table.

Amino acid	Buffaloes	Cows	Amino acid	Buffaloes	Cows
Lysin	3,51 + - 0,05	3,14 + - 0,03	Glycine	0,81 + - 0,03	0,67 + - 0,01
Histidine	1,66 + - 0,03	1,49 + - 0,15	Alanine	1,57 + - 0,06	1,34 + - 0,04
Arginine	1,17 + - 0,05	1,43 + - 0,06	Valline	2,52 + - 0,02	2,41 + - 0,02
Aspartric acid	2,94 + - 0,04	2,64 + - 0,04	Methionine	0,62 + - 0,05	0,61 + - 0,01
Threonine	1,22 + -0,03	1,05 + -0,01	Jsoleucine	2,48 + - 0,03	1,98 + - 0,01
Serine	0,72 + - 0,02	0,58 + - 0,01	Leucine	4,24 + - 0,03	3,68 + - 0,05
Glutamic acid	9,96 + - 0,17	8,51 + - 0,11	Tyrosine	0,48 + - 0,02	0,53 + - 0,04
Proline	4,44 + - 0,44	3,24 + - 0,02	Phenylalanine	2,31 + - 0,01	1,89 + - 0,13

Compared to the data received on conditions of Russian and Kazakhstan there is less concentration of serine, methionine and tyrosine in the milk of cows being cut in our conditions which is obviously connected with lack of these amino acids and S_2 in types of feed in Azerbaijan.

But concentration of amino acids in milk of cows and buffaloes in conditions of our republic is high enough.

High concentration of asparagin and glutamicacid in milk of buffaloes is explained by the fact of high concentration of those acids in microbial protein. Our previous initial receaches prove that level of microbial protein in rumen of buffaloes is higher than of cows. High level of alanine and aspartic acid in milk of buffaloes is explained in such way that these aminoacid are good glucogene factors (C. Remesy et. Al. 1986 D.G. Lidsey, 1982) and can be synthesized on intestinium of buffaloes. It seems that process of glucogenesis is more intensive in buffaloes than cows.

As for high level of voline in buffalo milk, could be explained by high level of metabolism in these animals. High concentrations of rooty chain in blood of the animal's results in high level of metabolism are remarked in other works too. (R.Y.Early et. Al. 1987).

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