

## THE INFLUENCE OF PHYTOPREPARATIONS ON ANIMALS IMMUNITY AND PRODUCTIVITY RAISING

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*Immunity enhancing and animals productivity raising under the natural phytopreparations influence was studied on red steppe breed calves of 2,5 months of age*

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Present crisis situation in live-stock breeding creates certain preconditions, which promote the animals resistance and growth energy reduction, the younger animals morbidity and the lo-wering of live-stock population safety.

With such conditions the technology of animals growing demands the search of new, effect-tive, cheap and innocuous means for the organism reactivity' and productivity raising. That is why the solution of this task is actual and has a considerable practical importance.

At the same time, the creation of favourable conditions for realization of phylogenic pro-cesses of organism stability protection in combination with investigations of the main mechanisms of immune status forming gives the possibility to corregate the animals resistance level and to make prognosis of their productivity.

With the aim of the mentioned problems solution, biological, chemical and synthetic pre-parations are used. Though, most of them have low efficiency, sometimes even cause the negative features and are expensive. To her this connection we have studied the influence of natural phyto-pre-parations on immunity enhancing, and animals productivity raising.

For researches conducting we formed two groups (control and experimental) of healthy cal-ves of red steppe breed, 2,5 months of age, according to the principle of analogue pairs. 10 calves in each group. All the animals were in identical conditions of feeding and maintenance. Each calve from the experimental group, half an hour before the feeding, per orally, was given 10 drops of "Gastroatsid" phytopreparation m 50 ml of boiled water, during 14 days.

Positive preparation influence-resulted in animals productivity raising and animals morbidity lowering. In control group, during the period from 2,5 months till 6 months of age, six calves had gastric-intestinal diseases and in experimental group all the calves were healthy.

Before the beginning and at the end of this experiment clinical inspection of calves was conducted and their blood biochemical and immunologic indices were determined.

Biochemical blood indices: general protein, general calcium, inorganic phosphorus, reserve alcality, carotene. Immunological Hood indices: immunoglobulins – IgM and IgC.

After the experiment completing in blood serum of the calves from the experimental group 10–20 % raising of general protein, calcium and carotene content was stated in comparison with the control group, but these indices fluctuated at the measures of the optimal norm and those of the calves from the control group were lower and fluctuated at the minimal measures of the norm.

### 1. Biochemical indices of calves blood after Gasiroatsid intake ( $M \pm m$ , $n = 10$ )

General protein,	General calcium,	Inorganic phosphorus,	Reserve alkalinity,	Carotene,
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g/l	mmol/l	mmol/l	mg/%	mg/%
Control group				
5,93 + 0,029	9,39 + 0,029	5,23 + 0,106	498 + 3,4	0,426 + 0,012
Experimental group				
6,62 + 0,14	9,57 + 0,19	5,49 + 0,04	566 + 9,14	0,441 + 0,0102
P < 0,01	P < 0,5	P < 0,05	P < 0,001	P < 0,5

Favourable influence of phytopreparation also displayed on the cell . immune answer, the evidence of this is 10–15 % increasing of immunoglobulins IgM and IgG in blood serum (Table 2) and T-lymphocytes and B-cells quantity in the whole blood. As it is known, immunoglobulins IgM and IgG have a valid significance in the primary and secondary immune answer, that is why in the antigen aggression conditions, the parallel increasing of antibody synthesizing ceils (B-lymphocytes and immunoglobulins) can be regarded as a result of phytopreparation immunostimulating effect.

## **2. Immimoghbulim (IgM and IgG) content in the calves blood serum after the pizyuprepannon intake ( $M \pm m$ , $n = 10$ )**

Group of animals		IgM, %	IgG, %
Control	the beginning of experiment	43	43
	<i>after the experiment</i>	36	38
Experimental	the beginning of experiment	40	48
	<i>after the experiment</i>	52	62

Average daily alive weight gains of calves from the experimental group were 23 % higher than these from the control group. The economic efficiency of the carried out measures accounts 6,4 grivnyas per 1 grivnya of expences.

### **Conclusions**

1. Thus, the stimulating effect of "Gastroatsid" displays itself on both, the cell and the hu-moral levels of organism immune .answer. It is explained bythe tight interconnection' of the regu-lating ways and mechanisms of immune system, because the immunoglobulins synthesis can be higher at the expense of plasmacytes quantity increase.

2. "Gasiroatsid" preparation use, according to the suggested scheme, positively influences on the general condition, metabolism, general resistance, productivity and animals safety. Its use is economically expedient.

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