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## **Productivity of young cattle at adding triticale into ration**

**Goal.** To investigate the efficiency of feeding grain triticale to large cattle in the composition of various grain mixtures and the quality of this product. **Methods.** Three groups of bulls were formed: I group (control) consumed grain mix No. 1 (without triticale); II (experimental) - grain mix № 2 (20% triticale instead of wheat); III (experimental) - mixture of seeds № 3 (40% by weight instead of wheat). **Results** Replacement in the mixture of grain mixes by 40% by weight of wheat germ by 20-40% of the yielding triticale for fattening Bugites reduces their daily average increments in live weight and increases feed costs. **Conclusions** Feeding animals with grain mix with the addition of 20 to 40% by weight of the triticale, instead of the equivalent quantity of wheat germ, for the production of beef is economically unjustified.

*Key words: young, bulls, ration, triticale, growth, lupine fodder, slaughter output.*

In the area of Polissya, in recent years, it has been used in livestock production, 50% - in the large-scale production of winter wheat and grain production (beer, alcohol) [8]. Triticale is a hybrid of wheat and rye, which combines Triticale with high potential positive features of both cultures. Triticale, crop yields, increased protein content, as well as rye, less soaked to the soil, provide indispensable amino acids, which determines that it bakes sufficiently high yields on fertilized biological and nutritional value, as well as feed sosniks (35-60 c / ha), Its well-eaten quality. The protein content in the triticale is 1-1.5% of the animal and the bird. It is winter-hardy and drought-more than in wheat and 3-4% higher than in rye. Ka food and feed culture, stable Grain triticale is not inferior to the grain of Pshepropati disease. Derma contains vitamins in the body of the body on the content of macro- and trace elements [7]. In this, a greater amount of digestible protein, In view of this, the study of the efficiency of rye and wheat [3]. Poland is a world leader in triticale in rations by a large triticale cultivator, which holds cattle and replaces them with wheat, comprising 9.6% of all crops. Among the grain mixtures for the production of beef in the CIS countries, the first place in the areas under the trity-in the area of Polissya is relevant. Feces is Belarus (more than 350 thousand hectares, or the purpose of research, given the increase of 15-17% of sown area). In many states, the triticale crops in the Polissya zone of Ukraine intensively improve the technology (radioactive zone) and the use of its use of grain triticale. In Poland, animal feeding stuffs need to be investigated efficiently by special processing technology for the feeding of this crop of large grain triticale, which allows the use of horned livestock as part of various grain mixtures, to wool it by 80% in the ration of fattening pigs, and also to determine With the quality of products. Her and broilers [9, 10]. In general, in this country, the Research Methodology. For conducting 63% of the gross harvest of grain, the triticale of scientific and production research is harvested in animal husbandry, 22% - in bread-making units of Ukrainian black-and-white milk breed in baker's and confectionery production. And 3 groups were formed by the method of pair-analogues. In Belarus, approximately 50% of grain of triticale, taking into account origin, age, live weight, intensity of growth in the equation period. The research was conducted in the physiological yard of the Institute of Agriculture of the Polissya National Academy of Sciences (Table 1).

### 1. scheme of conducting research

According to the scheme of the experiment and feeding young (control) group received an economic diet, consisting of si-vote at corn, hay cereal, zernosu-Misha №1 and salt pans. Animals II and III (D) groups than commercial feed ration fed zernosumishi, the answer-no, number 2 and number 3 instead zernosumishi № 1. Composition zernosumishi for feeding calves research groups was different (in weight%): And the group is

winter wheat - 40, lupine bezalkaloidny - 35, oats - 25; Group II - winter wheat - 20, triticale - 20, lupine bezalkaloidny - 35, oats - 25; Group III - triticale - 40, lupine bezalkaloidny - 35, oats - 25. experimental diet feeding calves ve-bast cattle during the experiment were similar to the overall nutritional value, kontsentratsiyeyu exchange energy, security proteyinyom and minerals designed for 0.9-1 kg of average daily growth in live weight. Type of feeding animals - cy-loose-concentrate. The structure of feed rations for calves kontsentrovani nutritional feed were 34.34 -34.40% gross - 9,78-9,79 and succulent forage (silage kukurudzyanyy) - 55,82-55,87% (Table 2).

2. Structure and nutrition of average daily rations in the experimental period

3. Growth of live weight of bulls on fattening and feeding costs per 1 kg of growth (n = 7; M ± m)

During the experiment, the concentration of exchange energy in 1 kg of dry matter of ration of feeding the fattening young was 9.40-9.58 MJ. For each feed unit there were 91-94 g of digestible protein. The accounting of given feeds and their residues was generated daily for each group of animals [2]. Nutritional value of rations was determined on the basis of chemical analysis of individual feeds and their residues, zoichimanaliz of feeds - according to generally accepted methods [4]. The live weight of young was determined by individual weighing until morning feeding at the beginning and at the end of each experimental and monthly period. To study the digestibility of nutrients, nitrogen and mineral balance rechovyvny under the influence factor researched and specific experiment on a background of science-in-the economic experiment on the physiological yard bull at the Institute conducted saline (balance) Research on 3 tvarynah From each group according to the available methods recommended by OI Ovsyannikov [5]. After the completion of the scientific and economic experiment from each group, three typical animals were selected for the control battle - according to GOST 1213 -74. The slaughter was carried out at the shop of Korostensky production and trading-but-stock company. For the chemical analysis of meat, samples of the longest muscle of the back (weighing 400 g) were taken from the 9th and 12th edges of the right half-column after 48 hours of cooling at 4 ° C. Determinations were carried out according to generally accepted methods of zootechnical analysis. The caloric content of meat was determined by the calculation method by the formula VM. Alexandrova [1]. Materials of research were processed by the method of variational statistics [6]. Research results. Results provedenyh studies show that under the same conditions of feeding and housing animals bull, zalezhno zernosumishi the composition of the diet, had a different live weight after eksperymentu (tab. 3). The females of the cattle of the (control) group of live weight after the end of the research prevailed the analogues of the II (experimental) group by 13.6 kg, or by 3.3%, and the third (experimental) group - by 25.8 kg, or on 6.5%. Its average daily gain of live weight was also higher than that of experimental groups of animals at 83-154 g, or 8.6-17.3%, with a probable difference (P> 0.95). For 1 kg of live weight gain, the bulls and group I spent 8.33 k.o., which is less compared to the analogues of groups II and III, respectively, at 0.71 k.o.d. (7.9%) and 1.43 k.o. (14.7%). Consequently, replacement zernosumishi composed of 40% by weight of wheat Dirty Dirty 20-40% trytyka-le for fattening calves in Polissya Ukraine reduced average daily gain and was hit-shuvala cost of feed per unit of output. Gross content in the feed of nutrients and energy can be an indicator of its value spravzhnoyi since a large number of substances pozhyvnyh feed shlunkovo not absorbed in the intestinal tract and is excreted in the feces, while taking part in gross energy feed. Objectively, the idea of the nutrition of a feed makes it possible to study the presence of re-digestive nutrients in it.

4. Digestibility of feed nutrients ra-Zion body calves (n = 3; M ± m)

The replacement of grain-mixed particles of wheat germ (20 and 40% by weight) into a three-tick agglomeration negatively affected the digestibility of nutrients in diet rations (Table 4). The highest digestibility of the diet of the diet was in the experimental animals of the (control) group and the lowest - the third (experimental) groups in the composition of the grain mixture, of which 40% by weight of wheat was replaced by triticale. Coefficients of digestibility of dry matter, protein, fat, fiber and non-free extraneous substances in young people of the control group were larger, corresponding to 1.04; 1.06, 7.36; 0.35 and 0.54 abs. % For group II and for 3,12; 3.31; 11.00; 3.08 and 2.05 abs. % Compared with the third group. The nitrogen balance is one of the factors that characterizes the biological value of fodder and is the main indicator of the degree of animal use of nitrogenous substances in the feed, makes it possible to objectively assess the metabolic processes associated with the transformation and synthesis of proteins in the body. The conducted studies indicate that the balance of nitrogen absorption in bulls in all the experimental groups was positive, but the best was in the young I (control) group (Table 5). The addition of various doses of triticale to the mixture

of corn decreased the absorption of nitrogen in animals of experimental groups compared with the control (at 12.26 and 16.01% abs.). The percentage of digestion of nitrogen from the digested was also higher in the bulls of the control group: at 9.86 abs. % For group II and by 20.90 abs. % Is equal to the third group. The percentage of allocated nitrogen with feces in the pre-test groups was almost the same (26.54-28.72%) and only 1.92 abs. % Was higher in the Bugichi group III control and at 2.18 abs. % Compared with the second group. There is a significant intergroup difference relative to the percentage of selected nitrogen in the urine. This indicator was the smallest among the animals of the control group: compared with the Bugis group II, it was less than 12.51 abs. % ( $P < 0.95$ ) and 14.08% for the young of the III group, where this difference was statistically significant ( $P > 0.999$ ). Consequently, the use of triticale in the composition of grain mix for fattening bulls negatively affected the digestibility of the main nutrients of feed and nitrogen balance, which led to lower performance. Our research results are consistent with the data of O.P. Kalashnikov with co-authors (1998), which explain these properties of tri-facial, inherited from rye. Calcium and phosphorus balances in animals of all groups were also positive, but their utilization in the body varied (see Table 5).

5. Average daily balance of nitrogen, calcium and phosphorus in the organism of experimental animals, g / g.

6. Slaughter quality of the experimental bulls ( $n = 3$ ;  $M \pm m$ ).

A small amount of calcium was allocated to the urine - 0,30-0,44% of the consumed. Bugai III groups isolated it with feces at 3.26 abs. % More compared to the analogues I and 6.41 abs. % For youngsters of group II. Accordingly, the amount of absorbed calcium they had was the smallest: 3.40 abs. % For control and 6.42 for abs. % Compared with the analysts of group II. A slightly different pattern is found regarding the balance of phosphorus in the body of fattening animals. The highest amount of urine was in Bugites III group - 21.66% versus 8.81 and 16.63% in analogs from other groups, and in calves - in the young II group (41.35% versus 32, 81 and 36.31% in the 1st and 3rd groups). The use of phosphorus from consumed was the smallest in animals of the third group: at 8.53 abs. % Compared with control and 7.81 abs. % For group II. Consequently, inclusion in the composition of grain mixes 40% by weight of sucrose triticale led to a decrease in the absorption of calcium and phosphorus in the organism of fattening bulls. After the research was completed, a control slaughter of experimental animals was performed on 3 goals. From each group (Table 6). Against the background of a larger premature live weight of the bulls of the control group by 15.7 kg (by 3.8%) compared to the analogues of the experimental group II and by 20.3 kg (by 5%) compared to the third experimental group, the carcass output was also higher in them, Respectively, 1.96 and 1.55 abs. % The amount of internal crude fat and its yield were the smallest in animals of group III - the intergroup difference in comparison with I and II groups was, respectively, 0,86 kg and 0,19 abs. % And 0.43 kg and 0.11 abs. % Slaughtered in the experimental Bugites was found to be marginal within the range of 49.89-51.93% and was higher in the young control group at 1.75-2.04 abs. % Than animals in experimental groups. Among the many objective methods for assessing the quality of meat, the most complete characteristic is its chemical composition. A comparative analysis of the chemical composition of the longest muscle of the young cattle in the study conducted in the experiment shows that in the muscle tissue of the animals of the second experimental group the concentration of dry matter, protein and ash was less than 0.76 ; 1.07 and 0.05 abs. % Than in the third experimental group and 0.55; 0.64 and 0.09 abs. % Relative to the control group (Table 7). While the fat content of Bug's beef in this group was greater than that of the third experimental group. Intergroup releases 0.18 and 0.36 abs. % Relative to control and mortality by concentration of protein and ash of the third experimental group. In the liver of the experimental Bugites are insignificant. The content of the dry matter and fat in the liver. The energy value of the beef and liver of the boar of the second experimental group was lower than the experimental young cattle, comparable to the similar indices of the tva-bi characteristic for this breed of animals in the control group, respectively, at 0.33 Old age and fluctuated within groups within, and 0.28 abs. % And 0.24 and 0.36 abs. % Relative, respectively, 4.19-4.24 and 4.78-4.90 MJ / kg.

7. Chemical composition of the longest muscle of the spine and liver of the experimental bulls ( $n = 3$ ;  $M \pm m$ )

### Conclusions

In the case of substituting grain mixes 40% by weight of wheat germ by 20-40% of the yield of tri-fat for fattening bulls in the Polissya zone of Ukraine, the average daily gain of live weight is reduced by 8-14,8%

(969 g, 889 g against 1043 g ), The cost of feed per unit of production is increased by 8.3-16.7%. Use in the composition of grain mixes № 2 and 3 for animal feeding *Derma triticales* reduced the digestibility of the main nutrients of the feed: dry matter - on 1,04-3,12%, protein - 1,06-3,31, fat - 7 , 36-10,98, cellulose - 0,35-3,08 and BER - on 0,54-2,05 abs. % The deposition of nitrogen in the body of bulls in the experimental groups was lower by 26.61-35.45 g than in control animals. There are no significant intergroup differences according to the indicators of death, there is a tendency for a slight increase in the carcass output (by 1.55-1.96% abs.) And the mortality rate (1.75-2.04%) From the Bugites I (controversial) groups in comparison with their analogues of II and III (experimental) groups. A comparative analysis of the chemical composition of the longest muscle of the Bug's back indicates that in the muscle tissue of the animals of the second experimental group the concentration of dry matter, protein and ash was less, respectively, at 0.76 abs. %, 1.07 and 0.05 abs. % Than in the third experimental group and by 0.55, 0.64 and 0.09 abs. % Relative to the control group, while the fat content in the beef in this group was larger by 0.18 and 0.36 abs. % For other research groups. Feeding the animals to the grain mixes with the addition of 20-40% by weight of the triticales, instead of the similar quantity of wheat germinating for the production of beef in the Polissya zone of Ukraine, is economically unfeasible - the increase and the receipt of funds are reduced to 177.8 -330.4 UAH / head

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