

## THE EFFICIENT USE OF BIOLOGICAL ADDITIVES IN BEEF CATTLE

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*The efficiency of the use of biological additive "Probiol plus" in the fattening of young cattle was studied. It was established that the use of this additives in bulls' feeding improves their average daily gain of live weight by 22.12 % and is economically feasible in beef production.*

**Keywords:** *bulls, Southern Beef breed, fattening, biologically active additive "Probiol plus".*

**Introduction.** Monitoring the usefulness of animal feeding is an essential part for zoo technical requirements in the system of technological measures of livestock maintenance. Unbalanced rations, low or too high level of feeding, the low quality of forage are the major causes of metabolic disorders in animals. Growing young cattle for meat under the modern conditions of farms, the enrichment of the diet with additives is of great importance, because the most of beef is produced using feed of own production and feed additives play only balancing role as they have scarce nutrients and accelerate the body's metabolic processes [2, 4].

Rational use of biological additives in animals feeding can significantly improve the coefficients of absorption of feed nutrients, productivity and safety of animals. To add these substances in the rations of young cattle significantly increases the live weight gain which gives the opportunity to grow the animals for slaughtering during the shortest period [1, 3].

**The aim of this article** - to study the efficient use of biological additives in feeding of bulls of Southern Meat breed for beef production.

**Material and methods of researches.** Scientific and practical experience was conducted on bulls of Southern Meat breed at the final stage of fattening under conditions of OOO "Batkivshchyna", Shyriaev Region, Odessa Oblast. For the experiment two groups of bulls containing 10 heads were formed and their live weight was 396 pounds. The first group of animals was control and it received ration which had a mixture of concentrate (barley and corn bran, sunflower cake), esparcet hay, corn silage, straw from barley.

The second experimental group of animals received the basic diet enriched with biologically active additive "Probiol plus" manufactured by SE "Ekzym" (Ladyzhyn, Vinnytsia Oblast) in the amount of 5 g per head.

The final fattening period lasted 92 days. Animals were kept free in a typical building on deep litter with outdoor place.

The experimental bulls were weighed individually every month during fattening period and average daily gain and cost of feed per 1 kg of live weight gain were determined.

**The results of the researches.** The difference between control and experimental groups by the main indicators of quality of fattening bulls are presented in table 1.

## 1. Productive indicators of fattening bulls

Indices	Groups	
	I control	II experimental
Live weight before fattening, kg	396.5±4,1	395.7±3.6
Live weight after fattening, kg	505.9±3,9	529.1±3.93
Duration of fattening period, days	92	92
Live weight gain: -absolute, kg - average for day, g	109.4 1189±15.3	133.6 1452±23.2
± before control, g	-	+263.0
± before control, %	-	22.12

Analysis of obtained results (table 1) showed that under identical conditions of bulls feeding and housing, the experimental group which received a biologically active additive "Probiol plus" for fattening period was characterized by the best average daily gain of live weight by 22.12 % (263.0 g). Therefore, for the same period of fattening (92 days) animals of experimental group had higher absolute gain by 24.2 kg and higher live weight by 23.2 kg at the end of fattening.

The economic calculations concerning use of biologically active additives "Probiol plus" in the feeding bulls of Southern Meat breed, indicate certain economic feasibility (tab. 2).

## 2. Economic evaluation of the use of biologically active additive in bulls feeding

Indices	Experimental group
Additional live weight gain of 1 head during fattening period, kg	23.2
Cost of additional live weight gain (prices from 2014), UAH	580.0
Additional cost for additives, UAH	48.3
Profit of 1 head, UAH.	531.7
Economic efficiency costs for 1 UAH, UAH	11.0

Despite the additional costs in the amount of 48.3 UAH but due to the additional live weight gain, the enrichment of cattle's ration by biologically active additive "Probiol plus" allows you to make a profit in the amount of 531.7 UAH per one head, that's why one deposited UAH will bring 11 UAH as a profit.

### **Findings**

The efficiency of the use of biological additive "Probiol plus" in the fattening of young cattle increases animals productivity and is economically feasible in beef production.

*Севастьянов О. Г., Кирович Н.О. Эффективность использования биологической добавки у мясному скотарстві. Вивчена ефективність використання біологічної добавки «Пробіол плюс» при відгодівлі молодняка великої рогатої худоби. Встановлено, що використання у годівлі відгодівельних бугайців даної біологічної добавки сприяє зростанню їх середньодобових приростів живої маси на 22,12 % і є економічно доцільним при виробництві яловичини.*

**Ключові слова:** бугайці, південна м'ясна порода, відгодівля, біологічно активна добавка «Пробіол плюс»

*Севастьянов А., Кирович Н. Эффективность использования биологической добавки в мясном скотоводстве. Изучена эффективность использования биологически активной добавки «Пробиол плюс» при откорме молодняка крупного рогатого скота. Установлено, что использование в кормлении откормочных бычков данной добавки способствует увеличению их среднесуточных приростов живой массы на 22,12 % и является экономически целесообразным при производстве говядины.*

**Ключевые слова:** бычки, южная мясная порода, откорм, биологически активная добавка «Пробиол плюс»