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OPTIMIZATION OF GROWING AND FEEDING OF DIFFERENT BREEDS OF RUMINANTS AND THEIR HYBRIDS WITH AN AVERAGE LEVEL OF FEEDING IN THE CONDITIONS OF THE CARPATHIAN REGION OF BUKOVINA

ОПТИМІЗАЦІЯ ВИРОЩУВАННЯ ТА ВІДГОДІВЛЯ БУГАЙЦІВ РІЗНИХ ПОРІД ЖУЙНИХ І ЇХ ПОМІСЕЙ ПРИ СЕРЕДНЬОМУ РІВНІ ГОДІВЛІ В УМОВАХ КАРПАТСЬКОГО РЕГІОНУ БУКОВИНИ

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Abstract. *This article presents the results of research on the impact of average typical feeding and retention technologies for fattening bulls of different breeds, types and their mixtures of ruminants on live weight, average daily, absolute and relative gains. The conducted scientific researchers are directed on development of new recipes of rations of feeding of bulls with use of various technologies of the maintenance at production of cheap and qualitative beef in the Carpathian region of Bukovina. According to the results of the research it was established that for 185 days during fattening bulls of different breeds of cattle where the daily gains in the created Bukovinian zonal type of meat Simmental cattle were - 947.0 g, which is 142.1 (17.6%) more than Aberdeen peers -Angus breed. Interestingly, the bulls of the dairy breed of the created new breed group of Bukovina red-spotted dairy cattle had a growth energy of 859.4 g, which is 87 g (10.1%) less than the 1Y group (meat Simmental) in the Bukovina region. With the use of different types of feeding and maintenance technologies when fattening steers of different breeds, types and their crossbreeds of ruminants up to one year of age and when fattening up to a year, the Simmental breed of the meat direction of productivity with the achievement of daily gains is more than - 947.0 grams with an increase in productivity by 17 .6%, which provide high economic results in terms of their biological and economically useful qualities in the conditions of the Bukovyna region. It is noteworthy in research that the best economic indicators are obtained in 1In the group in which the cost of feed per 1 quintal of live weight gain was at fattening 6.1k.od. As a result of fattening, the profitability of growing ruminant meat Simmental was 11.5% and 15.1%, respectively, with the average typical feeding in different climatic zones of Chernivtsi region.*

Key words*: breed, bulls, rations, daily gains, profitability, Chernivtsi region.*

Formulation of the problem.

In the conditions of the Ukrainian market and in the state of war, new responsible tasks are set before agrarian, educational science and production to ensure productive and highly productive ruminant cattle of various breeds, types and their crossbreeds with the use of various technologies of maintenance and feeding during fattening, which is relevant for the Carpathian region zone Bukovyny [4-9].

Cattle of various breeds and their types of livestock, when fattened from seven months to a year old, for various reasons lag behind in growth, give low growth, and also have a high susceptibility to various diseases. Such stressors contribute to this, such as: violation of the recipe of feeding rations, change of the environment, relocation from one room to another. Since, the meat productivity of the meat contingent of planned different breeds, types and their crossbreeds of livestock, which varies significantly with different levels of feeding with the determination separately for farms of the public sector of different forms of ownership when cheap beef is obtained in the conditions of the Bukovyna region [7, 8].

Analysis of recent research and publications.

An important problem in the study of the productivity of different breeds and their hybrids of livestock during fattening using own technologies of maintenance and feeding in summer and winter is that such data are practically absent and have not been studied by scientists in the past to obtain the maximum realization of the genetic meat productive potential in fattening in conditions Carpathians. Currently, a further detailed study of the growth energy of various planned breeds, types and their crossbreeds of ruminants using various technologies of maintenance and feeding during fattening is needed.

The analysis of literary sources shows that in recent years, a group of domestic scientists in the fields of dairy and meat cattle breeding has conducted a number of experiments with various technologies of maintenance and feeding to study the genetic meat potential of young cattle during fattening, but it was not studied by scientists in the past in the zone of the Ukrainian Carpathians [1, 2, 5].

The goal is to study the fattening of Bugai cattle of different breeds, types and their crossbreeds with the use of various locally adapted technologies of maintenance and feeding against the background of various proposed recipes of rations in the conditions of Bukovyna. A number of important scientific and industrial tasks have been set on this issue: determination of the average live weight of Bugai cattle, average daily gains and economic efficiency of the results obtained during the production experiment in this region.

Research material and methodology.

In our research, fattening of cattle was carried out using various technologies of maintenance and feeding according to the technology of dairy and meat cattle breeding to obtain average daily gains at the level of 785.0 - 950.0 g. with the achievement of a live weight of 311.5 - 360.5 kg at the age of one year. The object of the research was ruminant cattle of different breeds, types and their crossbreeds, which were fattened at an average level using different recipes of rations, maintenance technologies and types of feeding with the calculation of their economic feasibility for different farms based on breeding data of adapted animals in the Bukovyna region. When conducting scientific research, breed types, sex, age, live weight of animals, the direction and level of their productivity in different physiological periods, seasons and other production factors were taken into account [7]. For this purpose, 10 groups of Bugai cattle were formed in the amount of 9 heads, with an initial live weight at the beginning of the experiment of 157.2-185.9 kg at the age of 7 months according to the following research scheme:

Table 2 - Scheme of a scientific and economic experiment

Group	Breed, hybrids Quantity	number of animal heads	Accounting period (195 days)
			Winter period
Research – I	Simmental breed	9	Basic ration (OR): whole milk, hay, straw, horseradish, pasture fodder, green mass of annual crops, hay, corn silage
Research – *II*	Black and spotted breed	*9*	*As in 1 - research group*
Research -111	Black and spotted breed 50% x Simmental 50%	9	
Research – IУ	Bukovyna zonal type of meat Komologo Simmental	9	
Research – У	Bukovyna zonal type of meat Komologo Simmental 50% x Black and spotted breed 50%	9	
Research – У1	Bukovynsky plant type of Ukrainian red-spotted dairy cattle	9	
Research -У11	Bukovyna breed group of red-spotted dairy cattle	9	
Research -У111	Swiss breed	9	
Research 1X	Pinzgau breed	9	
Research X	Aberdeen is an Angus breed	9	

For the planned production research, analogues of Bugai cattle of various breeds and their crossbreeds were selected in the farms: FG "Ivankivtsi" black-spotted, black-spotted 50% x Simmental 50%, ATZT "Myrne" LLC Bukovinsk factory type of Ukrainian red-spotted dairy cattle and created Bukovyna breed group of red-spotted dairy cattle, PP "Kolosok 1" Aberdeen - Angus of Kitsmansky, LLC "Svizhenka Milka" Simmental and Swiss Zastavnyansky, SE DG "Chernivetske" Bukovynia zonal type of meat komologo Simmental, SVPK "Peremoga" Bukovynia zonal type of meat komologo Simmental 50% x red-spotted 50% Hertsaivskyi and Pinzgau NVA "Rayduga" of Putilsky districts of Chernivtsi region. In 2020, in the month of February, Bugai cattle were selected, which were fattened in each farm using different technologies of maintenance and feeding [3, 8].

Maintenance of experimental bulls of various breeds and their crossbreeds in a stablethe period was affectionate. In the summer, maintenance was carried out using various maintenance technologies. Watering of animals from automatic waterers and natural reservoirs. Distribution of hay and silage by pods. The type of feeding is silage - hay - concentrate. Feeding energy feed according to the rations in dry form twice a day. Pinzgau Bugays were located in the mountainous steppes of the Carpathians. The experiment was conducted in conditions close to production conditions.

The selection of experimental animals and the composition of groups were carried out using the method of balanced groups with group feeding, and the method of pairs of analogues with individual accounting of factors of feeding and

productivity, which makes it possible reduce the number of experimental animals in groups. In the conducted experiment, the numberof animals in the group was determined by the following main factors, but the main oneswere: equalized by breed, degree of consanguinity, age, sex, live weight based on zootechnical accounting data. In our research, all the physiological parameters for the experiment were met [3,7].

Research results.

For the production of cheap beef, it is important not only to identify the genetic meat potential of various breeds, types and their crossbreeds of ruminants in optimal conditions of different keeping and feeding, when the hereditary endowments of animals are most fully manifested, but also to study the growth energy of fattening animals in production conditions in different climatic conditions zones of the Bukovyna region. The results of the research (Table 1) indicate that during 185 days of fattening bullocks of different breeds of cattle and their types, in which the average daily gain in the Bukovyna zonal type of meat Komologo Simmental of ruminants was 947.0g, which is by 142.1g (17, 6) more than peers of the Aberdeen-Angus ruminant breed.

Table 1.

Changes in the live weight of experimental Bugai animals *M*±*m*, *n*=10)

Indicator	1	I1	II1	1У	У	У1	У11	У111	1Х	Х
Number of goals	9	9	9	9	9	9	9	9	9	9
Live weight at the beginning of the experiment, kg	164,5 ±1,5	163,8 ±2,4	148,2 ±1,8	185,3 ±1,6	165,7 ±1,9	162,5 ±1,5	167,5 ±2,3	177,3 ±1,7	157,2 ±2,1	172,7 ±1,8
At the end of the period, kg	311,5	319,1	325,3	360,5	329,3	319,7	326,5	323,0	295,1	321,6
Increase: General, kg	147,1 +1,7	155,3 +1,3	147,6 +1,5	175,2 +1,6	163,6 ±1,2	157,2 +1,5	159,1 ±1,1	145,7± 1,3	137,9 ±1,7	148,9 ±1,3
	794,6± 0,563	839,5± 0,355	795,1± 0,650	947,0 ± 0,750	884,3± 0,850	849,0± 0,556	859,4± 0,450	787,6± 0,550	745,4± 0,375	804,9± 0,657
Feed consumption per 1 kg of growth, unit.	6,5	7,9	6,9	6,1	6,6	6,7	6,3	6,6	6.7	7,2
Live weight at the end of the experiment, kg Increase:	411,5 ±1,6	419,1 ±1,8	425,3 ±2,1	475,5 ±1,3	429,3 ±1,1	419,7 ±1,4	426,9 ±1,6	423,0 ±1,9	395,1 ±1,2	421,6± 1,1
Total at the end of the experiment, kg Dobovyi, g	247,0 ±1,5 866,7	255,3 ±1,1 895,8	277,1 ±1,7 972,2	290,2 ±1,4 1018	285,2 ±1,9 1000,1	257,2 ±2,1 902,4	259,4 ±1,2 910,2	245,7 ±1,6 862,1	237,9 ±1,7 834,7	248,9± 1,4 873,3
Feed consumption per 1 kg of growth, unit.	7,2	8,1	7,1	7,3	7,1	7,3	7,5	7,7	7,5	7,4

It was established that bulls of the dairy breed of the newly created breed group of Bukovyna red-spotted dairy cattle had a growth energy of 859.4 g, which is 87.6 g less than the 1Y group (meat Simmental). It was established that during the entire

period of the experiment, within 285 days from the dates of birth to the date of final fattening, in the Bukovinsk zonal typical meat komologo Simmental, the animals were 1018 g, which is 151.3 (17.4%) more than Simmental breed analogues of the combined direction productivity in the conditions of the foothill zone of the Bukovyna region.

Economic calculations show that with approximately the same amount of feed consumed per head, their payment in increments was different and depended on the breed and their crossbreeds and the conditions of keeping and feeding. It is known that the main indicators of the economic efficiency of the cultivation of bulrushes were the cost price of a produced unit of production, revenue from its sale and, ultimately, profit and profitability. It is worth noting that the best economic indicators during fattening were obtained in the 1st group, in which feed costs per 1 kg of live weight gain amounted to 6.1 k.od. As a result of fattening, the profitability of growing meat Komologo Simmental was 11.5% and 15.1%, respectively.

Conclusions.

1. During the fattening of bulls of different planned breeds, types and their crossbreeds on different feeding and maintenance diets, during the 185 days of the experiment, cattle of the Simmental breed of the meat direction in terms of productivity in terms of daily gains prevailed by 142.1g (17.6%) more than peers Aberdeen - Angus breed in the conditions of the Bukovyna region.

2. Feeding cattle of different breeds with different amounts of self-produced fodder consumed per head, their payment in gains was different and depended on the genotype, and the best economic indicators were obtained from animals of the Bukovyna zonal type of meat Komologo Simmental cattle in which feed costs per 1 kg of live gain mass was 6.1 k. units. with a profitability of 15.1% in the conditions of the foothill zone of the Carpathian region of Bukovyna.

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Анотація. *В даній статті відображено результати досліджень щодо впливу при середньому типові годівлі та технологій утримання при відгодівлі бугайців різних порід, типів та їх помісей жуйних на живу масу, середньодобові, абсолютні та відносні прирости. Проведені наукові дослідження спрямовані на розробку нових рецептів раціонів годівлі бугайців з використанням різних технологій утримання при виробництві дешевої та якісної яловичини в Карпатському регіоні Буковини. За результатами проведених досліджень встановлено, що за 185 днів при відгодівлі бугайців різних порід худоби де добові прирости у створюваному буковинському зональному типові м'ясного сименталу худоби становили – 947,0г, що на 142,1(17,6%) більше від ровесників абердин - ангуської породи. Цікавим є те, що бугайці молочної породи створюваної нової породної групи буковинської червоно-рябої молочної худоби мали енергію росту 859,4 г, що на 87г (10,1%) менше від 1У групи (м'ясний симентал) в умовах регіону Буковини. З використанням різних типів годівлі та технологій утримання при відгодівлі бугайців різних порід, типів та їх помісей жуйних до річного віку і при відгодівлі до року де симентальська порода м'ясного напрямку продуктивності з досягненням добових приростів більше - 947,0 грамів із збільшенням продуктивності на 17,6 %, що забезпечують за своїми біологічними і господарське - корисними якостями високі економічні результати в умовах зони регіону Буковини. Заслуговує на увагу в дослідженнях, що кращі економічні показники отримано в 1У групі, в якій затрати кормів на 1 ц приросту живої маси склали при відгодівлі 6,1к.од. В результаті відгодівлі рентабельність вирощування м'ясного сименталу жуйних склала відповідно 11,5% та 15,1% при середньому типові годівлі в різних кліматичних зонах Чернівецької області.*

Ключові слова*: порода, бугайці, раціони, добові прирости, рентабельність, Чернівецької області*