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Efficiency of Various Technologies for Growing and Fatting Young Cattle in Light Buildings

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Abstract: The article discusses the effectiveness of bull-calves grown in the "cold" way of keeping at the age of 18 months in terms of live weight exceeded their peers in the control group by 35.5 and 30.1 kg or 7.73 and 6.63%.

Introduction. Currently, in Uzbekistan, livestock accounts for 57.9% of the total gross agricultural output. This industry plays an important role in generating income for rural residents of the country, so the problems and prospects for its development are in the priority of the agrarian policy of Uzbekistan. During the years of independence, significant changes have taken place in the agricultural sector of the country. Instead of state farms and collective farms, dekhkan and farm enterprises became the main agricultural producers. Currently, more than 90% of all livestock products are produced by small dekhkan farms [1].

From the published information it follows that for the three months of 2021, 88.9% of the total volume of agricultural products falls on dekhkan (personal subsidiary) farms, 7.1% on farms, 4% on organizations engaged in agricultural activities. Data are being collected on the share of dekhkan (personal subsidiary) farms in the production of the main types of agricultural products meat (in live weight) - 92.1%, milk - 95.1% and eggs 54.2%.

The problem of increasing the production of meat, in particular beef, improving its quality and reducing the cost is one of the urgent problems of the agro-industrial complex of Uzbekistan and is of great economic importance.

The importance of such changes prompted us to conduct a scientific and economic experiment to develop an intensive resource-saving environmentally friendly technology for growing and fattening cattle in lightweight buildings for small farms and peasant farms in a hot climate.

The study of this issue is now of particular scientific and practical interest and is relevant [2, 3, 4, 5].

The methodological basis for the research was the works and positions of scientists in the field of beef cattle breeding. In the studies, analytical, clinical, calculation and static research methods generally accepted in zootechnics were used.

For the experiment, 3 groups of red-steppe bulls were formed according to the principle of analogues, 15 heads each according to the following scheme (table 1).

Table 1. Scheme of experience

Group	Technology option		
	From birth to 2 months	From 2 to 12 months	From 12 to 18 months
Control	Closed premises, group keeping without leash	On sites with a shady canopy, group keeping without a leash	Tied indoor feeding

I-th experienced	In individual houses	Same	Fattening on sites with a shady canopy on a leash
II-th experienced	In buildings of lightweight construction in individual cages	In buildings of lightweight construction with group maintenance with walking	Fattening on sites with a shady canopy on a leash

The change in live weight was taken into account by monthly weighing in the morning before feeding. Absolute, relative and average daily live weight gain was calculated according to generally accepted methods. The linear growth of the animals was studied by taking the main measurements of the body (height at the withers and rump, width and girth of the chest, oblique length of the body, girth of the chest and semi-girth of the rear). Based on these measurements, physique indices were calculated.

Feed consumption was taken into account by taking into account the given feed and their residues for two adjacent days, ten days. Feed payment was calculated by the cost of feed units per 1 kg of live weight gain.

The obtained digital materials were processed by the method of variational statistics by K.E. Merkurova.

In our experiment, all experimental bulls after birth for two days were in the stall along with the materials. Then the bulls of the control group were transferred to the premises and kept in group pens for up to 2 months (five heads in each). And the bulls of the 1st experimental group were transferred to individual houses.

The calf hutch is made of polyester reinforced with fiberglass, so it is not affected by solar radiation and extremely high and low temperatures.

This palester guarantees the necessary strength, so the service life of the houses is almost unlimited. Palestra dimensions: length - 150, width - 120, height - 125 cm. Fencing: length - 150, width - 120, height - 1000 cm.

At the age of 2 to 12 months, the animals of the control and I-experimental groups are in open areas with shady canopies, II-experimental group in buildings of lightweight construction with paddocks for group drinking bowls AGK-4.

At the age of 12 to 18 months, the animals of the control group are in enclosed spaces on a leash. Technological processes are mechanized: feed preparation for feeding is carried out in a special workshop, feed is distributed using a KTU-10 mobile feeder, watering from individual automatic drinking bowls, manure removal is carried out using TSN-160 scraper conveyors twice a day.

Animals of I and II experimental groups are fattened on a site with a shady canopy on a leash, feeding and watering was the same as in the control group, manure removal with a bulldozer.

The diet of experimental young animals was compiled taking into account age, live weight and planned productivity.

The change in the live weight of experimental bulls in various ways of keeping and individual age periods provided in (table 2).

Table 2. Dynamics of live weight of experimental bulls kg.

Age, months	Group		
	control	I experienced	II experienced
When staging 15 days	36±0.82	35.7±0.88	38±0.84
3 months	83±0.88	87.6±1.04	90.2±1.02
6 months	140±1.60	147±1.72	149±1.38
9 months	204±1.36	215.6±1.44	217.6±1.68
12 months	270±2.82	285±2.64	290±2.90

15 months	341±2.25	365±2.58	370.2±2.96
18 months	424.1±2.18	454.2±2.44	459.6±3.10

Table 2 shows that as a result of growing the bulls of the experimental groups by the “cold” method of keeping them in lightweight buildings in individual cages and in houses, it had a noticeable effect on growth characteristics, significant differences were established between groups of individual age periods. Bulls reared in lightweight buildings and in individual houses at 18 months of age outperformed their peers in the control group by 35.5 and 30.1 kg, or 7.73 and 6.63%, respectively (P>0.999).

The obtained results of the scientific and economic experience allow us to draw the following conclusions: in the conditions of the hot climate of Uzbekistan, the cultivation of bulls of the red-steppe breed during the dairy period in lightweight individual cages and in houses in the summer and winter periods of the year is expedient from the veterinary and economic points of view and has a number advantages over the traditional method of rearing in a group house.

The organization of the "cold" method of rearing young cattle at all stages of production provided a more active increase in the productivity of livestock and biological potential compared to the corresponding bottom, obtained in the conditions of growing calves by mixed methods.

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