



The effect of intensive growth of Simmental heifers on the abbreviated age of the first insemination.

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ANNOTATION

The article presents the results of the conducted research experiments on the maintenance and feeding of Simmental heifers, from heifers imported from Europe, aged 0-14 months.

SUMMARY

Results of the made scientific research experiments after contents and feedings of calfs of Simmental breed, from heifers brought in from Europe, at the age of 0-14 months are presented in article.

Keywords: Simmental heifers, live weight, average daily gain, ration, exchange energy, growth, maintenance, feed costs.

I. INTRODUCTION

Reducing the age of the first insemination of heifers, early entry into the herds of young cows is economically feasible. But for this it is necessary to bring the live weight of Simmental calves to 380-410 kg at the age of 14-16 months with intensive cultivation technology.

A special place in this problem is the question of the influence of the intensity of growing young cattle on the formation of its productivity. The formation of productive qualities of young cattle is determined not only by genetically determined parameters, but also by the level and type of feeding, the technological system of housing, which have a decisive influence on the intensity of growth and the nature of body build. The intensive factors of rearing young stock from birth make it possible to shorten the time for preparing heifers for reproduction and to significantly increase the production of milk and meat. However, at present, in the conditions of the hot climate of Uzbekistan, there are no scientifically based data on the reduction of the period of the first insemination of heifers of the Simmental breed, obtained from imported heifers from Germany. Therefore, the solution to this problem is of great relevance.

II. PURPOSE OF THE WORK

To study the effect of intensive cultivation of heifers of the Simmental breed, derived from imported heifers from Germany, on the increase in productive indicators.

III. MATERIALS AND METHODS OF RESEARCH

Research and production experience is conducted in the Sirdarya region in the unitary enterprise "SARDOBA TYASM" on heifers of the Simmental breed. Two groups were formed of newborn heifers with 15 heads each according to the principle of analogues. The feeding level of the experimental group was increased by 25-30% than in the control.

The maintenance of heifers is up to 2 months of age in individual houses, From 2 to 4 months - in group bowls, from 4 to 14 months in a room with a walking platform.

IV. RESEARCH RESULTS AND DISCUSSION

In the dairy period, according to Table 1, 540 kg of whole milk were consumed by the experimental group's calves, and the control group - 405 kg. Milk was drained three times a day. Hay costs amounted to 249, silage-378, grain feed -224 kg, and in the control, respectively, 198, 300, and 165 kg. The cost of nutrients was higher in the experimental group: feed units by 23.2%, digestible protein by 23.5%, dry matter by 26.3%, compared with the control group.

Table 1: Feed consumption in the dairy period

| Name of feed | Groups | |
|---------------------------|---------|-------------|
| | Control | Experienced |
| Wholemilk | 405 | 540 |
| Alfalfahay | 198 | 249 |
| Cornsilage | 300 | 378 |
| Senage | - | - |
| Corngrain | 100 | 120 |
| Wheatgrain | 68 | 104 |
| Cookedsalt | 2,65 | 2,65 |
| Premix BMK * | 1,1 | 1,1 |
| Mineralsupplement | 3,55 | 3,55 |
| The feed contains: | | |
| Exchangeenergy, MJ | 5124,5 | 6654,9 |
| Feedunits, kg | 425,2 | 553,5 |
| Drymatter, kg | 414,2 | 561,8 |
| Digestibleprotein, kg | 51,6 | 67,4 |
| Cellulose, kg | 78,0 | 98,3 |
| Sugar, kg | 9Д | 11,7 |
| Starch, kg | 95,2 | 126 |
| Fat, kg | 28,4 | 37 |
| Calcium, kg | 4,4 | 5,6 |
| Phosphorus, kg | 1,6 | 2,1 |
| Carotene, g | 16,1 | 20,0 |

The cost per 1 kg increase in live weight of the heifers in the dairy period was in the experimental group 3.62 kg of feed units and 441 g of digestible protein, and in the control, respectively, 3.46 and 420.

An increase in the nutritional value of the ration of experienced heifers by 25% was reflected in their growth. Thus, the live weight of the experienced heifers at 6 months of age was 182.8 kg, which is 16.4%, or 30 kg, more than in the control group and the average daily weight gain was 851 g, compared to 701 g for the control heifers.

Table 2: Feed consumption at the age of 7-14 months, kg

| Name of feed | Groups | |
|--------------|-------------|---------|
| | Experienced | Control |
| Alfalfahay | 707 | 486 |
| Cornsilage | 1680 | 1760 |
| Senage | 994 | 885 |
| Corngrain | 157 | 145 |
| Wheatgrain | 132 | 102 |
| Wheatbran | 101 | 87 |

| | | |
|-----------------------|-------|-------|
| Exchangeenergy, MJ ‘ | 6872 | 5185 |
| Feedunits, kg | 1281 | 1113 |
| Drymatter, kg | 1792 | 1530 |
| Digestibleprotein, kg | 142,1 | 118,8 |
| Cellulose, kg | 440,5 | 376,9 |
| Sugar, kg | 62 | 52,3 |
| Starch, kg * | 181,3 | 157 |
| Fat, kg | 65,6 | 54,7 |
| Calcium, kg | 6,9 | 13,3 |
| Phosphorus, kg | 1,6 | 4,35 |
| Carotene, g | 33,1 | 80,6 |

Table 3: The cost of feed per 1kg increase in live weight, kg

| Name of feed | Groups | |
|-----------------------------------|---------|-------------|
| | Control | Experienced |
| Weightgain | 336,8 | 275,7 |
| Feedconsumption | 1834,5 | 1538,2 |
| Digestibleproteinconsumption | 209,5 | 170,4 |
| The cost of 1 kg gain: feed units | 5,44 | 5,57 |
| digestible protein, g | 622 | 618 |

In the post-dairy period (table 2) at the age of 7-14 months, the heifers of the experimental group grew and developed intensively. Thus, their live weight at 14 months of age reached 366.8 kg, the average daily weight gain for this period was 788.7 g, which is higher by live weight by 19.9% and the average daily gain of 22.2% compared to the control group. For 8 months post-harvest period, the heifers fed the experimental group 1281 kg of feed units and 142.1 kg of digestible protein, the control group, respectively, 1113 kg and 118.8 kg. The experienced heifers spent 5.44 kg of feed units and 622 g of digestible protein per 1 kg of live weight gain. This indicator in the control group was 5.57 kg and 618, respectively.

Table 4: The dynamics of growth of live weight and absolute growth, kg

| Age months | Average live weight, kg | | Absolute increase, kg | |
|------------|-------------------------|-------------|-----------------------|-------------|
| | Control | Experienced | Control | Experienced |
| 1 | 53,67±1,7 | 57,40±0,8 | 23,67 | 27,4 |
| 3 | 89,73±1,8 | 106,20±1,8 | 36,06 | 48,8 |
| 6 | 152,87±1,9 | 182,8±1,9 | 63,14 | 76,6 |
| 9 | 210,67±2,2 | 254,4±2,1 | 57,8 | 71,6 |
| 12 | 268,2±2,7 | 320,2±3,4 | 57,5 | 65,8 |
| 14 | 305,7±3,1 | 366,8±3,8 | 37,5 | 46,6 |

Table 5: Average daily gain for periods of growth, g

| Groups | Periods, months | | | | |
|-------------|-----------------|-------|-------|-------|-------|
| | 3 | 6 | 9 | 12 | 14 |
| Control | 663,6 | 701,5 | 642,2 | 638,8 | 625,0 |
| Experienced | 846,7 | 851,1 | 795,5 | 731,1 | 776,6 |

V.CONCLUSIONS

Over the entire period of the experiment (Table 3,4,5), the heifers of the experimental group were distinguished by a high growth rate. Increasing the level of feeding by 25% made it possible to bring the live weight to 366.8 kg, to get an absolute increase of 336.8 kg and average daily gain of 788.7 g, at a cost of 1 kg of increase in live weight of 5.44 kg of feed units and 622 g of digestible protein.

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