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*Article*

# Effective Technology for Raising Goats

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**Abstract:** This study presents a comparative analysis of goat milking efficiency during the dairy period under different rearing conditions. Specifically, the research examines milking performance when kids remain directly under their dams versus when they are partially separated. The study evaluates key productivity indicators, including live weight dynamics, absolute and average daily growth, and the effectiveness of different rearing technologies. The findings contribute to optimizing goat-rearing practices for improved milk yield and growth rates.

**Keywords:** Goat, Live Weight, Absolute and Average Daily Growth, Cultivation Technologies

## 1. Introduction

With the transition to market relations, goat farming, primarily focused on wool production, has become unprofitable due to the low demand for this product and its low prices. The sale of wool does not cover the costs of keeping goats, as a result of which the industry may not be competitive. In this regard, exploring opportunities for producing and selling additional products is a pressing issue. This task can be successfully solved by producing meat and milk, the production volumes of which largely depend on the technology of keeping goats and raising young goats [1].

The biological characteristics of goats are such that they can maximize the use of pastures and roughage while minimizing grain feed requirements and transform them into food and raw materials for industry.

At the current stage of goat breeding, there is a need to produce its products using low-cost technologies. In this regard, the currently existing technology for producing goat products requires analysis and restructuring [2].

First of all, it is necessary to maximize the use of the biological characteristics of goats for reproduction and preservation of offspring, due to high fertility, milk production, and maternal instinct of the females. The manifestation of these natural factors in animals should be facilitated by appropriate technology for keeping females and raising young goats [3].

## 2. Materials and Methods

The methodology of the work included the study of the constitutional differentiation of animals at birth, in the process of growth and in adulthood, the effectiveness of selection according to the constitution and size of animals, the creation of lines and the efficiency of breeding along lines [4]. Digital material from the experimental part of the study was processed by methods of variation statistics [5].

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Currently, in Uzbekistan, two technologies are used for raising young goats in pasture conditions: the first is to keep them directly under their mother's milk throughout the entire lactation period until they reach 4.0-4.5 months of age, and the weaning method is used, where young goats are weaned from the mother in the morning after the milk feeding period, and only in the evening are they allowed back to the mother for feeding, this is done so that the mother goats graze better and can use distant pastures, and this continues until the young goats are strengthened and able to move in pastures equally with the mother goats [6].

In this regard, we were tasked with conducting a comparative analysis of various kid rearing technologies for their correspondence to the animals physiological status and the rational combination of production operations with the biological abilities of the goats [7].

For this purpose, during the kiding period in March 2024, we formed two groups of goats, each with 25 kids, based on the principle of analogs [8].

The first group served as a control group, and the kids were kept under the mothers for the entire suckling period and used their milk as they pleased, while the animals were kept around the mating field for the first two months [9].

## 3. Results

The second group was experimental, where one-week-old young goats were weaned from the females in the morning and allowed to approach them as they returned from pasture. This continued until 2,0 months of age. Later, the kids were raised together with their mothers. Starting from the age of 30 days, goats were given 0.3 kg of grated pasture hay during the day. Using this technology allows females without kids to graze in separate pastures and, thus, to feed them more abundantly and contribute to more milk production and, accordingly, increase the growth rate of the kids. On rainy days, the kids were kept in pens, and on other days, in open pens. Below, in Table 1, data on the change in the live weight of young goats are presented [10].

**Table 1.** Age dynamics of live weight of young goats depending on the growing technology, kg.

| The age of the kids | Control | | Experienced | |
|---|---|---|---|---|
| | M±m | C% | M±m | C% |
| At birth | 3,1±0,11 | 9,1 | 3,0±0,09 | 8,7 |
| 7 days | 4,1±0,15 | 8,1 | 3,99±0,1 | 7,8 |
| 1 month | 7,2±0,17 | 7,2 | 76,2±0,13 | 8,0 |
| 2 months | 10,8±0,21 | 6,7 | 12,3±0,15 | 7,4 |
| 3 months | 14,1±0,24 | 7,3 | 16,2±0,19 | 7,6 |
| 4,5 months | 18,5±0,31 | 8,1 | 21,4±0,21 | 6,9 |

Analysis of the data presented in Table 1 shows that the growth of young goats in the groups did not occur equally.

Thus, if the growth of young goats during the milk period proceeded approximately the same (the difference is not significant), then subsequently, a constantly increasing growth difference was noted in favor of the young goats of the experimental group, and in 1,2,3 and 4.5 month-old age, respectively, this difference was 5.8; 13.9; 14.9 and 15.7 percent[11]. This is apparently explained by the fact that the females from the experimental group, grazing separately from the kids, have the opportunity to eat more pasture vegetation and digest it better, which undoubtedly contributes to a greater milk production and, accordingly, ensures a more intensive growth of the kids. Subsequently, the well-developed young goats, accordingly, eat and process pasture fodder better [12].

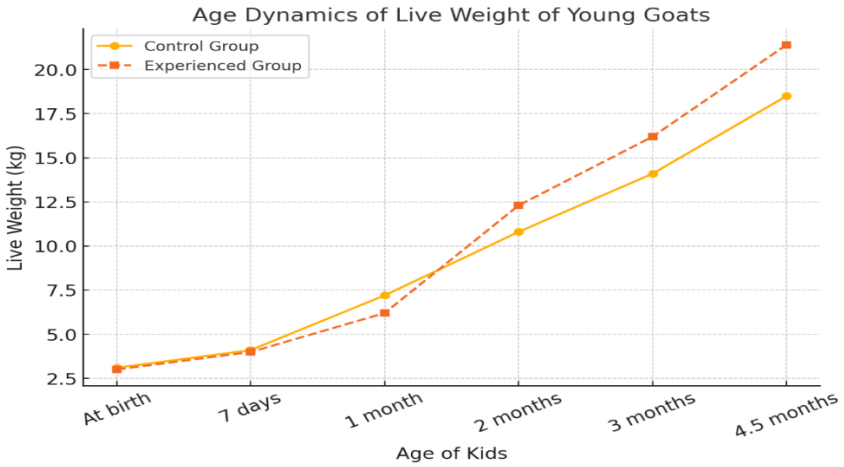


**Figure 1.** Graphical representation of Table 1.

The growth of kids depends on the gain in live weight. Below, in Table 2, data on the live weight gain of young goats by group are presented.

**Table 2.** Increase in live weight.

| Growth periods | Days | Absolute, kg | | Average daily g/day | |
|---|---|---|---|---|---|
| | | Control | Experienced | Control | Experienced |
| Colostrum | 7 | 1,0 | 0,99 | 142 | 141 |
| From birth to 1 month of age | 30 | 3,1 | 4,62 | 103 | 154 |
| From 1 to 2 months of age | 30 | 3,6 | 5,1 | 120 | 170 |
| 2 to 3 months of age | 30 | 3,3 | 3,9 | 110 | 130 |
| 3 to 4.5 months of age | 45 | 4,4 | 5,2 | 98,0 | 115 |

Analysis of the data presented in Table 2 shows that the highest absolute and average daily growth of the kids in both groups was observed from birth to two months of age, subsequently decreasing [13]. Thus, the goats of the experimental group showed an average daily gain of 154.0 grams in the first thirty days of life and surpassed the animals of the control group by 51 grams or 49.5%. Between the ages of 3 and 4.5 months, the difference was 17.0 grams or 17.3% [14].

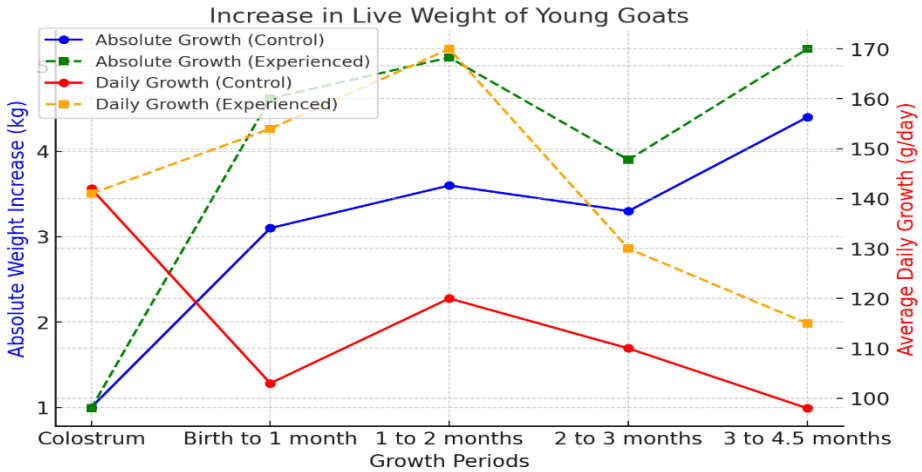


**Figure 2.** Graphical representation of Table 2.

## 4. Discussion

Thus, the results of the conducted research allow us to conclude that separate raising of young goats during the daytime period allows for greater gain [15]. At the same time, this technology is not without its drawbacks. Thus, with this method of rearing, a certain decrease in the feeling of motherhood in goats is noted, especially in the initial period of weaning, that is, it is required from shepherds to pay more attention to the process of "accepting" goats by goats upon their return from pasture.

## 5. Conclusion

The effectiveness of separate grazing of females and young goats compared to their peers grazed together with adult goats contributes to their more intensive growth, that is, conditions are created that more fully correspond to their physiological needs.

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