

# FACTORS INFLUENCING THE PRODUCTIVITY OF ORENBURG GOATS

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### Abstract

For the development of livestock farming, it is necessary to create a solid feed base. In turn, balanced feeding is an important condition for the manifestation of the Orenburg goats' genetic potential. This article discusses about the factors influencing the productivity of these types of the goats which ensures good health, high productivity, normal reproductive functions, and is also the basis for the prevention of metabolic disorders and many animal diseases.

**Keywords:** succulent feeds, mineral supplements, daily feed, flattened oats, rolled oats, brooms, autumn leaves, feed supplement, stall period.

# Introduction

During the stall period, Orenburg goats are kept in a base (preferably without a tether) on a straw bedding with open access to the room and an exit to the walking yard. On sunny days, Orenburg goats are let out for a walk for 4-5 hours during the day, and on frosty days - for 1-2 hours. In the fresh air, Orenburg goats' metabolism and resistance to diseases increases, which helps to increase the wool shearing and down pile, as well as improve their quality. Only in severe frost, snowfall, blizzard or snow cover over 10 cm are animals kept indoors [1].

In the diet of Orenburg goats during their stall or semi-stall maintenance, a significant proportion is occupied by hay and barn feed (straw, chaff). Particularly valuable is the small-stemmed hay of legumes and cereal grasses, mown during the flowering period, well preserved during the harvesting period. The daily norm of hay for Orenburg goats is as follows: for ewes - 1.8...2.2 kg, for bucks - 2.5...3, for kids up to one year - 0.8...1 kg [2]. In the rations, hay should account for at least 30% of the feed by total nutritional value.

Hay should be dry, but not over-dried (humidity up to 17%). In good weather, hay is stored on the second day after mowing. In such hay, leaves and small stems are preserved. Wet hay is dried under awnings, which are covered with film.

Of the barn feeds, the best is straw - pea, lentil, legume, bean, as well as spring cereals. Goats eat winter grain straw poorly. For better digestibility of straw, it is advisable to chop it, calcinate, steam it, and season it with concentrates. The most common



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method of processing straw for feeding is chopping. Straw cuttings (2...3 cm long) are moistened with warm salt water (500 g of salt per 10 buckets of water) and kept in a wooden box for up to 18 hours, then flavored with concentrates or root crops. As a result, the palatability, nutritional value and digestibility of such straw increase sharply. It is not recommended to store soaked cuttings [3].

In down and wool goat breeding, the following approximate daily feed rates are provided for during the stall period of maintenance:

a) young one-year-olds: hay 2 kg, including 1 kg of cereal-legume, concentrates for kids - 0.5 and for she- Orenburg goats - 0.3 kg, legumes 1 kg, concentrates before kidding - 0.3 and during suckling until good pastures appear - 0.4 kg;

b) adult ewes: 2.5 kg of hay, including 1 kg of cereal and legume, 1.5-2 kg of silage; in addition, during early spring kidding, concentrated feed is added to the daily rate at a rate of 0.2 kg per day for two months before kidding and 0.4 kg during suckling [4];

c) adult bucks: 2.5 kg of hay, including 1 kg of cereal and legume, 0.5 kg of concentrates, 1.5-2 kg of succulent feed; during the pre-mating and mating periods, the rate of concentrate distribution is increased to 1.5 kg per day;

d) kids: before weaning, if kept in stalls and on poor pastures, starting from the age of one month, give concentrates at a rate of 0.1-0.2 kg per day, preferably cereal and legume hay ad libitum; After weaning, the kids are fed with concentrates at a rate of 0.3 kg per head per day, and the female goats - 0.2 kg [5].

The diet of a dairy goat in the autumn and winter periods consists mainly of hay, concentrated and succulent feeds, and mineral supplements. For adult goats, the daily feed rate may consist of the following set: cereal hay (forbs) - 1.2 ... 1.4 kg, legume hay - 0.5 ... 0.7 kg, succulent feed - 1.5 ... 2.5 kg, concentrates (flattened oats, rolled oats) - from 0.3 ... 0.5 to 0.8 kg, table salt - 13 ... 15 g, disodium phosphate - 12 ... 15 g.

As the experience of many goat breeders shows, brooms and autumn leaves serve as an extremely valuable feed supplement during the stall period [6].

Brooms are usually prepared in small quantities. Although sometimes the Orenburg goats were given only brooms as roughage during the entire stall period: two large willow brooms per day and 400...500 g of hay. In this case, the Orenburg goats gave milk until they gave birth, and a week after giving birth, they received 4...4.5 liters of milk. In summer, the milk yield reached 6 liters.

The importance of brooms in goat nutrition is enormous, it is best to give a goat a broom per day, and if this is not possible, then at least half a broom every other day. At least 80...100 brooms should be prepared for one goat [7].





Brooms are prepared from willow, birch, aspen, maple, ash, and rowan branches. Willow ones are considered the best. Birch ones are fed sparingly, alternating with brooms of other tree species, otherwise they can cause kidney inflammation.

They start to tie brooms from June 5-10, when young shoots grow and warm weather sets in. Branches are conveniently cut with pruning shears. The thickness of the ends of the branches at the cut should not exceed 1-1.5 cm. The cutting should be done either late in the evening or early in the morning, when the trees are growing and they accumulate valuable substances.

After cutting, the branches are laid out on the ground for several hours to dry lightly and to allow vitamin D to form in them under the influence of sunlight. Such dried branches are easier to tie with twine or polyethylene twine. At the butt, the broom should be no thicker than 18...20, 80...100 cm long. The brooms are dried in the shade in the attic of the house or in the barn, hanging on rows of poles or on nails on the walls. After a month, they are stacked in several layers on a lattice flooring.

In the fall, before the onset of cold weather, fallen willow, birch, linden, poplar and other leaves are mainly harvested. They are conveniently raked with a wooden rake into small swaths and dried over the course of 4...5 sunny days, turning over. You need to store such leaves in the attic or in a shed, laying a one-meter layer of old hay or straw for better ventilation. Such leaves, sometimes even green, still contain 25-30% of nutrients. But their main value is micro- and macroelements. The Orenburg goats willingly eat these leaves in small quantities. You just need to make sure that they do not get moldy [3].

If you do not prepare brooms and leaves, it is advisable to feed goats at least a small amount of leafless raw twigs of deciduous trees from November to May. They are conveniently cut with pruning shears. When cut, they should not be thicker than 3-4 mm, otherwise the goat will not be able to snack on them. It is quite enough to feed a goat 20-40 such twigs daily. Their wood, buds and bark contain a lot of chlorophyll and all the minerals. The Orenburg goats eat winter twigs greedily and without a trace. This feed additive helps improve their rumen digestion, which is important during the stall period.

The Orenburg goats require a small amount of minerals, but their deficiency in the diet has a sharp impact on the animals' vital functions: mothers with a lack of phosphorus and calcium give birth to weak kids, milk production decreases, male goats have a reduced sexual activity and the quality of sperm deteriorates [4].

Good feeds usually contain a sufficient amount of minerals, but it is advisable to always have salt licks and tricalcium phosphate in the feeder.





The behavior of goats on pasture has its own characteristics, despite the fact that they are able to eat many types of grass, goats are picky about the choice of plants. On pasture, adult goats eat up to 6 kg of green mass per day, male goats - up to 8, and young animals - 3...4 kg. During lactation, goats must be fed with concentrated feed in ground form at the rate of 0.3...0.4 kg per day per animal. Goats need more maintenance feed than other animals, as this species has a more intense metabolism [5].

According to some authors, goats digest fiber better than sheep. During the digestion of fiber, acetic acid is formed in the stomach, which in turn helps to increase milk yield and increase the fat content of milk. Thus, the ability to consume large amounts of roughage and produce acetic acid can explain the high milk productivity of the Orenburg goats. Animals readily eat concentrates and table scraps.

However, sometimes a goat demonstrates downright "taste anomalies," eating plastic bags and other items unsuitable for food. This is a sure sign that the animal's diet lacks mineral salts. A goat desperately needs calcium and, especially, phosphorus. It needs at least 8...10 kg of salt per year. A goat also needs iodine. These elements will be processed in her body and will again acquire in milk a percentage ratio that makes it useful for children and easily absorbed by the human body.

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