

TECHNOLOGICAL ASPECTS REGARDING GROWTH IN GOATS FARM

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Abstract

This paper aims to analyze the technological aspects of module 200 heads of goats on a farm sizes in the market enabling the delivery of the products. It is considering the possibility of the existence of land necessary for ensuring the farmer owned fodder or other forms lease, rent and also producing and getting feed at a price as low cost. Farm size, in general, is chosen so as to ensure the development of production processes and conditions imposed to ensure an environment healthy animals, respecting the laws in force. Romanian farmers raising goats can be a chance in competition with farmers in the European Union. This opportunity exists because goat milk is not subject to quotas, and large areas in Romania are conducive to this activity. For a good development of business growth and maintenance is necessary to know the main goat husbandry and veterinary activities that must be followed and respected in the various stages of the year. Goats represent an economic opportunity due to their increased number and characteristic to multiply faster, higher production potential and low investment costs, maintenance, feeding and marketing. Goat milk and goat cheese are increasingly demanded by consumers in Romania. For this reason goat rearing is a profitable occupation can become very enjoyable.

Keywords: goats, technological aspects, milk, cheese, environment, health, animals.

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1. INTRODUCTION

Goats growth is a traditional activity in Romania. The diversity of the work that they carry, low power consumption and nature of feed they consume, provides growth and sustainable exploitation of goats character and future activity. There is the possibility of achieving the export of goats meat producers to bring high income.

A goat produces on average three times more milk than sheep actually consuming the same amount of food.

Goats have a good ability to adapt and endure high temperatures easily.

Being polygastric animals, ruminants, consume roughage capitalizing economically efficient this type of feed that other animals don't eat.

Has the potential combination pronounced by crossing with other breeds to obtain good production of milk or meat.

After a decline in livestock in the 1990s, there is an increasing trend in the number of traditional areas in raising goats: Dobrogea, Dolj, Constanta, Teleorman, Tulcea, Olt, Mehedinti, Bacau, Buzau, Gorj, Arges

Prahova, Vrancea. It is noted that in Romania processing goat milk is mixed with sheep's milk or cow's milk (Table 1).

Table 1.
Dynamics of livestock and meat production in the period 2005-2013

Specification	UM	2005	2010	2011	2012	2013
Total actual sheep and goats	thousand head	8.921	9.623	11.331	12298	12710
Total production of meat live	thousand tons	114	100	150,0	107	171
The average weight at slaughter	kg/head	19	16	21	18	24

2. MATERIAL AND METHOD

Carpathian breed - is the oldest and most widespread breed, primitive, rustic, strong and very heterogeneous in terms of color and exterior development and production of milk

and young goats. Owns 80% of the total number of goats in Romania. Produces on average 240-260 liters of milk per lactation of 800 liters and maximum fat percentage from 3.4 to 4.3%.

Banat white breed - is improved with a higher productivity level. The head is characteristic animal milk production with high capacity, small, fine-looking lean. The neck is of medium length, thick, strong states dry, normal aplomb, bones developed. The udder is well developed, pear-shaped or globular with short hairs and smooth with medium development nipples, prices mechanical milking. Milk production is approximately 500 liters of milk, varying between 300-900 l per lactation.

Microclimate and maintenance conditions

Goats are exploited in the best conditions of stabulation. The farm must be equipped with modern milking: milking machine, stainless steel tank for storage and keeping constant temperature cooled to 4 degrees C; cheese room: steel valve for milk pasteurization, media and forms; ripening room and storage room equipped with air conditioning. Transport from milking to cheese room is via double circuit so the milk does not entering in contact with air (Tabel 2).

Table 2.

Environmental parameters for goats

Animals category	Inside temperature		Relative humidity	Air speed
	winter	summer		
	°C	°C	%	m / s
Reproduction goats	3 - 5	15 - 21	70 - 80	< 0,5
Goats in maternity	8 - 10	18 - 21	60 - 70	0,2
Young goats one month old	8 - 14	18 - 21	60 - 70	0,2
second month old	12	15 - 21	60 - 70	0,2
Reproduction male goats	3 - 5	15 - 21	70 - 80	< 0,5

Semi-intensive system maintenance

- the system is used for increasing family farms goat milk ;
- the need to ensure the milking parlor 32 stations served by two emulsifiers ;
- feeding is mechanized by using a wagon;

- garbage is removed using a tractor fitted with a blade ;
- feeding driveway is 2.3 to 3 m wide;
- doors are wide 3-4 m;
- high milk production is achieved through mechanization of milking ;
- goats are slaughtered for meat production in 35-45 days ;
- farm can sell breeding or semen if biological material has value ;
- farm will be equipped with a laboratory with necessary equipment to collect sperm ; etc.

3. RESULTS OBTAINED

Goats feeding

- basic nutrition are green fodder and fiber feed plus concentrated feeds;
- feeding areas for fiber consist in gratings of 30-35 cm wide access sided or double width 60-70 cm for bilateral access;



Figure 1. Feeding goats area

- crib grill is equipped with tray concentrated and dollop salt;
- to feed goats are squeamish and do not eat feed musty or with animal smell;
- shelter should be located inside banks of 80 cm length; 50 cm wide and 40 cm height for play and recreation.

Diet during the grazing

Grazing time is 10 -12 hours a day, entering and one reserved for milking, ingested green table is 8 -10 Kg / day for adult, youth over six months 4-5 kg and kids 2-3 kg / day. Within this system can provide feeding, using unique blend based on 65 % of the fiber feed (half hay and half coarse), silage, green mass, root 20 % and 15 % chopped corn cobs, all chopped,

homogenized and optionally moistened with saline solution or weak solution of molasses.

Feeding goats in stalls

Stabulation takes approx. 155 days depending on the duration of the winter season. During this period, feed goats, traditionally with different type of hay, concentrated feed only in the first month of lactation in amounts of 200-300 g / day.

In semi-intensive and intensive feeding operation is based on rules and rations. Consumption level reaches 3 to 3.5 % dry substance from animal weight and varies in relation to physiological state is minimal at the end of gestation and the maximum between 6 and 10 weeks of lactation.

Watering the goats

- water is consumed for watering, cleaning and washing facilities shelters ;
- amount of water for 24 hours: 10 l / head adult goats ; 4 l / head youth 4 l / head dairy ; 2 l / head forage preparation ; 60 l / carer ; 2 l / m² washing shelter
- watering goats with constant use, having a housing in which there is a water tank equipped with float to keep the level constant.

Milking groups

- milking groups includes milking room and the dairy;
- milking room in herringbone or abies; animals are placed undertake feeding troughs from 45-60 degrees; platform width 0.70 m; gutter width 40 cm.



Figure 2. Milking room

- animal waiting room ensure 0.4-1 m / head;
- the dairy is the place reserved for collection, cooling, storage and washing utensils milking milk;
- engine room contains equipment used in the transport and storage of milk;

- milking group includes a laboratory and a healthcare facility.

Dimensional elements stabulation goats

- Surface: 1,5 m / adult goats head; 1.4-1.5 m / head youth 2.3-2.5 m / head goats with kids; 0.4 m / head kids; 4-5 m / head in goats;
- Feeding front: 40-45 cm / head adult goats; 30-40 cm / head youth 40-45 cm / head goats with kids; 20 cm / cap kids; 50 cm / head goats

Design and annexes

- pens and spaces on pasture with shade
- paddocks to sunlight, exercise, playground; it is recommended to double the surface area of the shelter; some are paved with brick paved width is to us; has some ground to rest hooves;
- storage space (1mp/ head) and preparation of feed (7mp/100 head) of equipment and facilities;
- veterinary flag (5% of actual)
- artificial insemination point
- rooms for preparation and storage of dairy products.

Production and exploitation of cultivated grasslands

Are plowing at 25-30 cm by roller leveling, sowing 2-3 cm, herbicide, managing manure 50 t / ha or chemical N - 50 kg / ha; P - 50 kg / ha and K - 50 kg / ha. The structure of the optimal mixture is the 70% feed grass (*Lolium*, *Dactylis*, *Festuca*) and 30% vegetables (alfalfa, clover, etc), The total amount of seed is from 30 - 35 Kg / ha.

It is necessary to ensure a fixed or mobile sources of water. The land is divided into 5-6 parcels each returning 5-6 days of grazing into the first parcel being made when plants height 12-14 cm. For efficiency, parceling is the boundary with hedges of deciduous shrubs and conifers (sea buckthorn, hawthorn, hazel). In the absence of shrubs can be made permanent or portable fences in defining parcels.

Estimating costs

For breeders of future orientation on growth efficiency of goats is needed financial analysis farm. This analysis is estimated, the market prices used on this writing.

Structure livestock

- 200 milking goats
- 300 kids (young goats).

Animals are bred: goats 365 days and kids 2 months.

Income from the turning cheese - 360,000 lei.

Depending on the season milking operation, for a kg of cheese are required 5-6 liters of milk. Thus, we consider the average amount of milk that Carpathian Breed can give, is 600 liters annually, during lactation and results 100-120 kg every goat cheese.

100-120 kg cheese × 200 goats = 20000-24000
kg of cheese

24000 kg cheese × 15 lei / kg cheese = 360000
lei

Income from the turning kids - 39000 lei

Take into account the sale of 300 kids resulting from the 200 goats, reached 10 kg each (an average figure).

10 kg weight × 13 lei / kg × 300 head =
39000 lei

Total annual income = 369000 lei.

4. CONCLUSIONS

- Goats represent an economic opportunity, due to the number and property to multiply faster, higher production potential and low investment in costs, maintenance, feeding and marketing
- Goat is a "factory" milk, it gives 10-18 times more milk than body weight, compared to 5-6%, as a cow gives
- Goat milk and goat cheese are increasingly demanded by consumers in Romania. For this reason goat rearing is a profitable occupation can become very enjoyable
- A goat produces on average three times more milk than sheep actually consuming the same amount of food.
- Goats have a good ability to adapt and endure high temperatures easily.
- Being polygastric animals, ruminants, consume roughage capitalizing economically efficient this type of feed that other animals don't eat.
- Has the potential combination pronounced by crossing with other breeds to obtain good production of milk or meat.

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