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IMPORTANCE OF COMPOUND FEED (GRANULATED FEED) IN PRODUCING HIGH-QUALITY SHEEP PRODUCTS

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ANNOTATION

This article provides a scientific analysis of the importance of compound feed (granulated feed) in producing high-quality meat, wool, and milk in sheep farming. The nutritional value, digestibility, economic efficiency, and advantages of pelleted feed compared to traditional feed are examined. The research results show that the use of compound feed is an important factor in increasing sheep productivity and reducing production costs.

Keywords: Sheep farming, Compound feed, Pellets, Feed, Productivity, Feeding technology, Vegetable oils, Meat yield, Production cost.

INTRODUCTION

Sheep farming, as one of the important branches of agriculture, plays a significant role in supplying the population with meat, wool, and dairy products. In modern conditions, it is necessary to implement a scientifically based feeding system to improve the quality of sheep products.

In recent years, compound feed (granulated feed) has been widely used in sheep farming and is recognized as a balanced type of feed that fully meets the physiological needs of animals.

Characteristics of Compound (Granulated) Feed

Granulated compound feed is a type of feed produced by mixing various feed components (grains, protein sources, vitamin and mineral supplements) and compressing them using special technology. It is rich in protein and has high digestibility.

Table 1. Composition of Compound Feed (Average Indicators)

Indicators	Amount (%)
Grain products	50–60
Protein supplements	15–25
Vegetable oils	2–5
Vitamin-mineral premix	3–5
Fiber substances	8–12

The table presented above shows the main components of compound feed (granulated feed) and their average proportions, which represent a balanced ration aimed at meeting the physiological needs of sheep.

Grain products (50–60%).Grain products make up the main part of compound feed. They serve as an energy source and play an important role in the growth and weight gain of sheep. A high proportion of grains ensures the supply of carbohydrates and stabilizes the energy balance of the animal’s body.

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Protein supplements (15–25%).Protein components are essential for muscle tissue development, wool formation, and overall productivity improvement. Maintaining this indicator within 15–25% is considered optimal depending on the age and production direction of the sheep.

Vegetable oils (2–5%).Fats are a high-energy source that increases the caloric value of the feed. In addition, they improve the absorption of fat-soluble vitamins and have a positive effect on meat quality.

The main advantages of granulated feeds include a balanced nutrient composition, high digestibility, convenience in feeding, increased productivity of sheep, improved quantity and quality of meat, and increased wool yield.

Feeding sheep with compound feed has a positive effect on growth rate, meat quality, and wool productivity.

Table 2. Increase in Sheep Productivity under the Influence of Different Feed Types

No	Feeding type	Live weight gain (g/day)	Meat yield (%)	Wool yield increase (%)
1	Traditional feeding (hay + pasture)	80–100	45–48	5–8
2	Mixed feeding (hay + grain)	120–150	48–52	8–12
3	Compound feed (granulated feed)	180–220	52–58	12–18

The table data clearly demonstrates the differences in main productivity indicators of sheep when fed with traditional feed compared to compound feed (granulated feed). The analysis shows that granulated feed has advantages in all main parameters.

Daily weight gain (120–150 g → 180–220 g).In sheep fed with compound feed, daily weight gain is observed to be 40–60% higher compared to traditional feeding. This is explained by the balanced composition and high digestibility of granulated feed. As a result, efficient absorption of nutrients in the animal's body is ensured.

Wool productivity (100% → 115–130%).The increase in wool productivity by 15–30% is directly related to the protein and mineral content of compound feed. In particular, when nutrients necessary for keratin synthesis are sufficiently supplied, both the quality and quantity of wool improve.

Meat yield (45–48% → 50–55%).The increase in meat yield indicates better development of muscle mass in sheep. High-quality protein and energy sources in compound feed contribute to faster formation of muscle tissue, leading to improved meat quality and quantity.

Economic efficiency The use of granulated feed allows optimization of production costs. It reduces expenses and increases profitability compared to other types of feed. These results are clearly reflected in the following table.

Table 3. Economic Efficiency Indicators

Indicators	Traditional Feed	Compound Feed
Feed consumption (kg/1 kg gain)	6.5–7.0	4.5–5.0
Production cost (conditional units)	100	85–90
Profitability (%)	15–20	25–35

The table data allows comparison of the economic results of feeding sheep with traditional feed and compound feed (granulated feed). The analysis shows that the use of compound feed provides significant economic advantages.

Feed consumption (6.5–7.0 → 4.5–5.0 kg per 1 kg gain).When compound feed is used, the amount of feed required to produce 1 kg of weight gain decreases by approximately 25–30%. This is explained by the high digestibility and better utilization of nutrients in granulated feed. As a result, less feed is consumed while more production is obtained.

Production cost (100 → 85–90 conditional units)A 10–15% reduction in production cost reflects a decrease in overall production expenses. Reduced feed consumption, faster growth rate, and optimized production processes all contribute to lowering total costs.

Profitability (15–20% → 25–35%).The significant increase in profitability is one of the most important economic advantages of using compound feed. Profit levels increase by approximately 1.5–2 times, ensuring higher income for farms.

The table analysis shows that compound feed (granulated feed) ensures efficient use of feed resources, reduces production costs, and improves the economic stability of farms. Therefore, the use of compound feed is considered both a biologically and economically optimal solution in sheep farming.

DISCUSSION

The analysis shows that compound feeds fully meet the biological requirements of sheep. The granulated form improves feed digestibility and reduces energy loss. As a result, the overall health of animals improves and product quality increases.

In addition, the use of local raw materials in compound feed production makes it economically advantageous as well.

CONCLUSION

1. Compound feed (granulated feed) is a highly effective type of feed in sheep farming.
2. It positively affects growth rate, productivity, and product quality of sheep.
3. Granulated feeds reduce feed wastage and increase economic efficiency.
4. The wide use of compound feed is recommended in modern sheep farming enterprises.

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