

FEEDING AND QUALITY EVALUATION OF FEED FOR BREEDING SHEEP

Akhmetova B.S.*, candidate of Agricultural Sciences

bako_84_21@mail.ru, <https://orcid.org/0000-0002-4477-752X>

Nurzhanova K., candidate of Agricultural Sciences

aza938@yandex.ru, <https://orcid.org/0000-0003-1688-2784>

Satieva K., candidate of Agricultural Sciences

k.satieva@yandex.ru, <https://orcid.org/0000-0001-8212-5517>

Ismailova A., master of Agricultural Sciences

erkin_ainur87@mail.ru, <https://orcid.org/0000-0002-0504-6425>

Kazhybekova T., master of Agricultural Sciences

tk844957@gmail.com, <https://orcid.org/0009-0002-7782-3593>

NJSC «Shakarim University of Semey», Semey, Kazakhstan

Annotation. Proper feeding is the most important factor determining the quality of products obtained from livestock. Having a good supply of feed is the main condition for the development of animal husbandry. The animal's body receives the necessary nutrients for its vital functions from the surrounding environment. This, in turn, requires a concentration of nutrients in the diet. For proper animal growth, high productivity, and an increase in livestock numbers, it is essential to have a feed base that provides animals with the necessary nutrients. For example, in a farm, proper feeding helps improve animal health, ensures normal reproduction, preserves the entire livestock population, promotes good development, and increases productivity.

The article evaluates the main types of feed for sheep, sourced from the feed base of LLP "Ukrainskoye" in the Ulan district of East Kazakhstan region, AIC "Elkentai" in the Zhanasemei district of Abai region, and the "Akbastau" farm, using organoleptic and laboratory methods. During the research, the types of feed and their quality were thoroughly analyzed, and an assessment of their cost and efficiency was conducted. The research results showed that the types of feed used are widely distributed across all regions of Kazakhstan and play an important role in meeting the primary nutritional needs of livestock in farms. This study highlights the impact of proper feed selection on productivity, animal health, and the economic success of farms.

Keywords: feeding, ration, feed quality, sheep, chemical composition of feed.

Introduction. Agriculture occupies a significant share in the development of our country's economy. The development of animal husbandry is based on three factors. The first is the breeding qualities of the livestock, that is, its genotype.

The second is environmental conditions, which have the greatest impact on the manifestation of genetic traits, namely the level and quality of feeding, which is a phenotypic factor.

The third is the conditions of housing and care. Among these factors, nutrition has the greatest influence on the growth, development (ontogenesis), and productivity of animals. Therefore, in order to preserve livestock and obtain high-quality and abundant production, feeding must be organized on a scientifically grounded basis [1-3].

For the proper organization of livestock feeding on a farm, it is necessary to prepare a sufficient supply of feed. It is also important to know how to use this feed efficiently as animal nutrition. To achieve this, livestock specialists must have a deep understanding of the digestive characteristics of different types of farm animals and, in accordance with their physiological needs, use feed resources efficiently. This ensures high productivity while minimizing feed costs. This is especially important because, in animal husbandry, a significant portion of direct expenses that determine the cost of production is allocated to feed and feeding [4].

Feeding plays a crucial role as a factor ensuring the health of animals, their reproductive functions, and high productivity.

The maintenance of animal health and their ability to perform certain functions depend on a sufficient amount of nutrients in the composition of plant- and animal-based feed [5-6].

The primary source of nutrition for animals is plants. The nutrients in plants are not digested by the animal's body in their original form but undergo various chemical transformations, turning into a more digestible state and being utilized to meet the body's needs.

The most important factor determining the quality of products obtained from animals is feeding. Having a high-quality feed supply is the main condition for the development of animal husbandry. The animal's body obtains the necessary substances for life from its surrounding environment. This, in turn, requires the concentration of nutrients in the diet. To ensure proper animal growth, high productivity, and an increase in livestock numbers, a solid feed base that provides essential nutrients is necessary. For example, in a farm setting, proper feeding helps improve animal health, ensures normal reproduction, preserves the entire livestock population, supports good development, and enhances productivity [7-9].

The energy, nutrients, and biologically active substances necessary to sustain the life of an animal's body are supplied through its daily feed intake. Therefore, ensuring a sufficient supply of all components required for proper metabolism directly depends on the quantity and quality of the feed given to the animals. The quality of feed is primarily determined by its chemical composition, richness in nutrients, and digestibility by the animal's body [10-11].

Before feeding and during the feeding process, it is necessary to check and monitor the quality of the feed prepared on the farm. This is important because feed that has been stored for a long time may lose its nutritional value, making it less beneficial for the animals. However, private farm owners do not always send feed to a laboratory for analysis of its nutritional content and digestibility. Instead, they often assess it visually, relying on its smell, color, appearance, and how willingly the animals consume it [12].

Currently, more than 500 types of various feeds and feed additives made from plants are used for animal feeding. These include hay, haylage, silage, grass meal, by-products of oilseed production, microelement salts, as well as vitamin, enzyme, and antibiotic preparations.

First of all, the quality of the feed, its chemical composition, nutritional value, the content of macro- and microelements, vitamins, and the sufficiency or deficiency of biologically active substances are determined. Taking these factors into account, a daily ration is developed according to the norms established for a specific group of animals, their productivity, and age. This ration must contain all the aforementioned nutrients in sufficient amounts. Without this, it is impossible to provide animals with a balanced diet [13-15].

Materials and methods of research. Scientific research on sheep feeding was conducted in 2024 at LLP "Ukrainskoye" in the Ulan district of East Kazakhstan region, AIC "Elkentai" in the Zhanasemei district of Abai region, and the "Akbastau" farm. The study involved Kazakh semi-coarse wool and coarse wool fat-tailed sheep, as well as rams of meat Merino and meat-wool sheep breeds. The feed base required for livestock farming is fully provided by the farms' own production.

LLP "Ukrainskoye" in the Ulan district of East Kazakhstan region is located in the foothills of the Kalba Mountains and is characterized by mountainous terrain. Depending on the absolute altitude, the territory is divided into mid-mountain and low-mountain areas, represented by pasturelands in the dry-steppe grazing zone.

The climate influences the distribution of precipitation, the characteristics of the land cover, and the botanical composition of vegetation. The ability to efficiently utilize natural pastures year-round and cultivate forage grasses and cereal crops to establish a feed base provides significant opportunities for the development of sheep farming in this region.

In LLP "Ukrainskoye" of Ulan district, East Kazakhstan region, a pasture-stall system of sheep keeping is used.

Under the unique natural and feed conditions of the steppe zone in Ulan district, East Kazakhstan region, sheep farming is one of the key sectors of livestock production in the region.



Picture 1 – Sheep grazing on the pasture of LLP "Ukrainskoye"

Accordingly, as seen in Picture 1, the use of natural pastures in the Ulan district, including low-mountain areas, as seasonal pastures for sheep is one of the reserves for increasing the efficiency of sheep farming.

In the Abai region, the "Akbastau" farm is located in the Kokentau rural district, while the "Elkentai" agricultural production cooperative is situated in the Zhienaly rural district. The farms specialize in breeding Kazakh semi-coarse wool and coarse wool fat-tailed sheep. The climatic conditions are favorable for raising livestock for meat production.

The climate of the Abai region is continental, with cold winters and hot summers, which affects the specifics of agricultural activities. Based on climatic characteristics, these farms are located in the dry steppe zone. The terrain consists of a combination of flat, low-hilly, and low-mountain areas with absolute elevations ranging from 290 to 350 meters and relative elevations from 20 to 50 meters.

The vegetation cover is characterized by species typical of the desert-steppe zone. Meadow grasses and shrub vegetation predominate.

The preparation and evaluation of feed delivered from farms were carried out following the recommendations of N. Omarkozhauly in the book «Evaluation of Feed and Animal Feeding» and the methodological guidelines of M. N. Abanova «Technology for Feed Preparation» [16-17].

As a result of the study, the quality and nutritional value of the feeds were determined based on their complete consumption by animals, as well as their smell, color, taste, and moisture content. The evaluation was carried out in accordance with the requirements of the State Standard.

The moisture content of the feeds was determined using a laboratory method with a drying oven. Macro- and microelements in the feeds were identified by ashing in a muffle furnace at 500°C (Pic. 2).



Picture 2 – Analysis of feeds in the laboratory

Results. In the course of the study, a zootechnical analysis was conducted on the composition of feeds used in farming enterprises in the East Kazakhstan and Abai regions for feeding sheep. First, the types of feeds used in the farms were identified. The main types of feeds used in the farms include alfalfa, clover, brome grass, and wheat bran. For the study, feed samples were collected from farm feed stocks, and their chemical composition was analyzed in the "Zootechnical Feed Analysis" laboratory at Shakarim State University in Semey. After the average feed samples were delivered to the laboratory, they underwent an organoleptic assessment (SS 4808-87).

Table 1 – Types and Quality of Feeds Obtained from Farms

№	Types of Feeds	Botanical Description	Evaluation		
			Color	Smell	Conclusion on Feed Quality
1	2	3	4	5	6
1	Alfalfa	Belongs to the legume family, an annual or perennial herbaceous plant. The stem is branched, bushy, with a height of 40–80 cm. The leaves are trifoliate, elongated. The inflorescence is a multi-flowered raceme. The fruit is a multi-seeded pod.	Light green	Characteristic smell, no foreign odor	I (Suitable for feeding livestock) Contains no toxic plants
2	Clover	Perennial, sometimes annual herbaceous plants belonging to the legume family. They reach a height of 15–50 cm, with a rounded stem and thickened root. The leaves are compound, consisting of 5–9 leaflets. The flowers are small, red, pink, yellow, or white, grouped into spherical or elongated racemes. The fruit is a pod containing 1–2, sometimes 3–6 seeds.	Light green	Characteristic smell, no foreign odor	I (Suitable for feeding livestock) Contains no toxic plants
3	Timothy grass	Timothy grass is a perennial herbaceous plant belonging to the wheatgrass genus of the Poaceae family. It grows to a height of 25–70 cm. The stem is hairy, sometimes smooth, with narrow, ribbon-shaped leaves. It has 3–10 hairy flowers. The inflorescence is a spike, and the fruit is an oval grain. It blooms in June and bears fruit in July. Timothy grass is a nutritious forage for livestock.	Light green	Characteristic smell, no foreign odor	I (Suitable for feeding livestock) Contains no toxic plants

1	2	3	4	5	6
4	Wheat	An essential cereal crop belonging to the Poaceae family. The spike has a spindle-like shape, with colors ranging from white to pink or black, and contains an awn inside. The seed is elongated, with a longitudinal groove and a smooth surface.	Light yellow	No foreign smell	I (suitable for livestock feeding) Contains no poisonous insects or toxic substances

Based on the results of Table 1, the quality of the feeds brought from farms was assessed. According to the results of the organoleptic evaluation, alfalfa, clover, timothy grass, and wheat as a grain crop meet standard requirements and belong to Class I. During the organoleptic evaluation of feeds, the botanical composition was first considered, the color was assessed visually, the smell was checked for mold or signs of spoilage, and moisture content was determined in the laboratory using a drying oven. Based on these indicators, a classification was assigned. The feeds examined in our study were rated as high-quality and suitable for livestock feeding. Coarse feeds meet zootechnical requirements.

Animals are fed with various types of feed, and their nutritional and biological value is determined by the chemical substances in their composition.

After evaluating the main types of feed in farms (alfalfa, clover, timothy grass, wheat), their chemical composition was studied. The zootechnical analysis of the feeds was carried out according to the Kazakhstan State Standard SS R-50817-2008. In the laboratory, we determined only the moisture and ash content of the feeds (Table 2).

Table 2 – Chemical composition of feeds, %

№	Type of feed	Farm names					
		«Ukrainskoye»		«Elkentai»		«Akbastau»	
		Water	Ash	Water	Ash	Water	Ash
1	Alfalfa	15,5	9,1	15,1	8,5	15,4	8,8
2	Clover	17,3	7,3	17,0	7,0	16,5	6,7
3	Timothy grass	16,4	3,8	16,0	3,6	15,5	4,1
4	Wheat	15,0	5,5	15,2	5,4	15,6	5,8

According to the results of Table 2, the moisture content of the feed in the studied farms ranged from 15.1% to 17.3%, while the ash content was between 3.6% and 8.5%. In the "Ukrainskoe" farm, these indicators were 15.0–17.3% and 3.8–9.1%, respectively. In terms of nutritional value, it was found that alfalfa and clover contained a higher amount of micro- and macroelements.

Regarding the chemical composition of the feed, the ash content in alfalfa and clover used for feeding sheep in the studied farms was 6.7–7.3%, indicating that leguminous crops contain significantly more minerals, including calcium, compared to cereal crops.

The chemical composition and nutritional value of different feeds are essential for sustaining life, but they must be consumed, digested, and absorbed by the body to be converted into energy and essential nutrients.

Feed intake and digestibility are closely related. A high fiber content increases the feed volume, reducing digestibility and limiting intake. This is because coarse feeds take longer to pass through the digestive tract, extending the digestion period. Consequently, legumes such as alfalfa and clover have higher digestibility than cereals such as timothy grass and wheat, as their fiber content is 25.6–24.4%, allowing for better feed intake.

Table 3 presents the daily ration amount for breeding rams during the winter period.

Table 3 – Daily Ration for Breeding Rams

Type of feed	Ration Structure, kg
Cereal grass, kg	0,9
Legume grass, kg	0,6
Carrot, kg	1,0
Barley, kg	0,5
Wheat, kg	0,5
Table salt, g	18,0

All the studied farms use the diet option shown in Table 3. The nutritional value of this diet can be seen in Table 4.

Table 4 – Nutritional Value of the Diet

Composition	Amount
Dry matter, kg	2,62
Feed unit, kg	2,41
Metabolizable energy, MJ	27,6
Crude protein, g	395
Digestible protein, g	288
Calcium, g	20,0
Phosphorus, g	10,8
Manganese, mg	0,07

It is known that sheep are fed depending on their age, sex, and physiological condition. In Table 4, we confirmed that the nutritional value of the ration meets the feeding standards for rams during the winter period and fully satisfies the body's needs. The winter period requires special attention when feeding ewes, as pregnant females must fully provide nutrients to the fetus both in the womb and after birth. This affects the viability, growth, development, and productivity of future offspring, so it is essential to give this issue special attention.

The results of determining the chemical composition of the feeds used in the studied farms showed that the quality of the feed for cattle is considered nutritionally complete in the ration.

Conclusion. Proper and sufficient feeding of sheep during the winter period is a crucial factor in maintaining their health and productivity. During this period, due to the shortage of pasture forage, it is necessary to provide livestock with nutritious feed.

In the farms of East Kazakhstan and Abai regions, the quality of sheep feed is at a high level. According to the research results, the main types of feed – alfalfa, clover, brome grass, and wheat bran – meet standard requirements in terms of organoleptic and chemical composition and are classified as first-class feed. Determining the chemical composition of feed allows for a balanced diet, which contributes to improving livestock product quality and increasing economic efficiency. The moisture and ash content of the feed are within the established norms, while leguminous feeds are distinguished by their high content of mineral substances, especially calcium. The study confirmed that the nutritional value and digestibility of the feed are high, fully meeting the physiological needs of the animals. Proper sheep feeding contributes to increased body weight, wool productivity, offspring health, and overall efficiency. Providing sufficient nutrition to pregnant ewes is particularly important, as it directly affects the viability of future lambs. Additionally, proper and balanced feeding of breeding rams plays a key role in maintaining their reproductive ability, health, and full realization of their genetic potential.

In conclusion, the feed used in the studied farms is complete, high-quality, and meets zootechnical requirements.

Gratitude. The research was carried out under the Program-targeted financing of the Ministry of Science and Higher Education of the Republic of Kazakhstan for 2024-2026, BR24992940 «Creation highly productive sheep population in north-eastern region Kazakhstan based on development effective selection techniques and introduction resource-saving technologies».

References:

- [1] **Сәбденов, К.С.,** Бексейітов Т.К., Абдуллаев М., Исламов Е.И., Құлатаев Б.Т.. Қой шаруашылығы: Оқулық / Алматы: Дәуір, 2011. – 472 б.
- [2] **Grigorev, M.F.,** Chernogradskaya N.M., Grigoreva A.I., Popova A.V., Makarov K.P. The effectiveness of feeding growing sheep using non-traditional feed additives // Journal of Agriculture and Environment, – 2021. – V.4. <https://doi.org/10.23649/jae.2021.4.20.11>.
- [3] **Natyrov, A.K.,** Ubushaev B.S., Moroz N.N., Ubushaev B.S., Moroz N.N. Meat productivity of sheep during feeding and fattening // Agrarian-And-Food Innovations, 2021. – V.19-28. <https://doi.org/10.31208/2618-7353-2021-16-19-28>
- [4] **Ульянов, А.Н.,** Куликова А.Я. Технология интенсивного разведения овец // Северо-Кавказский научно-исследовательский институт животноводства Российской академии сельскохозяйственных наук. – Краснодар, 2012. – С. 30.
- [5] **Сыдык, Д.А.,** Казыбаева А.Т., Еркуатов Р., Турганбаев Н.О. Влияние подкормки на молочность и состав молока овцематок казахской курдючной полугрубошерстной породы // Вестник Кызылординского университета имени Коркыт Ата, 2022. – №4 (63). – С.58-78. <https://doi.org/10.52081/bkaku.2022.v63.i4.132> (дата обращения 25.03.2025)
- [6] **Бальджи, Ю.А.,** Исмагулова Г.Т., Короткий В.П., Мустафина Р.Х., Абдрахманов К.А., Рыжов В.А., Поляков В.В. Способ применения комплексной кормовой биодобавки / Патент РК на изобретение №35223 по заявке №2020/0361.1 от 30.05.2020. – Бюлл. №31 от 08.06.2021.
- [7] **Горяинова, М.И.** Технология выращивания овец в условиях личного подсобного хозяйства. – Краснодар, 2010. – 29 с.
- [8] **Ревякин, Е.Л.,** Чистяков Н.Д., Мирзоянц Ю.А. Рекомендации по развитию высокоэффективного овцеводства.– М.: ФГНУ «Росинформагротех», 2007.– 124 с.
- [9] **Армилов, А.Н.,** Погодаев В.А., Адучиев Б.К., Сергеева Н.В. Рост и внешние показатели овец породы Дорпер в период адаптации в Республике Калмыкия //Зоотехния, 2017. – №7(17). – С. 28-32.
- [10] **Колосов, Ю.А.,** Абонеев В.В., Кошаев А.Г., Засемчук И.В. Откормочные качества и мясная продуктивность овец сальской породы улучшенных генотипов // Политематический сетевой электронный научный журнал Кубанского государственного аграрного университета, 2019. – №10(154). – С. 360-382.
- [11] **Колосов, Ю.А.,** Чамурлиев Н. Г., Дегтярь А. С., Дегтярь С.В. Повышение мясной продуктивности ягнят путем скрещивания овец породы меринос и гладкошерстных // Известия Нижневолжского агроуниверситетского комплекса: наука и высшее профессиональное образование, 2019. – № 4 (56). – С.135-140.
- [12] **Калашников, А.П.,** Фисинин В.И., Щеглов В.В., Клейменова Н.И. Нормы и рационы кормления сельскохозяйственных животных. – М.: Агропромиздат, 2003. – 304 с.
- [13] **Mahmoudi, S.,** Rashidi A., Moghim M., Razmkabir M., Mahmoudi P. A comparative analysis of economic traits between purebred and synthesized sheep breeds in dry and harsh environments of Iran // Small Ruminant Research, 2024. <https://doi.org/10.1016/j.smallrumres.2024.107388> (дата обращения 25.03.2025)
- [14] **Шоканов, Н.К.** Плодородие пастбищных трав в Восточном Казахстане // Вестник, 2013. – №10. – 36 р.
- [15] **Gorlov, I.F.,** Nikolaev D.V., Sherstyuk B.A., Slozhenkina M.I., Gishlarkaev E.I. Features of the formation of quality indicators ram Edilbay breed in arid conditions // IOP Conference Series: Earth and Environmental Science, 2019 Vol. 341 (1). <https://doi.org/10.1088/1755-1315/341/1/012035>. (дата обращения 25.03.2025)
- [16] **Омарқожаұлы, Н.** Мал азықтандыру және азық сапасын бақылау. Оқулық /Алматы,

2018. – Б.20-25.

[17] **Абанова, М.Н.**, Насырханова Б.К. Мал азықтандыру практикумы. – Семей, 2006. – Б. 21-28.

References:

[1] **Sabdenov, K.S.**, Beksejotov T.K., Abdullaev M., E.I. Islamov, B.T.Kylataev. Koy sharuashylygy: Okulyk /Almaty: Daur, 2011. – 472 b. [in kazakh];

[2] **Grigorev, M.F.**, Chernogradskaya N.M., Grigoreva A.I., Popova A.V., Makarov K.P. The effectiveness of feeding growing sheep using non-traditional feed additives // Journal of Agriculture and Environment, 2021.– V.4. <https://doi.org/10.23649/jae.2021.4.20.11>.

[3] **Natyrov, A.K.**, [Ubushaev B.S.](#), [Moroz N.N.](#), [Ubushaev B.S.](#), [Moroz N.N.](#) Meat productivity of sheep during feeding and fattening // [Agrarian-And-Food Innovations](#), 2021. – V.19-28. <https://doi.org/10.31208/2618-7353-2021-16-19-28>

[4] **Ulyanov, A.N.**, Kulikova A.Ya. Intensive sheep breeding technology // Russian Academy of Agricultural Sciences North Caucasus Scientific Research Institute of Animal Husbandry. Krasnodar, 2012. – p. 30. [in russian];

[5] **Sydyk, D.A.**, Kazybayeva A.T., Yerkuatov R., Turganbaev N.O. The effect of top dressing on the milk content and milk composition of sheep of the Kazakh fat-tailed semi-coarse breed // Bulletin of the Korkyt Ata Kyzylorda University, 2022. – №4 (63). – V.58-78 URL:<https://doi.org/10.52081/bkaku.2022.v63.i4.132> [in russian];

[6] **Baldzhi, Yu.A.**, Ismagulova G.T., Korotkij V.P., Mustafina R.H., Abdrahmanov K.A., Ryzhov V.A., Polyakov V.V. Sposob primeneniya kompleksnoj kormovoj biodobavki / Patent RK naizobretenie №35223 po zayavke №2020/0361.1 ot 30.05.2020. – Byull. №31 ot 06.08.2021. [in russian];

[7] **Goryainova, M.I.**, Technology of sheep rearing in conditions of personal subsidiary farming. – Krasnodar, 2010. – 29p. [in russian];

[8] **Revyakin, E.L.**, Chistyakov N.D., Mirzoyants Yu.A. Recommendations for the development of highly efficient sheep breeding. - Moscow: FGNU Rosinformagrotech, 2007. – 124p. [in russian];

[9] **Arilov, A.N.**, Pogodaev V.A., Aduchiev B.K., Sergeeva N.V., Growth and external indicators of Dorper sheep during the period of adaptation in the Republic of Kalmykia // Zootechny, 2017. – №7(17). – P. 28-32. [in russian];

[10] **Koloso, Yu.A.**, Aboneev V.V., Koshaev A.G., Zasemchuk I.V. Fattening qualities and meat productivity of sheep of the Salsk breed of improved genotypes // Polythematic online electronic scientific journal of the Kuban State Agrarian University, 2019. – №10(154). – Pp. 360-382. [in russian];

[11] **Koloso, Yu.A.**, Chamurliov N. G., Degtyar A. S., Degtyar S.V. Increasing the meat productivity of lambs by crossing merino ewes and smoothkosher sheep // Proceedings of nizhnevolzskiy agrouniversity complex: science and higher vocational education, 2019. – № 4 (56). – P.135-140. [in russian];

[12] **Kalashnikov, A.P.**, Fisinin V.I., Shcheglov V.V., Kleimenov N.I. Norms and rations of feeding farm animals. – M.: Agropromizdat, 2003. – 304 p. [in russian];

[13] **Mahmoudi, S.**, Rashidi A., Moghim M., Razmkabir M., Mahmoudi P. A comparative analysis of economic traits between purebred and synthesized sheep breeds in dry and harsh environments of Iran // Small Ruminant Research, 2024. <https://doi.org/10.1016/j.smallrumres.2024.107388>

[14] **Shokanov, N.K.** Pasture grass fertility in East Kazakhstan // Bulletin, – 2013.– № 10. - 36 p [in russian];

[15] **Gorlov, I.F.**, Nikolaev D.V., Sherstyuk B.A., Slozhenkina M.I., Gishlarkaev E.I. Features of the formation of quality indicators ram Edilbay breed in arid conditions // IOP Conference Series: Earth and Environmental Science, 2019 Vol. 341 (1). <https://doi.org/10.1088/1755-1315/341/1/012035>.

[16] **Omarkozhauly, N.**, Animal Feeding and Feed Quality Control Okulyk /Almaty, 2018. – P. 20-25. [in kazakh];

[17] **Abanova, M. N.**, Nasyrkhanova B.K. Animal feeding workshop / Semey, 2006. – P. 21-28. [in kazakh];

АСЫЛ ТҰҚЫМДЫ ҚОЙ МАЛДАРЫН АЗЫҚТАНДЫРУ ЖӘНЕ АЗЫҚ САПАСЫН БАҒАЛАУ

Ахметова Б.С.*, ауыл шаруашылығы ғылымдарының кандидаты
Нуржанова К.Х., ауыл шаруашылығы ғылымдарының кандидаты
Сатиева К.Р., ауыл шаруашылығы ғылымдарының кандидаты
Исмайлова А.Ж., ауыл шаруашылығы ғылымдарының магистрі
Қажыбекова Т.Қ., ауыл шаруашылығы ғылымдарының магистрі

Семей қаласының Шәкәрім атындағы университеті, Семей қ., Қазақстан

Андатпа. Малдан алынатын өнім сапасының ең маңызды факторы - азықтандыру. Жақсы мал азығының қоры мал шаруашылығын дамытудың ең басты шарты болып табылады. Мал ағзасы өзінің тіршілігіне қажетті заттарды өзін қоршаған ортадан алады. Бұл өз кезегінде рацион құрамында қоректік заттардың шоғырлануын қажет етеді. Малды дұрыс өсіру, мол өнім алу және басын көбейту үшін оны қоректік заттармен қамтамасыз ететін азық қорының базасы болуы қажет. Мысалы, шаруашылықта малды дұрыс азықтандыру – малдың денсаулығын жақсартуды, қалыпты төл беруін, мал тобының толық сақталуын қамтамасыз етіп, жақсы дамуы үшін, өнім беруге қабілеттілігін арттырады.

Мақалада Шығыс Қазақстан облысы Ұлан ауданының «Украинское» ЖШС, Абай облысы Жаңасемей ауданының «Елькентай» АӨК және «Ақбастау» шаруа қожалықтарының азық қорынан алынған қой малдарына берілетін негізгі азықтарына органолептикалық және зертханалық әдістерді қолдана отырып, баға берілген. Жүргізілген зерттеу жұмысы барысында мал азығының түрлері мен олардың сапасы жан-жақты талданып, бағасы мен тиімділігіне сараптама жасалды. Зерттеу нәтижелері көрсеткендей, қолданылған азық түрлері Қазақстанның барлық өңірлерінде кеңінен таралған және шаруашылықтарда малдың негізгі азықтық қажеттіліктерін қамтамасыз етуде маңызды рөл атқарады. Бұл зерттеу мал азығын дұрыс тандаудың өнімділікке, денсаулыққа және шаруашылықтың экономикалық табыстылығына тигізетін әсерін айқындайды.

Тірек сөздер: азықтандыру, рацион, азық сапасы, қой, азықтың химиялық құрамы.

КОРМЛЕНИЕ ПЛЕМЕННЫХ ОВЕЦ И ОЦЕНКА КАЧЕСТВА КОРМОВ

Ахметова Б.С.*, кандидат сельскохозяйственных наук
Нуржанова К.Х., кандидат сельскохозяйственных наук
Сатиева К.Р., кандидат сельскохозяйственных наук
Исмайлова А.Ж., магистр сельскохозяйственных наук
Қажыбекова Т.Қ., магистр сельскохозяйственных наук

Университет имени Шакарима города Семей, г.Семей, Казахстан

Аннотация. Качественное кормление – самый важный фактор, определяющий качество продукции, получаемой от животных. Наличие хорошего запаса кормов является главным условием развития животноводства. Организм животных получает необходимые для жизнедеятельности вещества из окружающей среды. Это, в свою очередь, требует концентрации питательных веществ в рационе. Для правильного выращивания животных, получения большого объема продукции и увеличения поголовья необходимо наличие кормовой базы, обеспечивающей животных питательными веществами. Например, в хозяйстве правильное кормление способствует улучшению

здоровья животных, нормальному получению потомства, сохранению всего поголовья, а также их хорошему развитию и повышению продуктивности.

В статье проведена оценка основных кормов для овец, взятых из кормовой базы ТОО «Украинское» Уланского района Восточно-Казахстанской области, АПК «Елькентай» Жанасемейского района Абайской области и крестьянского хозяйства «Акбастау», с использованием органолептических и лабораторных методов. В ходе проведенного исследования были всесторонне проанализированы виды кормов и их качество, проведена экспертиза их стоимости и эффективности. Результаты исследования показали, что используемые виды кормов широко распространены во всех регионах Казахстана и играют важную роль в обеспечении хозяйств основными кормовыми потребностями животных. Данное исследование выявляет влияние правильного выбора кормов на продуктивность, здоровье животных и экономическую успешность хозяйства.

Ключевые слова: кормление, рацион, качество корма, овцы, химический состав корма.