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ҚАЗАҚ ҰЛТТЫҚ АГРАРЛЫҚ УНИВЕРСИТЕТИ

# Х А Б А Р Л А Р Ы

## ИЗВЕСТИЯ

НАЦИОНАЛЬНОЙ АКАДЕМИИ НАУК  
РЕСПУБЛИКИ КАЗАХСТАН

КАЗАХСКИЙ НАЦИОНАЛЬНЫЙ  
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## NEWS

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OF THE REPUBLIC OF KAZAKHSTAN

KAZAKH NATIONAL  
AGRARIAN UNIVERSITY

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E-mail: [elemesovna.1970@mail.ru](mailto:elemesovna.1970@mail.ru)**THE REVIVAL OF KARAKUL BREEDING  
IN THE DESERT ZONES OF KAZAKHSTAN IS  
A PLEDGE OF RAISING THE ECONOMY OF AGRICULTURE**

**Abstract.** In the article contains the results of long-term researches of authors on all technological groups of karakul sheep and physiological conditions. The optimal specific gravity of the ewes in the herd structure is 75-80%, which has an effect on the growth of the livestock and the excess of the production of gross output per 1 structural sheep. For intensive use of high-value rams - producers with a live weight of 75-80 kg with an average sexual load, the nutritional value of the diet should be not less than 2.0-2.2 kg of feed units and 300 g of digestible protein, and at elevated - respectively: 2.5 kg of feed units and 350g digestible protein. Relationship between fatness, fertility and fertility of queens is established. Fertility of karakul ewes from the first insemination reaches up to 95%, and the lower-middle to 73%. The article gives information on the norms of feeding ewes in lamb, recipes for mixed fodders-concentrates and the norms of feeding rations for the second half of the ewes' suasion.

**Keywords:** reproduction, karakul sheep, desert livestock, structure of sheep heads, uterus, ewe in lamb, lambs, feeding sheep, recipes for mixed fodders, rations.

**Introduction.** Prior to the denationalization of large karakul farms of the Republic of Kazakhstan, this deserted livestock sector played a significant role in providing the country's population with food and industry with agricultural raw materials.

At the beginning of 1990, Kazakhstan had 6, 2 million karakul sheep, was produced up to 3 million an astrakhan of original colors and lace types. Kazakhstan occupied the leading position in terms of the number of Karakul sheep, the sale of bums at international auctions and fairs in Leningrad, Leipzig. Karakul sheep are historically adapted to the extreme conditions of the desert. Sheep grazing in the desert regions of Kazakhstan is possible almost throughout the year. They feed mainly on pasture fodder and use water of high degree of mineralization. In the average years of the desert, Karakul sheep satisfy up to 75-80% of the need for fodder due to natural pastures [1-7].

Scientific recommendations accumulated in the past, which are briefly described below.

**Purpose of the research.** Increase the number of karakul sheep and improve the quality of products, based on the improvement of technological processes in the conditions of transfer of the industry to new forms of management.

**Methods of research.** The current state of Karakul breeding was studied by the method of analysis of static information. Experiments to determine the effectiveness of technology for the production of karakul production, feeding and maintaining sheep were established according to the results of scientific and economic and physiological experiments.

**Results of the research.** Increase in the proportion of queens in the structure of the herd. High production efficiency is achieved in karakul farms, where the number of females in the structure of the herd reaches 75-80, 0%. In this case, the production of gross output on the structure of the sheep is increased to 20-23%. In the conditions of the cancellation of the use of the drug SFM (serum of foal mares), it is planned to obtain an off spring per 100 queens: 85 lambs from primary sources, and 95 from

adults. It is very important to leave the maximum number of newly born young animals for reproduction in the herd.

**Timing of mating and lambing of queens.** Terms of mating and lambing of sheep in certain regions are determined by natural conditions and, as a rule, are timed to coincide with the appearance of green grass on pastures. Many years of practice confirmed the expediency of the deadlines for the beginning of lambing in the middle of March in the southern regions of the republic and from the first of April - in the western regions. It should be remembered that it is impossible to lag with the mating, since in the later periods the number of sheep's sheep increases. In farms provided with feed and production facilities, it is possible to carry out early-spring lambing of queens.

**Preparation and use of rams-producers.** The production rams play an important role in the reproduction of the herd and its qualitative transformation. However, their preparation for the breeding campaign is not always given due attention. In many cases, it is limited to increasing the supply of concentrated feed for 1, 5 months before the breeding campaign with pasture maintenance of rams-producers. In this case, the level of biological fullness of the diet is not always taken into account. It does not always include protein, juicy feed, vitamin and mineral fodder additives. With inadequate feeding and content, the volume of ejaculate of the sheep-breeds of the Karakul breed, even under moderate load, does not exceed 0, 75-0, 94 ml per one cage, and at a higher load it decreases to 0, 5 ml with a simultaneous decrease in the quality of the seed. It is not a secret that due to these circumstances, in the mating are forced to start more and more reserve rams, not tested for the quality of the offspring. In the end, this affects negatively the effectiveness of breeding work. Karakul sheep in all seasons of the year should be kept in the best conditions for feeding.

The approximate average daily ration of rams produced during the preparation and use in the mating consists of 1, 0 kg of alfalfa hay, 0, 5 kg of carrots, 0.1 kg of chicken eggs and 1, 2-1, 5 kg of mixed fodder per head per day. Good results include the inclusion in the diet of wheat bran, meal, meat-and-bone meal, fodder hydrolysis yeast, vitamin and mineral supplements. The total nutritional value of the daily ration in the breeding season for rams with a live weight of 75 to 85 kg with a load of three cages per day should be 2, 0-2, 2 fodder units and 300-350 g digestible protein.

The load per adult producer ram at artificial insemination should be at least 500 queens per season, and on the inspected 150 heads. At the same time, the quantity and quality of the seed meet the requirements of the instructions for artificial insemination of sheep, the volume of ejaculate - not less than 1ml, G-0. 8-0, 9.

**Preparing the queens for insemination.** The quantitative and qualitative indices and productivity of the karakul queens are largely determined by their full feeding in various physiological states. The pre-service or preparatory period takes a while from the lambing of the lambs to the breeding campaign. The duration of the preparatory period for suckling queens can be different depending on the chosen technology of growing lambs, i.e. when the youngsters are beaten at 4 months of age – 1, 5-2 months, with an early paring increase by 2 times. The main criterion determining the preparedness of the queens for mating is their fatness, which in turn depends on the length of the preparatory period. Fertility of the uterus of higher fatness from the first insemination is within 75-95%, and below-average 50-73%.

**The work of the point of artificial insemination.** Successful completion of the breeding campaign depends on a clear organization of work in all parts of the work of the point of artificial insemination of sheep. Sampling of queens that have come to the hunt and their insemination should be carried out in the shortest possible time in order to lengthen the sheep grazing time during the day. Sampling of queens in the hunt is carried out early in the morning. To perform this work in full, it is desirable to arrange several pens for 150-20 queens, and rams - samplers to start at the rate of 80 queens - for one ram Artificial insemination of sheep begins immediately after sampling. Sheep is inseminated twice with an interval of 6-8 hours. The inseminated uterus is labeled with an easily washable paint. On the twelfth day from the beginning of insemination of the queens, fertilization is checked. To this end, in the morning hours, a group of inseminated uterus is allowed to take rams-producers and select the sheep that have come into hunting again.

Artificial insemination stations must work for 40 days. And only after that, for the reduction of the sheep's nature, the uterus is covered with rams-samplers, for which two groups are created.

**Sheep lamb.** Depending on the weather conditions, the lambing of the queens takes place in a sheepfold or on a cattle field. The sheepfolds are shielded with shields for 4-5 sheep for keeping sakmans and separate groups of sheep. As the lambs develop, the sakmans are enlarged and placed near the sheepfold.

**Feeding and keeping karakul ewe in lamb.** The sufficiency of the ewe in lamb, especially its second half, occurs during the critical winter period, when the sheep organism does not fully provide itself with nutrients due to pasture feeding. Therefore karakul sheep should receive a full-fledged diet during the whole period of pregnancy.

Low level of feeding of ewe in lamb leads to profound functional disorders in the animal's body, reduced fatness, which have a negative effect on the health of sheep, and on the smelting process.

In the case when the ewes in lamb receive the bulk of the required nutrients in the pasture, feed fodder concentrates are used as additional feeding. For the southern zone, the following composition of the concentrate mixture is recommended (table 1).

Table 1 – Recipes for mixed fodders for ewes in lamb

Components	% by weight	
	1	2
Barley	51,8	47,5
Waste from wheat	37,0	–
Corn with cob	–	50,0
Cotton flake	7,5	–
Carbamide	–	0,4
Disseminated Karatau phosphate	2,2	1,9
Salt	1,5	1,2
Total	100	100
In 100 kg of feed contains, kg:	82,2	101,0
	9,4	10,3
In 1 kg of feed contains, g:		
calcium	9,8	10,1
phosphorus	4,6	5,4

Fodder concentrate is enriched for 100 kg of feed – 0, 8 g of cobalt chloride and 10 g of sulfuric acid copper.

If the ewes in lamb are not substantially deprived of nutrients from pasture forage, when transferring them to pasture-semi-stable content, full-scale feed mixtures (tablets can be used most effectively table 2).

Table 2 – The recipe for a full-scale feed mix for ewes in lamb

Components	% by weight
Hay rapeseed	41,0
Senna alfalfa	31,0
Corn crushing with cob	7,0
Barley crushed	19,0
Desiccated Karatau phosphate	1,0
Table salt	1,0
Only	100
In 100 kg contains, kg:	58,9
feed units digestible protein	6,9
In 1 kg of feed contains, g:	
calcium	6,3
phosphorus	3,5

Similar recipes can be made for other zones of Karakul sheep breeding, based on the stock of feed in the farms and the needs of sheep in nutrients.

**Cultivation of young animals** is one of the main links of zoo technical measures that affect the efficiency of reproduction of the herd, this directed ripening of the young. Karakul lambs from queens are usually beaten at the age of 4-4, 5 months. The problem is that at the time of weaning from the queens, the young were well developed, well-fed, and had a living mass of at least 28-30 kg.

An important moment in the technology of astrakhan farming is the surrender of all the stunted meat to the meat, left for cultivation immediately after beating them from the queens. This provides an increase in the proportion of queens in the herd, on the one hand, the production of cheap dietary lamb, on the other.

In karakul breeding, a promising method of growing young animals is the early lambing of the lambs at 2-2, 5 months of age.

**Veterinary and preventive measures to eliminate infertility of sheep.** The main cause of infertility of Karakul sheep are invasive and infectious diseases.

Measures for the prevention and control of helminthiasis of Karakul sheep are carried out strictly in accordance with the current regulations and veterinary legislation. Veterinary workers of the economy are obliged to investigate every case of miscarriage and establish its cause, carry out the necessary veterinary measures. If you suspect a contagious origin of an abortion, the fetus with the membranes should be sent to the veterinary and bacteriological laboratory. Sheep with unidentified causes of infertility should be concentrated in one flock. They should be monitored before the next service campaign. The remaining uterine queens are subject to culling

**Conclusions.** Long-term studies conducted on all technological groups and physiological conditions of Karakul sheep allow us to draw the following conclusions:

1. The optimal specific gravity of the queens in the herd structure is established - 75-80%, which ensures the growth of the sheep population and the excess of the production of gross production by 1 structural sheep not less than 23%.

2. For the purpose of intensive use of high-value sheep with a live weight of 75 - 80 kg at an average load, the nutritional value of the diet should be not less than 2, 2 feed units and 300 g digestible protein, and at elevated - respectively: 2,5 kg fodder units and 350 g digestible protein.

3. A direct relationship between fatness, fertility and fertility of queens is established. Fertility of karakul queens from the first insemination reaches up to 95%, and the lower-middle to 73%.

4. In the first half of the trial, when the main part of the nutrients is received on pastures, as feed supplement feeds with fodder concentrates in the amount of up to 300 g per head, and in the second it is desirable to feed full-length feed mixtures, according to the feeding standards for karakul sheep.

5. In the absence of realization of karakul smuts, special attention should be paid to the safety of lambs and their directed cultivation. Over-repair sheep should be given to meat at 4 months of age when reaching a living weight of 28-30 kg.

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### **ВОЗРОЖДЕНИЕ КАРАКУЛЕВОДСТВА В ПУСТЫННЫХ ЗОНАХ КАЗАХСТАНА ЗАЛОГ ПОДЪЕМА ЭКОНОМИКИ СЕЛЬСКОГО ХОЗЯЙСТВА**

**Аннотация.** В статье приводятся результаты многолетних исследований авторов на всех технологических группах каракульских овец и физиологических состояний. Установлен оптимальный удельный вес маток в структуре стада 75-80 %, оказывающее влияние на рост поголовья и превышение производство валовой продукции на 1 структурную овцу. Установлена прямая зависимость между упитанностью, оплодотворяемостью и плодовитостью маток. Оплодотворяемость каракульских маток от первого осеменения достигает до 95%, а нижесредних до 73%. Приводятся сведения о нормах кормления суягных маток, рецепты комбикормов-концентратов и нормы кормления рационов для второй половины суягности овцематок. Приводятся сведения о нормах кормления суягных маток, рецепты комбикормов-концентратов и нормы кормления рационов для второй половины суягности овцематок.

**Ключевые слова:** воспроизводство, каракульские овцы, пустынное животноводство, структура овцепоголовья, матки, ягнята, смушки, кормление овец, рецепты комбикормов, рацион.

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### **ҚАЗАҚСТАННЫҢ ШӨЛ АЙМАҚТАРЫНДАҚ ҚАРАКӨЛ ШАРУАШЫЛЫҒЫН ЖАНДАНДЫРУ АУЫЛ ШАРУАШЫЛЫҒЫНЫҢ ЭКОНОМИКАСЫН АРТТЫРУДЫҢ КЕПІЛІ**

**Аннотация.** Осы мақаланың авторлары ұзақ жылдар бойы «Қаракөл қой шаруашылығы ғылыми зерттеу институтында» қызмет етіп, көптеген ғылыми ұсыныстарды өндіріске ендірген тұстарын қаракөл шаруашылығын жандандыруда пайдаға асатынына сенімділікпен қараймыз. Мысалы, мал басының көбеюіне шаруашылықтағы саулықтардың үлес салмағын 75-80% жеткізген жағдайда, жалпы өнімділік 20-23% артып отыратыны дәлелденген. Мақалада жыл жағдайына азық қорының мүмкіншіліктеріне қарай қойларды ұрықтандыру төл алу науқанын белгілеу, ұрық қошқарларды күйекке дайындау, қолдан ұрықтандырудың жаңа тәсілдерін игеру, буаз сауқлықтарды азықтандыру, козыларды бағыттап өсіру, мал дәрігерлік профилактикалық шаралар туралы ұсыныстар келтіріледі.

**Түйін сөздер:** қаракөл қойы, мал басының құрамы, саулық, қозы, елтірі қойларды азықтандыру, күйек науқаны, төл алу, бағыттап өсіру.

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