#### NEWS

# OF THE NATIONAL ACADEMY OF SCIENCES OF THE REPUBLIC OF KAZAKHSTAN SERIES OF AGRICULTURAL SCIENCES

ISSN 2224-526X

Volume 1, Number 55 (2020), 17 – 23

https://doi.org/10.32014/2020.2224-526X.3

UDC 636.32/.38:675.6.061.25 (574)

# A. Ombayev<sup>1</sup>, H. Ukbaev<sup>2</sup>, R. Shamekenova<sup>2</sup>, A. Abdurasulova<sup>1</sup>

<sup>1</sup>Kazakh National Agrarian University, Almaty, Kazakhstan, <sup>2</sup>Republican Chamber by Karakul sheep breed, Kyzylorda, Kazakhstan. E-mail: abdi rahman@mail.ru, ukbaev@inbox.ru, abdurasulova.aigerim@mail.ru

#### ASTRAKHAN BREEDS SHEEP OF KAZAKHSTAN

**Abstract.** The purpose of this work is to analyze the origin and distribution of Karakul sheep in the world and the current state of astrakhan sheep breeding in Kazakhstan.

The article describes the origin of the Karakul sheep, as well as information on the creation in Kazakhstan of a new Kazakh astrakhan-fat-tail sheep of astrakhan-meat-greasy productivity. The results of a comparative study of the biological characteristics of the astrakhan breeds of sheep bred in Kazakhstan are presented.

The main products for the sake of breeding astrakhan sheep breeds are unique in their color, shades and strength of the skin.

A major breeding achievement of sheep farmers in Kazakhstan is the creation of Kazakh karakul-fat-tail sheep of astrakhan-meat-greasy productivity, which has no analogues in the world, well adapted to the desert and semi-desert zones of Central Asia and Kazakhstan.

It should be noted that the biological characteristics of astrakhan sheep breeds allow the efficient use of scarce pastures of inaccessible desert and semi-desert zones.

**Key words:** astrakhan breeds, karakul, Kazakh karakul-fat-tail, astrakhan-meat-greasy, pastures, desert, semi-desert, Kazakhstan, Central Asia, biological, exterior, astrakhan.

**Introduction.** In Kazakhstan, astrakhan breeds of sheep breeding is represented by two breeds: karakul and Kazakh karakul-fat-tail (Atyrau) astrakhan-meat-greasy productivity. It, as an industry, is a whole complex of technologically and economically interconnected primary producers (business entities with different ownership forms), enterprises that process karakul breeding products (fur enterprises, factories for primary processing of wool), a number of service enterprises and organizations.

The development of this industry is carried out on the basis of year-round grazing of sheep on natural pastures of deserts and semi-deserts, unsuitable for arable farming.

The Karakul breeding of Kazakhstan, which began with 5000 purebred sheep, the first-born of the industry, the Chimkurgan state farm, established in 1928, developed at a very high pace. This work continued during the difficult years of the war. For the period from 1951 to 1960 25 large specialized state farms were created. By the end of 1991, the number of Karakul sheep had already exceeded 6 million heads, and the production of skins reached 2 million. Karakul breeding in Kazakhstan has become one of the most important areas of the national economy of the republic [1].

The karakul breeding in Kazakhstan was created both by absorbing crossbreeding of queens of local fat-tail sheep with karakul sheep, and by importing purebred karakul livestock from farms of Uzbekistan and Turkmenistan, of which 70 thousand karakul sheep and about 250 thousand ewe lamb were imported.

The question of the origin of Karakul sheep has long attracted the attention of many researchers, therefore, there are different opinions:

- 1. The Karakul sheep was created in ancient times in Asia Minor and brought to Central Asia by Arab conquerors [2].
  - 2. The Karakul sheep appeared in ancient times on the modern territory of Uzbekistan [2,3].
- 3. The Karakul sheep is a product of recent origin, obtained as a result of a mutation when crossed with sheep of other breeds [4].

Confirmation of the hypothesis about the antiquity of the Karakul breed and its occurrence on the modern territory of Uzbekistan can be found in the source "Geography of the East" that came to us from the Arab geographer Ibn-Haukal, a traveler who visited Khorezm in the 10th century. He wrote that he had never seen such sheep and lambs anywhere, neither in his homeland, nor in other countries and continents, and there are no such sheep in all countries as in Turkestan and the Khorezm region. The skins of these sheep have black, beautiful dark red hues and are very highly valued.

Another source indicating the credibility of the ancient origin of the Karakul breed is a portrait of Shota Rustaveli, where he is depicted in a Karakul hat - a gift from the poetess Meskhechi-Khujand (XII century).

During archaeological excavations carried out in Persopol (the capital of ancient Persia), the antiquity of which is 500 BC, utensils with the image of sheep were found, the shape of the tail and horns of which is similar to the existing Karakul sheep.

The opinion of the ancient origin of the Karakul sheep was confirmed in special literature. P.N. Kuleshov wrote: "I consider the Karakul sheep an ancient breed, the breeding of which took thousands of years of factory work." We needed a sheep with a beautiful lambskin at a young age. Centuries and millennia passed, and a wonderful Karakul breed was obtained [5].

The ancient origin of the Karakul sheep is indicated by its amazing strength of heredity, which is especially manifested when crossing with other breeds.

Academician M.F.Ivanov, noting the amazing strength of the heredity of the breed, which is especially manifested when crossing with other breeds, wrote about the ancient origin of the Karakul sheep. He noted that no matter what breed the karakul breed crosses, a half-blood offspring is always, in terms of its zoological characteristics, wool color and even quality of the lambskin is to a significant extent similar to a Karakul sheep [6].

L. Adamec believes that Karakul sheep were created in the Middle East in the second millennium BC, from where they spread to neighboring regions, including Central Asia [2].

In his opinion, the Karakul sheep descended from a very old pedigree sheep, formed in Syria, Palestine and Mesopotamia for 2000 BC, and entered Turkestan in the 8th century along with the Arabs, where astrakhan sheep breeding flourished until the Mongols conquered it, which subsequently they were almost destroyed, replacing the fat-tail sheep brought with them. And the remaining herd of Karakul sheep that survived on the remote desert pastures of the Bukhara Khanate served as valuable material for further breeding and distribution.

However, academician V.M. Yudin, an outstanding astrakhan breeder of the 40-70s of the last century, considers L. Adamec's theory unreasonable, referring to Ibn-Haukali's assertion that there are no sheep producing such sheep besides Central Asia beautiful lambskin. He noted that if the sheep were Arab, driven to Khorezm and Bukhara, then Ibn-Haukal, as an observing geographer, would have noted this as a person who visited India, Central Asian states, Spain, Sicily and, of course, knows his homeland well - Arabia [1].

Sh.R. Herremov and Yu.A. Yuldashbayev in the book "Karakul breeding" provides very valuable and interesting historical information on the origin of the Karakul sheep, citing literature information on karakul breeding [7].

In their opinion, the work is of great interest of the famous professor Durst, who describes the excavations in Anau near Ashgabat, which are known in zootechnical terms. These excavations, conducted under the direction of the American professor R. Pampelli (1904), are interesting in that they allowed a detailed study of the strata of the earth, the prescription of which begins from 8250 BC. In strata dating back to 6,250 BC, Durst found fossil remains of sheep that are completely similar to the existing karakul of the Maymen offspring. Therefore, Durst makes a completely solid assumption that the Karakul breed is the remains of an ancient fossil breed, called by him "Anau".

In 1861, Vamberi, a Hungarian Turkologist, succeeded the first of European researchers, secretly, under the guise of a dervish, to penetrate Bukhara and gain access to ancient manuscripts. From the Bukhara annals, he, in particular, describes the wealth of Khan Nez Magomed, who ruled the khanate since 1642, among which he mentions 80 thousand sheep who brought gray lambs.

V.M.Yudin wrote: "The zoological and biological features of the Karakul sheep allow us to conclude that this breed was created in ancient times by the peoples inhabiting Central Asia" [8].

B.N. Vasin believes that the modern Karakul sheep occurred as a result of mixing several groups of sheep, one of which was fat-tail with coarse wool, and the other of semi-coarse sheep. He (1946) emphasizes that the first references in the literature to the existence of Bukhara kuryapyaks (doodles) are found only in the second half of the 17th century. Among animals with very coarse, long wool close to that of fat-tail sheep, there are sheep with very thin, homogeneous, short wool. The live weight of the uterus ranges from 28 to 70 kg. According to the type of physique, there are sheep with a rough bone, close to the bone of fat-tail sheep and, conversely, with a very tender one. Strong variation is also observed in the shape and fat content of the tail. Even the main products of karakul breeding – astrakhan – are very diverse in their shapes, types, and sizes of curls, as well as in the character of their skin, woolline, and skin pattern [9].

I.N. Dyachkov expresses an opinion on the occurrence of the fur properties of lambs in the process of mutation of their subsequent fixing of these properties by humans by selection and selection. At the same time, he believes that the formation of the Karakul breed took place in the XVII–XVIII centuries. in the Karakul beks of Bukhara [10].

I. Ya. Averyanov believes that the initial selection was not to create smackiness in lambs at birth, but to acquire curly wool by fixing corresponding changes in the development of skin and wool in the late stages of morphogenesis [11].

It is well known that the population of Uzbekistan has long been engaged in breeding fat-tail sheep. In the 8th – 9th centuries, there appeared the astrakhan sheep of non-Karakul breed. They differed sharply from local sheep in their productivity and appearance. Merlushki obtained from such lambs were not in great demand among the population. But the wool of these sheep was significantly higher in quality than that of the local fat-tail sheep.

The sheep farmers, apparently with the aim of improving their wool qualities, began to crossbreed their local sheep with the newly imported ones. At that time astrakhan as commodity raw materials did not have much demand. As a result of prolonged selection and selection of animals in combination with suitable climatic and feed conditions, was created a completely new astrakhan breed. Lambs differed from all previously known sheep breeds in the extremely high quality of their skins in terms of curl shape, luster and wool color. The name "Karakul" a new breed of sheep received, probably, by the name of the Karakul district, located near Bukhara. The most important evidence of the creation of Karakul sheep on the territory of present-day Uzbekistan is also the fact that in the past, nowhere, in any other region of the world, lambskin had a curl so characteristic of this breed.

According to V.S. Zhilyakova and A.K. Chepelova, for many centuries, the distribution of the breed was limited to Central Asia. For the first time, Karakul sheep were exported only at the end of the 19th century: first to Ukraine, and somewhat later to the Crimea, the North Caucasus, Transcaucasia and the Middle Volga region. Since 1894, Karakul sheep from Russia (apparently meaning from Uzbekistan) were taken to Bosnia and Herzegovina (Yugoslavia), in 1903 to Germany, in 1904 to Austria. Here they took root well and gave high-quality astrakhan. Due to the lack of natural pastures, the costs of keeping sheep were high. Therefore, the herd sizes were small. But the sheep were bred clean, acquired a breeding direction with the sale of breeding animals. Subsequently, from Germany and Austria, Karakul sheep came to almost all countries of Western Europe, but due to unsuitable natural and economic conditions they were not widely spread here [12].

Then the Karakul sheep spread to Africa and Latin America. Currently, large-scale breeding of Karakul sheep is also carried out by Afghanistan and Namibia.

These materials allow us to conclude that the Karakul breed, like any other domestic animal breed, is a product of complex crossbreeding. The main criterion for long-term selection was kinkiness, which later led to the formation of curl.

In the course of scientific research, we had to carry out various variants of mating within the breed of Karakul sheep according to their colors, colors, astrakhan type, as well as fine-wool and local fat-tail meat-greasy breeds with Karakul sheep of various colors. Based on our research, we came to the conclusion that the Karakul sheep breed is a truly unique breed, transmitting its astrakhan qualities and exterior features already in the 1st and 2nd generation even when crossed with fine-wool and fat-tailed sheep. It differs from other breeds of sheep in the world, as academician M.F.Ivanov noted back in the 40s of the last century, amazing by the strength of heredity. It should be noted that only ancient breeds, such as Karakul, Edilbaev, Gissar, can transmit their pedigree distinctive features and quality indicators even at

the initial stage of crossing with other breeds, and the Karakul breed is unique in that it conveys some of its lambskin qualities in the first generation offspring [1].

In all likelihood, as most karakul breeders of the last century claim, the most important evidence of the creation of karakul sheep in Central Asia is the fact that in past times, nowhere else in any other region of the world did lamb skins possess such a curl characteristic of this breed. The antiquity of the origin of the Karakul breed is also explained by the fact that it is characterized by the exceptional strength of heredity of the astrakhan properties, which manifests itself when it is crossed with such an ancient breed as merino, and the comparative ease of converting coarse-wool breeds into astrakhan.

Karakul sheep are bred on all continents, with the exception of Australia. The widespread mass distribution of the breed was facilitated by its exceptional endurance and ability to acclimatize in a wide variety of climatic and feed conditions. So, the breeding of Karakul sheep is carried out by South-West Africa, the Republic of South Africa, Afghanistan, Iran, Uzbekistan, Kazakhstan and Turkmenistan, which are the main producers of karakul skins in the world, and a small amount is produced in Europe, North and Latin America.

It should be noted that to a certain extent, the competitor of karakul is mink. These two branches of valuable fur manufacture their products in different environmental conditions, which affected the pace of production. Thus, Karakul is produced in semi-desert and desert areas, and mink is produced in more environmentally friendly areas of the globe. Due to food security and the rapid growth of the world's population and the great demand for basic foodstuffs (mainly meat), the number of Karakul sheep in the world has been significantly reduced in the direction of increasing meat and sebaceous breeds.

Currently, a huge assortment of artificial dense materials is produced that imitate karakul fur (artificial karakul fur). They temporarily went into fashion. However, they were quickly abandoned by women who can afford to buy a fur coat made from natural karakul.

It should be noted that if the mink is famous for its luster, silkiness and colors, the karakul fur is distinguished by its beautiful pattern, curls, color and colourations, luster and silkiness. Thanks to these quality indicators, karakul is in great demand today.

The Karakul sheep breeding technology is common for sheep of other breeds: feeding, grazing, water supply, shearing, feeding, fattening, etc. At the same time, working with the Karakul breed requires not only general technical knowledge, but also knowledge of the selection features that are inherent only to sheep this breed. Breeding work in karakul breeding is similar to the work of a jeweler. It requires a specialist with great observation, aesthetic taste and understanding of the beauty of the pattern, formed by curls of different sizes, types and shapes; the ability to distinguish all the subtleties and features of the combination of colors, shades and colors of karakul. Of particular importance in this regard is the knowledge of the genetics of Karakul sheep, the inheritance of breeding and economically useful traits.

The biological characteristics of the Karakul sheep were formed in the conditions of the thinned grass stand of deserts and semi-deserts of Central Asia, where, in order to satisfy their feed requirements, the sheep have to go up to 20 km daily and use mineralized, brackish and salty drinking water.

Karakul sheep well pick small, stunted plants with their lips, pick up fallen pieces of stalks of dried grass, leaves, ears after harvesting grain.

A powerful chewing apparatus allows you to chew on coarse-stalked plants (wormwood, keireuk, saxaul branches, etc.), which are almost the only source of food on autumn-winter pastures.

Karakul sheep walk well on wormwood-ephemeral and solyanky pastures. They eat fodder plants with a bitter and tart taste with a pungent and spicy smell. Due to this feature, Karakul sheep spend much less nutrients per 1 kg of weight gain than other sheep breeds, but they do not tolerate uniform food [13].

Karakul sheep are able to lay a large amount of fat along the caudal vertebrae. In unfavorable years on pasture and fodder conditions, they compensate for the lack of pasture due to fat deposits.

Year-round pasture maintenance, sparse vegetation, lack of drinking water, sharply continental climate with sharp fluctuations in temperature and humidity not only in the seasons of the year, but also during the day, had a significant impact on the Karakul breed of sheep.

The production life of Karakul sheep is on average 6-7 years (before tooth wear), in some households sheep are used up to 8-10 years of age.

The biological maturity of Karakul sheep occurs at the age of 5-6 months, household maturity at 1,5 years of age. The fertility of ewes is an average of 93-95 lambs per 100 uterus. The highest fecundity of Karakul uterus manifests itself at the age of 4-5 years.

Kazakh Karakul-fat-tail breed of sheep (Atyrau breed astrakhan-meat-greasy productivity) bred in the period from 1974 to 1998 by a complex reproductive crossing of Kazakh-fat-tail coarse-wooled and Edilbaev uterus with coloring sura of Karakul sheep Surkhandarya and Karakalpak inbreed types, followed by breeding "in itself" crossbreeds of the second generation (authors: H.I. Ukbaev, T. Kanseitov, R.D. Shamekenova etc.).

It is the only breed bred in the Republic of Kazakhstan that combines astrakhan productivity - karakul curls, original colors, colors of the Kazakh inbreed type of suras and meat-greasy productivity with fat deposition on a fat-tail and high precocity [14].

The breed is also a source of production of high-value mutton, especially lamb and coarse wool. In addition, it provides high-quality leather-fur coat.

- the breed has no analogues in the world;
- breed of combined productivity. With changing market requirements for the production of astrakhan and mutton, you can use its valuable features early maturity and high meat-greasy productivity or high-quality astrakhan products;
- on the exterior they are closer to the fat-tailed sheep. In lamb age they have very beautiful skins with parallel-straight and parallel concentric patterns;
  - The breed is well adapted to the desert and semi-desert zones of Kazakhstan.

Biological characteristics of sheep of Kazakh karakul-fat-tail breed were formed in conditions of sparse grass stand in the arid zone of Western Kazakhstan. The breed has a huge adaptability potential to different breeding and maintenance conditions. Experience shows that the Kazakh karakul-fat-tail breed quickly and well adapts to saline desert and semi-desert zones of the Kyzylorda region, pastures of the sand zones of the Moyunkum and Kyzylkum regions, the South Kazakhstan and Zhambyl regions, without reducing the quality indicators of astrakhan productivity and live weight [14].

Sheep of the Kazakh karakul-fat-tail breed, as well as the Karakul breed, make good use of all types of pasture feeds, eat the largest number of arid pasture plants, including weeds, prickly grasses, raspberries, tersken, wormwood, etc. They make good use of the bitter plants of the semi-desert and desert zones in the autumn period of the year after rain. Sheep of the Kazakh karakul-fat-tail breed are well adapted to sparse vegetation, lack of water, a sharp fluctuation in seasonal temperatures (in winter up to -40, in summer up to +40). The period of their economic use is an average of 6-8 years, until the teeth are completely worn out, biological maturity occurs at the age of 6 months, and household maturity at 1.5 years of age. Sheep of the new breed are characterized by a harmonious physique, a strong constitution, intensive growth and development inherent in the Edilbaev sheep breed. At 1,5 years of age, in terms of live weight, they come close to the analogues of fat-tail sheep.

In terms of exterior, meat-greasy productivity and, in general, by phenotype, sheep of this breed are closer to animals of fat-tail meat-greasy breeds, and in lamb age, astrakhan productivity, and quality indicator of astrakhan to karakul sheep breed.

Lambs of the Kazakh karakul-fat-tail breed are characterized by a taut shape of a fat-tail, a deep and wide chest, a large area of lambskin, intense severity, various colors of suras, contrast and evenness of colors, pronounced silkiness and shine of the wool.

Animals of Kazakh karakul-fat-tail breed are not inferior in terms of meat-greasy productivity to Kazakh fat-tail sheep: the live weight of adult uterus is 58-66 kg, and sheep are 97-103 kg. At a lamb age, they have karakul curls of a semi-circular, ribbed and flat shape with a parallel-straight and parallel-concentric pattern of astrakhan. The wool coat is good silkiness and with a strong shine, zoning of the pigment along the length of the wool, creating a contrast in the color of the suras.

It has been established that breed precocity in karakul-meat-greasy sheep appears after birth. At birth, the lambs of this breed of different colors do not stand out in size and live weight, but in the subsequent months of the lactating period they are characterized by an intensive increase in body weight. By the time of weaning from the uterus, young ewes reach 35-39 kg, rams 40 kg or more. Possessing a sufficiently high milk content (65.0-70.0 kg), karakul-fat-tail ewes provide normal growth and development of lambs during the entire suckling period from birth to weaning without any additional feeding.

Sheep of the Kazakh karakul-fat-tail breed have a high reproductive capacity, from 120-130 lambs are born from each hundred uterus. In terms of wool shearing, Karakul-meat-greasy sheep reliably surpass sheep of mother breeds by 31.4%.

It has been established that sheep of Kazakh karakul-fat-tail breed steadily transmit their biological, productive, as well as economically useful qualities to their offspring.

In general, Kazakhstan has all the prerequisites for the development of astrakhan sheep breeding these are unique two breeds, such as the Karakul and Kazakh Karakul-fat-tail astrakhan-meat-greasy productivity, extensive natural pasture located in desert and semi-desert territories with an area of more than 100 million hectares., personnel potential, providing scientific and technical support for the industry.

## А. Омбаев<sup>1</sup>, Х. Укбаев<sup>2</sup>, Р. Шамекенова<sup>2</sup>, А. Абдурасулова<sup>1</sup>

<sup>1</sup>Қазақ Ұлттық Аграрлық университеті, Алматы, Қазақстан, <sup>2</sup>Қаракөл қой тұқымының республикалық палатасы, Қызылорда, Қазақстан

## ҚАЗАҚСТАННЫҢ ЕЛТІРІ БАҒЫТЫНДАҒЫ ҚОЙ ТҰҚЫМДАРЫ

**Аннотация.** Жұмыстың негізгі мақсаты – қаракөл қой тұқымының пайда болуы, оның әлемде таралуы және Қазақстанда елтірі бағыттағы қой тұқымдарының қазіргі жағдайына талдау жасау.

Мақалада қаракөл қойының шығу тарихына және Қазақстанда елтірілі – етті-құйрық майлы жаңа қой тұқымының шығарылуы жан-жақты баяндалады.

Өткен ғасырда қаракөл шаруашылығымен айналысқан ғалымдар мен мамандардың пайымдауынша қаракөл қойының Орта Азия жерінде шығуына негіз болып саналатын себеп: ол осы қой тұқымына тән қасиеттер мен белгілердің, оның ішінде елтірінің гүлінің тек осы малға ғана тән екендігінде. Ең бастысы, оның негізгі генетикалық-селекциялық белгілерінің еш өзгермей тұқым қуалағыштығы, тіпті жергілікті қылшық жүнді етті-майлы қой тұқымын қаракөл қошқарымен шағылыстырғанда онда қаракөл елтірісі белгілерінің қалыптасуы оның негізі болып саналады.

Қаракөл қойы тұқымын Орта Азия халықтары шөл және шөлейт аймақтардың қатал ауа-райымен жайылымдық жағдайында үлкен іскерлікпен сұрыптау мен жұп таңдау арқылы шығарған.

Қаракөл қой тұқымы – әлемдегі ерте заманнан келе жатқан ең әйгілі қой тұқымдарының бірі: ол жер шарында Австралиядан басқа құрлықтың бәрінде өсіріледі. Қаракөл қойын өсірумен Оңтүстік-Батыс Африка, Оңтүстік Африка республикасы, Ауғанстан, Иран, Өзбекстан, Қазақстан және Түркмения айналысады, әрі осы аталған елдер қаракөл елтірісін өндіретін ірі мемлекеттер болып саналады, ал Европа, Солтүстік және Латын Америкада аз көлемде елтірі өндіріледі.

Қазақстанда қаракөл шаруашылығымен 1928 жылы «Шымқорған» кеңшарына экелінген 5000 бас таза қаракөл қойын өсірумен айналыса бастады, әрі осы іс-шара үлкен көлемде Ұлы отан соғысы жылдары жалғасын тапты. Тіпті 1951-1960 жылдары елімізде 25 арнайы мамандандырылған қаракөл кеңшарларға ұйымдастырылды.

1991 жылдың соңына қарай республикада қаракөл қой саны 6 млн басқа, елтірі өндіру 2 млнға жетті. Осылайша қаракөл шаруашылығы республиканың халық шаруашылығының негізгі бағыттарының бірі болып қалыптасты.

Мақалада, қаракөл қойының биологиялық ерекшеліктері Орта Азияның шөлді-шөлейтті аймағында шөбі сирек азықтық жағдайда қалыптасқаны, әрі аталған қой тұқымының азық қорегін қамтамасыз ету үшін тәулігіне 20 шақырым жайылым жерді жүретіндігі, әрі тұзды, минералды суды ішетіндігі айтылған.

Қаракөл қойларының еріндері шөбі сирек кездесетін жайылым азығын таңдай отырып, өз ағзасына қажетті керекті заттарды ала алады, тіпті жусан, кеуреуік, сексеуіл т.б. өсімдіктердіде қажетіне тиімді пайдалана алатын қой тұқымы.

Оның негізгі өнімі – қаракөл елтірісі – өзінің түр-түсінің әртүрлілігіне байланысты өте әдемі, сұранысқа ие мал өнімі.

1974-1998 жылы Атырау облысында дүние жүзінде теңдесі жоқ әрі елтірілі, әрі етті, әрі майлы өнімді жаңа қой тұқымы шығарылып, республикамыздың көптеген шаруашылықтарында өсіріле бастады.

Қазақ елтірілі-етті-майлы қой тұқымы еділбай және қазақтың қылшық жүнді құйрықты қойларының әр түрлі түстері мен реңдерін қаракөл қой тұқымының сұр түсті қарақалпақ және сұрхандариялық тұқымішілік типтің платина, антрацит, қола, янтар, өрікгүл, шамшырақгүл және болат реңді қошқарларымен екінші буданға дейін сіңіре шағылыстырылып, сол екінші будан төлдерден дене тұлғасы қазақы мен еділбай қойына сәйкес келетін, ал туылғанда өн бойындағы бұйралардың сапасы қаракөл қой тұқымының төлдеріндей көркем де әсемдікті үйлестірген сұр түсті түрлі реңді қозыларды 1,5 жастан кейін «өзімен-өзі» шағылыстырылып, ұрпағына беретіндей етіп өн бойына бекітілді.

Одан алынған төлдерді өсіру бағытында қазақы қойдың төлдері сияқты тез өсіп жетілген қозыларды іріктеп, сұрыптап тұсақ болған соң сондай өнімді аталықтармен жұптастыру арқылы саны көбейтілді.

Аталған елтірі бағытындағы қой тұқымы – әрі жоғары сапалы қой етімен бірге қозы етін шөлді-шөлейтті аймақта өндіруге бағытталған мал тұқымы.

Әрине, ең бастысы елтірілі бағыттағы қой тұқымдарының биологиялық ерекшеліктері еліміздің шөлдішөлейтті аймағының жайылымын тиімді пайдаланылуы мақалада баяндалған.

**Түйін сөздер:** елтірілі қой тұқымдары, қаракөл, қазақ елтірілі-етті-майлы, жайылым, шөлді-шөлейтті, Қазақстан, Орта Азия, биологиялық, түр-келбет, қаракөл.

## А. Омбаев<sup>1</sup>, Х. Укбаев<sup>2</sup>, Р. Шамекенова<sup>2</sup>, А. Абдурасулова<sup>1</sup>

<sup>1</sup> Казахский национальный аграрный университет, Алматы, Казахстан, <sup>2</sup> Республиканская палата по каракульской породе овец, Кызылорда, Казахстан

#### СМУШКОВЫЕ ПОРОДЫ ОВЕЦ КАЗАХСТАНА

**Аннотация.** Цель – анализ происхождения и распространения каракульских овец в мире и современное состояние смушкового овцеводства в Казахстане.

В статье освещены вопросы происхождения каракульских овец, а также дана информация о создании в Казахстане новой казахской каракуль-курдючной породы овец смушково-мясо-сальной продуктивности. Представлены результаты сравнительного изучения биологических особенностей смушковых пород овец, разводимых на территории Казахстана.

Каракульская порода овец — одна из древнейших, приспособленных к суровым пастбищно-кормовым условиям пустынных и полупустынных регионов Средней Азии и Казахстана.

По всей вероятности, как утверждают большинство каракулеводов прошлого столетия, важнейшим доказательством создания каракульских овец на территории Средней Азии является тот факт, что в прошлые времена нигде, ни в каком другом районе мира шкурки ягнят не обладали столь характерным для данной породы завитком. Древность происхождения каракульской породы объясняется еще и тем, что ей свойственна исключительная сила наследственности смушковых свойств, которая проявляется при скрещивании с такой древней породой, как меринос, и сравнительная легкость преобразования грубошерстных пород в смушковые.

Каракульских овец разводят на всех континентах, за исключением Австралии. Широкому массовому распространению породы содействовала ее исключительная выносливость и способность акклиматизироваться в самых разнообразных климатических и кормовых условиях. Так, разведением каракульских овец занимаются Юго-Западная Африка, Южно-Африканская Республика, Афганистан, Иран, Узбекистан, Казахстан и Туркмения, которые являются основными производителями шкурок каракуля в мире, и незначительное количество производится в странах Европы, Северной и Латинской Америки.

Основная продукция, ради которой разводят смушковые породы овец – это уникальные по своей окраске, расцветке и прочности шкурки.

Каракулеводство Казахстана, начавшее свой отсчет с 5000 чистопородных овец, первенца отрасли – совхоза «Чимкурган», созданного в 1928 г., развивалось очень высокими темпами. Эта работа продолжалась и в трудные годы войны. За период с 1951 по 1960 гг. были созданы 25 крупных специализированных совхозов. К концу 1991 года численность каракульских овец уже превысила 6 млн. голов, а производство шкурок достигло 2 млн. штук. Каракулеводство Казахстана стало одним из важнейших направлений народного хозяйства республики (14).

Каракулеводство в Казахстане создавалось как путем поглотительного скрещивания маток местных курдючных овец с каракульскими баранами, так и за счет завоза чистопородного каракульского поголовья из хозяйств Узбекистана и Туркменистана, из которых было завезено 70 тыс. каракульских баранов и около 250 тыс. ярок.

Крупным селекционным достижением овцеводов Казахстана является создание казахской каракулькурдючной породы овец смушково-мясо-сальной продуктивности, не имеющей аналогов в мире, хорошо приспособленных к пустынным и полупустынным зонам Средней Азии и Казахстана.

В статье также освещены биологические особенности каракульских овец, которые сформировались в условиях изреженного травостоя пустынь и полупустынь Средней Азии, где, чтобы удовлетворить свои потребности в корме, овцам приходится проходить ежедневно до 20 км и пользоваться минерализованной, солоноватой и соленой питьевой водой.

Следует отметить, что биологические особенности смушковых пород овец позволяют эффективно использовать скудные пастбища малодоступных пустынных и полупустынных зон.

Каракульские овцы хорошо собирают губами мелкие, низкорослые растения, подбирают опавшие кусочки стеблей высохшей травы, листочки, колосья после уборки зерновых.

Мощный жевательный аппарат позволяет пережевывать грубо- стебельчатые растения (полынь, кейреук, ветки саксаула и др.), которые на осенне-зимних пастбищах составляют почти единственный источник корма.

**Ключевые слова:** смушковые породы, каракульская, казахская каракуль-курдючная, смушково-мясосальная, пастбища, пустынное, полупустынное, Казахстан, Средняя Азия, биологические, экстерьер, каракуль.

#### Information about authors:

Ombayev A., Head of the Department of Production Technology of Livestock Products of the Kazakh National Agrarian University, Foreign Member of the Russian Academy of Sciences, Corresponding Member of NAS of the Republic of Kazakhstan, Doctor of Agricultural Sciences, Professor, Almaty, Kazakhstan; abdi\_rahman@mail.ru; https://orcid.org/0000-0002-1347-6249

Ukbaev H., Academician of the National Academy of Sciences of the Republic of Kazakhstan, Doctor of Agricultural Sciences, Professor, Director of the Republican Chamber for the Karakul sheep breed, Kyzylorda, Kazakhstan; ukbaev@inbox.ru; https://orcid.org/0000-0002-9887-240X

Shamekenova R., Doctor of Agricultural Sciences, Professor, Scientific Consultant of the Republic of Kazakhstan, Almaty, Kazakhstan; ukbaev@inbox.ru; https://orcid.org/0000-0003-1993-990X

Abdurasulova A., Master of Agricultural Sciences, Laboratory Assistant of the Department of Production Technology of Livestock Products of the Kazakh National Agrarian University, Almaty, Kazakhstan; abdurasulova.aigerim@mail.ru; https://orcid.org/0000-0003-4114-8987

#### REFERENCES

- [1] Ombayev A.M. Astrakhan sheep breeding // Book-album. Almaty, 2018.
- [2] Adamec L. General animal husbandry. M., 1931.
- [3] Ivanov M.V. Karakul lambskin. Album of karakul lambskin. M., ed. "Soviet Asia". 1933.
- [4] Vasin B.N. The origin of the Karakul lambskin. Abstracts of the work of the institutions of the biological department of the USSR Academy of Sciences. 1940.
  - [5] Kuleshov P.N. Theoretical work on livestock breeding: OTPZ Selkhozgiz. M., 1947.
  - [6] Ivanov M.V. Astrakhan sheep breeding. In the book sheep breeding, M., 1940.
  - [7] Herremov Sh.R., Yuldashbaev Yu.A. Karakul breeding. M. Infra-M Course. 2016.
  - [8] Yudin V.M. About the quality of karakul and the fate of the breed // Sheep breeding. N 12. 1957.
- [9] Vasin B.N. Vasina-Popova E.T., Grabovsky I.N., Krymskaya E.K., Petrov V.A. Guide for karakul breeding. Moscow, Kolos 1971
- [10] Dyachkov I.N. Formation of karakul curls, astrakhan types and their genetic connection // Collection of scientific works of VNIIK. Samarkand. 1966. Vol. 15.
- [11] Averyanov I.Ya. The development of curl and lambskin of Karakul lambs in the last days of the uterine period // Sheep breeding, N 3, 1970.
  - [12] Zhilyakov V.S., Chepelova A.K. Foundations of karakul breeding // Alma-Ata, Kaynar. 1976.
- [13] Risimbetov T.K., Kydyrbaeva A.E. Improvement of Karakul economy in desert regions of Kazakhstan is a guarantee of agricultural economy // News of the National Academy of Sciences of the Republic of Kazakhstan, series of agrarian sciences. N 6. 2018. P.69–74.
- [14] Ukbaev H.I. Atyrau breed of fat-tail sheep of astrakhan-meat-greasy productivity. J. Sheep, goats, woolen work. N 2. 2011.