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THE QUALITY OF THE WOOL OF DROMEDARY CAMELS IN THE CONDITIONS OF KYZYL-KUM

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Abstract: The article presents the results of a study of the quality of wool of dromedary camels in the conditions of Kyzyl-Kum in the Republic of Karakalpakstan depending on animal constitutions. The basic parameters of the quality of the wool were studied, such as density, fineness, length of wool fibers and conclusions have been drawn.

Key words: wool, fluff, transitional hair, spine, density, fineness, length of wool fibers.

Introduction. None of the types of farm animals so successfully combines such qualities as high working capacity, meatiness, milk production, wooliness and adaptability to harsh conditions of deserts and semi-deserts, like a camel [1], therefore, to increase the production of cheap high-quality meat, milk and wool these animals are bred in many countries of the world. Camel husbandry is one of the main branches of livestock farming in the Republic of Karakalpakstan, it is important in the development of vast desert territories with a sharply continental climate, providing the local population with food (meat, milk), and industry - raw materials (wool, leather). The importance of camel breeding is especially enhanced due to the intensive industrial development of the vast expanses of the Ustyurt Plateau (total area of 7.5 million hectares) specifically because of the limited possibilities for breeding dairy and beef cattle in this territory [4].

Wool has high thermal conductivity and moisture insulation properties, and there has always been a great demand in the domestic and international markets for this very raw material.

Studies [2], [5], [7], and others, established that, with proper maintenance and care, camels grow well in desert and semi-desert conditions, develop and produce high-quality products at their low cost. A serious obstacle to the development of the camel husbandry is the neglect of breeding work, throughout the whole industry in the Republic of Karakalpakstan.

Breeding work is one of the largest factors in the matter of mass improvement of the situation in camel breeding. Science has proven that increasing the meat and wool productivity of camels by 25-30 percent depends on the breeding work in the field and the breed of camels [6].

In the Republic of Karakalpakstan, there is insufficient work to qualitatively improve the composition of camels. In this case, it is necessary to carry out a set of zoo technical measures that would contribute not only to the numerical growth of camels - dromedaries, but also to improve its breed qualities [4].

The aim of this work is to develop optimal methods for the production of dromedary camel wool, which helps to increase their quality of wool of different and constitutional types of animals.

Research material and methods: Wool samples were taken from three animals of each group using a restrictive fork 4 cm² in size. The natural length of pigtails, downy layer and fineness of individual types of fibers was determined according to the method of V.V. Kalinina. The experimental data

were processed on a computer using the STRAZ program and the method of variation statistics described by N. A. Plokhinsky (1980).

The place research carried out. The research was started in 2018 at the Nurtilek Karauzyak farm in the Karauzyak district of the Republic of Karakalpakstan. The stock of camel farms is represented mainly by single-humped camels and their hybrids. Animal farms are characterized by their typicality, high adaptability to local natural and forage conditions, without any special exterior flaws. The selection and formation of camels in groups was carried out according to the principle of analogues taking into account age (6-12 years), constitution (strong), live weight and body measurements (average for the population). The initial selection of animals was carried out from the number of one-humped in March 2018 from the number of camels which newly gave birth. Selected mother camels and other camels were marked with special paint and experimental groups were formed.

The object of the study was purebred one-humped camels of different constitutional types of animals.

Climatic and vegetation characteristics. According to the data of the «Buzubai» weather stations, the pasture territory of the farm where the scientific work was carried out is located in the north-eastern part of Kyzyl Kum and is characterized by a sharply continental climate. The Karakalpaksky part of Kyzyl Kum is located in the territories of two republics - Kazakhstan, and Uzbekistan. It is characterized by a specific climate. Summer is hot and dry, winters are not snowy with frosty and cold northeasterly winds. The coldest months are January, February. The average monthly temperature is -12.9 - -15.0 °C, and the hottest is July + 30 °C. On the hottest days, the temperature can rise to + 47 °C., And in winter drop to - 30 °C. The average annual rainfall is 90-120 mm. The period with snow cover in the year is 25-30 days. The thickness of the snow cover varies from 8 to 12 cm, and in some years it can be thicker. The average relative humidity in the summer is 20%, in the spring 30-40%, and in the winter 70-80%. The number of days in a year with a relative humidity of 50% or less is on average 120-150 days.

The pasture is drought-tolerant, salt-tolerant, grass in the southern part, mainly consists of ephemera, ephemeroids, wormwood, hodgepodge and cereal vegetation. In the northern part, the most common are hodgepodge, legume, saxaul, etc. Their productivity largely depends on the amount of precipitation and can range from 1.2 to 10.0 c / ha. In the pasture territory, water sources are uneven, water is mainly slightly saline 3-5 g / l. The best pastures are located in areas adjacent to the Aral Sea and here the yield reaches up to 10 c / ha. The total area of the plateau is divided into ten massifs, which are characterized by the peculiarity of soils, vegetation by the

presence of water sources, and with this in mind, they are seasonally used in animal husbandry.

The results of the study. Camel wool is heterogeneous, in morphological terms, consists of fibers of fluff, transitional hair and spinal wool. The content and density of these fibers in the coat of the skin is due to overgrown animals and the economic value of camel hair. Camel hair has a high heat-insulating and waterproof ability. The morphological structure of the coat of camels is subject to high variability. It depends on the species, breed, and gender, and age, physiological condition of the animals, season and region of the animal. Each individual animal of one herd according to the morphological composition of the coat and growth can be very different from other animals.

The wool quality indicators are shown below in the following table -1

Table 1

Quality indicators of fluff wool of a camel

Animal constitution	Fluff		
	Density,%	Fineness, mk	Length, cm
Gentle	86,5	14,0	4,0
Strong	87,4	15,0	6,0
Rough	87,2	15,0	6,0

An analysis of the data given in Table 1 shows that the conditions of the type of constitution of the mother camel are mainly influenced by the quantitative indicators of wool-length, and such indicators as the quantitative ratio of individual fiber types, while fiber fineness remain practically unchanged.

Table 2

Quality indicators of transitional hair of camel

Animal constitution	Transition hair		
	Density, %	Fineness, mk	Length, cm
Gentle	8,5	38,0	10,5
Strong	8,3	39,0	12,6
Rough	8,6	39,0	12,8

Analysis of tables 2 and 3 shows that the length of the fluff in the strong constitution of animals was one and a half times longer than in the gentle type of constitution. The difference in the length of the transitional hair between the strong constitution and the gentle constitution was 20.6 and 21.9 percent, respectively the length of the core fibers, this difference was 16.6 percent in favor of a strong type of constitution.

Table 3

Quality indicators of the spinal wool of camel

Animal constitution	Ость		
	Density, %	Fineness, mk	Length, cm
Gentle	5,0	56,0	12,0
Strong	4,3	58,0	14,0
Rough	4,2	56,0	14,0

Thus, the analysis of the results of studies on the quality of mother camel wool of different types of constitution shows that an improvement in their feeding conditions has a positive effect on their wool productivity, while an increase in haircuts is due to lengthening of the wool fibers, which accordingly leads to an increase in their cuts.

Conclusions. The results of a study of the quality of wool of a single-humped mother-camel are given below.

1. Obtaining the largest amount of wool requires paying attention to the age of animals and the constitutional type of dromedary camels.

2. The quality of the wool of a mother camel is directly dependent on the constitution of animals, since in a strong and rough type of constitution, one-humped mother camel exceeded the tender constitution of animals with their peers.

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