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1

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НАН РК сообщает, что научный журнал «Вестник НАН РК» был принят для индексирования в Emerging Sources Citation Index, обновленной версии Web of Science. Содержание в этом индексировании находится в стадии рассмотрения компанией Clarivate Analytics для дальнейшего принятия журнала в the Science Citation Index Expanded, the Social Sciences Citation Index и the Arts & Humanities Citation Index. Web of Science предлагает качество и глубину контента для исследователей, авторов, издателей и учреждений. Включение Вестника НАН РК в Emerging Sources Citation Index демонстрирует нашу приверженность к наиболее актуальному и влиятельному мультидисциплинарному контенту для нашего сообщества.

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GENETIC POTENTIAL OF EDILBAYSKY BREED SHEEP OF ESPC «AGRO BAYSERKE» HEARD

Abstract. Results the article are shown in of studying of breeding herd of sheep of edilbaysky breed the created in new climatic conditions of «Baysyerke Agro» ESPC of Almaty region to them are given in article. The main economic and useful sign of this breed – precocity of lambs for the lactic period of development.

Keywords: phenotypic variability, fat-tailed sheep, growth and development, carcass weight, wool production, meat-fat productivity, the post-natal period.

Introduction. In Kazakhstan, sheep breeding is one of the leading sectors of the agricultural sector. This is facilitated by the presence of vast natural pastures (181 million hectares), almost 70% of which are located in the desert and semi-desert areas. There was the emergence, formation and development of fat-tailed sheep breeds [1].

Currently, 16 (sixteen) sheep breeds of different directions of productivity are bred in the Republic, well adapted to the specific local, often extreme living conditions of certain regions, where it is almost impossible to maintain another direction of the agricultural sector. Here, first of all, should include the seven (7) fat-tailed breeds of sheep: meat-tallow (coarse - edilbaysky, local kazakh coarse wool, from Sary-Arka and Ordabas region); meat – greasy - wool (semi-rough-fur - kazakhsemi-rough-fur and the second enterbreed type of Degeres breed); meat and wool fat (semi fine-wooled –first interbreed type of Degeres breed) and Atyrau-smushkovmeat-fat breed. Their share is more than 70% of the total number of sheep of the Republic. It is gratifying to note that all of these breeds are fat-tailed sheep created by local scientists. [2,3].

A valuable biological feature of sheep of all sheep breeds is that they, unlike other species of farm animals, are well adapted to year-round grazing content and eating rough root parts of the plant, which is very important when using sparse and broken pastures, as well as high intensity of growth of lambs during the milk period of postnatal development. The mother-sheep have a well-developed maternal instinct. They very rarely do not take their lamb after birth, do not run away from it, which is of great practical importance in the preservation of newborn offspring [4].

Undoubtedly, among breed sheep in Kazakhstan the special attention is edilbaysky coarse-wooled fat-tailed breed, created by folk selection at the end of the XIX century on the territory of West Kazakhstan region. They take one of the first places among the existing breeds of sheep in the world on live weight and level of meat and fat productivity. Added to this is that all of these valuable biological quality of fat-tailed sheep breeds, expressed in edilbaysky the most. They are the national pride of the Kazakh people, as the Akhal-Teke breed of Turkmen horses, the Romanov breed of Slavic sheep, the Hissar breed of Tajik sheep, etc

Despite this, when the global sheep total wool production at a cost was 65-70%, edilbaysky sheep, until the last 25 years producing coarse wool in small quantities (1.5-2.5 kg), were forced into unfavorable

zones. There breeding of other types of farm animals was ineffective and their number was reduced to a minimum. In recent decades, due to the sharp decline in the price of wool and the increasing demand for lamb in the international market, edilbaysky sheep have become widespread in the country. Currently, they are grown almost throughout Kazakhstan, several regions of the Russian Federation and the Republic of Kyrgyzstan.

The gene pool of edilbaysky breed has played a prominent role in the creation and improvement of all domestic coarse-wooled and fat tail sheep breeds, as the Kazakh coarse-wooled, Kazakh fat-rumped medium, Sary-Arka, Degeres, Ordabas and a number of intrabreed types of Karakul breeds.

This leads to the preservation and further improvement of the gene pool of the edilbaysky breed. In addition, the increase in the number and distribution is one of the highest priorities of the national zootechnical science and practice. At the same time, the creation of new breeding subjects for this breed of sheep in different regions of the Republic is of great importance.[5]

In this aspect, the interest is the breeding herd of sheep of edilbaysky breed created in ESPC "Bayserke-Agro" located in Talgar district of Almaty region. Is a diversified agricultural holding concerned, except sheep, breeding cattle dairy (Holstein black-motley breed), and four beef breeds (Kazakh white-headed, Auliekol sheep, Aberdeen-Ingushi and Hereford) as well as sport and herd horse breeding (zhabe and kushumsk ones)

Materials and methods of research. The task of this work is to study the phenotypic variability of the leading selected traits of the breeding herd of sheep of the edilbaysky breed, created in the conditions of ESPC TRPC (training research and production center) "Bayserke-Agro" of Almaty region. The object of the study were different age and sex groups of sheep of the desired type. This herd is created by absorption crossing ewes of Kazakh coarse wool, (formerly superior edilbaysky sheep) with purebred sheep edilbaysky sheep breed. The latter were imported from the «Brlk» breeding plant from the West Kazakhstan region, where one of the best gene pools of these animals is concentrated. In the final phase of work to improve precocity and meat production, the flock of sheep, the type of induction crossing, was used gene pool Hissar coarse wool fat-tailed breed of sheep. In the future, three-pedigree offspring of the desired type were bred "in itself". As you know, when you use an introductory crossbreeding of similar type and direction of the productivity of species, the scheme of this crossing is further simplified, and the offspring of the first generation is not considered as crossbred and purebred as the parent (being the edilbaysky breed). The number of ewes of the desired type in the sector is about 5,000 (five thousand) heads.

Results and discussion. Perhaps the most leading breeding a symptom of any kind of farm animals, irrespective of their productivity is the live weight. From its size depends on the development of many other economic and useful features. Besides, live weight of animals in comparison with other signs has the highest "norm of reaction" to conditions of paratypical factors that the last, considerably complicates selection and breeding work.

In the new breeding zone – in the conditions of ESPC TRPC "Bayserke-Agro" live weight of newborn rams is 5.1 kg, the ewe hog – 4.6 kg, which indicates a good development of lambs in the embryonic period of growth. In our opinion, this is facilitated by the experiments established by a remarkable domestic scientist, who played an outstanding role in the preservation and development of the gene pool of this breed by academician Ermekov M. A – a very valuable biological feature developed for many generations in the Queens of edilbaysky sheep – a higher mobilization of the mother's body for the preservation and intensive development of the fetus during the period of malnutrition, especially in the second half of pregnancy. So if the autumn live weight of ewes fine-wool breeds for the period of pregnancy in conditions of South-Eastern Kazakhstan decreased by 8.6 and 9.9 percent, edilbaysky – 12.6%, and in the Central Kazakhstan – in the more adverse paratypical conditions, at the latest, this figure is considerably high of 20.6%.

In postnatal ontogenesis, where, as a rule, the "interaction" of the genotype and environment is the highest, the growth of live weight of the herd of edilbaysky sheep "Bayserke-Agro" is extremely intense. At the same time, in the semi-desert zone in the conditions of round-the-clock pasture content of different age groups of sheep herds, these indicators are among the highest in the history of the development of this breed of sheep (table 1). Thus, the average live weight of the main sheep and adult mother-sheep of the desired type exceeds the breed standard established for elite class animals by 20.5 and 3.3 kg or 17.7 and

Table 1 – Live weight of edilbaysky sheep, kg

Age	Rams			Mothers		
	n	$X \pm m_x$	max	n	$X \pm m_x$	max
At birth	615	5,1 \pm 0,04	6,5	620	4,8 \pm 0,06	6,0
4,5 months	598	45,8 \pm 0,18	56	601	39,3 \pm 0,37	50
18 months	70	81,5 \pm 0,57	95	580	65,1 \pm 0,6	85
Adult	50	115 \pm 1,89	145	590	78,3 \pm 0,4	102

4.2%; some of the best individuals weigh 145 and 102 kg; at the age of 18 months -6.5; 5.1 kg or 7.9; 8.5%; 95 and 85kg, and 4-month-old rams and ewe hogs-7.8; 3.3 kg or 17 and 8.3%, 56 and 47 kg, respectively.

Indicators of live weight of the individual best individuals of different age and sex groups of animals indicate a large genetic potential of the created herd of sheep, which is of great importance for future breeding.

Undoubtedly, perhaps, the most important selective features of the sheep of the edilbaysky breed, which we must not only preserve, but improve and pass on to the next generation – unsurpassed precocity and the level of meat productivity of young animals – especially for the first 4 months of postnatal ontogenesis, i.e. the period of milk development. These valuable qualities of sheep of this breed are currently the highest priority, because the demand for lamb in the global international market is higher than ever, so in this age group of animals edilbaysky sheep, we decided to stay separately in more detail.

According to our data for a number of years, the live weight of rams and ewe hogs at the age of 4 months on average in the herd is 45.8 and 39.3 kg, which is one of the best indicators of the world sheep breeding. They at this time than than at birth, has increased in mass at 9.0 and 8.2 times, respectively. A more visual description of the population on this issue can be obtained by studying the variation number of phenotypic variability of live weight of lambs (table2).

Table 2 – Variation series of live weight of rams and ewe hogs at the age of 4 months

Rams, n = 598				Ewe hogs, n = 601			
#	Class boundaries	Class middles, W	Frequency f, %	#	Class boundaries	Class middles, W	Frequency f, %
1	28-30,9	29,5	1,01	1	30-31,9	31	4,2
2	31-33,9	32,5	0,3	2	32-33,9	33	3,13
3	34-36,9	35,5	1,01	3	34-35,9	35	10,42
4	37-39,9	38,5	5,0	4	36-37,9	37	10,42
5	40-42,9	41,5	26,2	5	38-39,9	39	18,75
6	43-45,9	44,5	28,4	6	40-41,9	41	15,63
7	46-48,9	47,5	29,2	7	42-43,9	43	12,5
8	49-51,9	50,5	6,3	8	44-45,9	45	17,71
9	52-53,9	53	2,6	9	46-47,9	47	3,13
				10	48-49,9	49	4,2

It is noteworthy to note that of the recorded animals, the specific weight of the rams, the live weight of which exceeds the breed standard (38 kg) established for the elite class animals are 97.68 and ewe hogs 82.25%, and exceeding the average data (45.8 and 39.3 kg) for the herd – 38.1 and 57.17%, respectively. Among the rams of particular interest for breeding are those individuals (59 heads), the live weight of which is 50 and above, and ewe hogs 45 kg and above (150 heads). If we consider that precocity is a hereditary property, these animals are important for future practical work, in particular, providing the possibility of early use of the animal for herd reproduction without damage to life and further development.

We conducted a control slaughter of rams at the age of 4 months. This is the age of the offspring, where the value of the gene pool of the edilbaysky breed is fully manifested-precocity, which contributes to the production of high-quality and low-cost lamb, which increases the efficiency of breeding these sheep. For slaughter seven heads of rams of the average live weight of 46 kg characteristic to an average

indicator of herd were selected. The mass of carcass, fat tail and internal fat averaged 20.7, 3.2 and 0.25 kg, and slaughter weight - 24.15 kg, and yield - 45.0, 6.9, 0.54 and 52.5%, respectively.

It should be noted that the average rate of shearing in the herd of adult rams (3.0 kg) and mother-sheep (2.1 kg), and also one-year-old rams (2.3 kg) and ewe hogs (1.5 kg) meets only the minimum requirements established for the first class animals. The relatively low level of shearing of sheep wool is explained as it is with most breeds of sheep in the world - the direction of breeding for live weight, which in turn is associated with a sharp decline in demand for wool in the international market.

Undoubtedly, one of the main achievements of the ESPC "Baysyerke-Agro" under the condition of veterinary well-being is the cultivation and sale of breeding sheep of the edilbaysky breed. Only in the last 5 years, more than 6 (six) thousand breeding animals were sold to the farms of three regions of the Republic - Almaty, Zhambyl and East Kazakhstan and, thus, the impact on improving the productive and breeding qualities of local low-yielding fat tailed sheep breeds. In addition, the farm annually produces 25-30 tons of high-quality lamb.

Т. М. Досмухамбетов, Т. Садыкулов, М. А. Кинеев, Н. П. Иванов, М. А. Алиев

АЛМАТЫ ОБЛЫСЫ "БАЙСЕРКЕ АГРО" ЖШС ООҒӨО ТАБЫНЫНЫҢ ЕДІЛБАЙ ТҰҚЫМДЫ ҚОЙЛАРЫНЫҢ ӘЛЕУЕТИ

Аннотация. Мақалада еділбай қой тұқымын өсіруде жаңа аймақ болып саналатын Алматы облысы ЖШС «Байсерке Агро» шаруашылығында құрылған осы қойлардың өнімділік нәтижелерінің көрсеткіштері зерттелген. Осы қойдың ең басты өнім көрсеткіштері болып саналатын – қозыларының анасынан бөлгенге дейін тез жетілгіш ерекшелігі талданған.

Түйін сөздер: өсуі мен дамуы, қаңқасының салмағы, жүн өнімдері, ет өнімділігі, босанудан кейінгі кезең.

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ГЕНЕТИЧЕСКИЙ ПОТЕНЦИАЛ ОВЕЦ ЕДИЛЬБАЙСКОЙ ПОРОДЫ СТАДА ТОО УНПЦ «БАЙСЕРКЕ АГРО» АЛМАТИНСКОЙ ОБЛАСТИ

Аннотация. В статье приведены результаты изучения продуктивности племенного стада овец едильбайской породы, созданных в новых для них природно-климатических условиях ТОО «Байсерке Агро» Алматинской области. Анализирован главный хозяйственно-полезный признак данной породы – скороспелость ягнят за молочный период развития.

Ключевые слова: рост и развитие, вес carcаса, производство шерсти, мясная производительность, послеродовой период.

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