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## **CONSTITUTIONALLY PRODUCTIVE TYPES OF THE EDILBAY BREED SHEEP**

### **Abstract**

The article presents the results of studies of three types of animals of the edilbay breed, clearly differing in type, size and degree of expression of productive features.

**Key words:** *edilbay sheep, live weight, coat color, wool class, productivity.*

At present, much attention is paid to the development and qualitative improvement of meat-sebaceous sheep breeding. This is due to the growing need for the market in quality mutton and wool raw materials [1].

Among fat-tailed sheep in the Republic Kazakhstan, one most promising in solving the above-mentioned problems is edilbay sheep, which is characterized by a good adaptability to live in all areas of the meat and sheep breeding country [2].

In breeding farm «Brlık» in the West Kazakhstan region, a large enough array of high-yielded edilbay sheep has been created by the intra-breed selection, which differ from other populations cultivated in the West Kazakhstan, Atyrau region and Central Kazakhstan in terms exteriors and productive type.

The Expert Commission of the Ministry Agriculture of the Republic Kazakhstan in October 2000 tested this population of edilbay sheep as a new intra-breed type.

Further improvement the productive qualities sheep of a new intra-breed type is impossible without studying productive-biological characteristics animals of different constitutional-productive types available in herd. The task of research was to identify the most desirable them, and also successfully combining high meat-sebaceous qualities with woolly productivity.

The sheep edilbay offspring were not of same type. Among them there were individuals with a pronounced meat-sebaceous direction of productivity in the presence coarse wool of third grade and animals that successfully combine high meat quality with good woolly productivity [2].

In the practice of gissar sheep breeding, such sheep are usually divided into three constitutional types: A - strong, B - rough and B - tender. Into the group animals of strong type included large animals with a massive constitution, well developed meat-sebaceous qualities and satisfactory hair [3].

To animals of a rough type, animals with a heavy bone structure, a sharp hook-nosed profile the head, an outstanding forward thorax, thin skin and extremely unsatisfactory woolen productivity with a third grade of wool were referred to.

The animals of a gentle type are sheep with less pronounced meat quality, tender skeleton and better qualities wool (long, soft) [4, 5].

Among the edilbay sheep, there are also similar types: type A with well-expressed meat and wool productivity; type B-animal, evading towards wooliness, with less pronounced meat productivity, with wool of the first and second grades; type C animals with well-pronounced meat-sebaceous productivity, with some roughness the constitution and wool of third grade, with a lot of dry and dead hair [6].

The purpose of research is to identify most effective options for selecting sheep of the edilbay breed for live weight and wool class, ensuring the greatest number of individuals with high meat and wool productivity.

**Objects and methods.** For the experiment, two flocks of full-aged uterus the edilbay breed with a population of 500-550 head were used. In one flock they conducted the experiment on selection of parental pairs for live weight, in another - for the quality (grade) of wool.

In carrying out the experience on selection of parents for live weight, the full-fat ewes were divided into three groups: I - live weight within the range of 61-65 kg (small), II - from 66 to 70 kg (medium), III - 71 kg and higher). On the uterus of each of the groups, two groups of rams were used: I gr. (n = 3) - live weight in the range of 95-100 kg (average) and group II (n = 3) - from 101 to 110 kg (large). The object of the study was the young, obtained from the above-mentioned types of matings. The flocks of the queens, as well as the young stock obtained from them, accumulated under the same conditions of feeding and maintenance, on year-round pasture maintenance with top-dressing of roughage during critical wintering periods.

**Results of the research.** The results boning the sheep the edilbay breed breeding farm "Brluk" indicate that at present in herd a significant proportion is occupied by large animals that combine well-expressed meat-sebaceous qualities with a sufficiently high level of wool productivity, mainly wool the second grade. The number of animals that once occupied more than 50% specific weight in herd, with a rough constitution, third-class wool and a large content of rough assortments of woolly fibers, with a relatively short body, sharply hump-nosed head profile, decreased significantly.

At present, this type of sheep in the herd breeding plants occurs in the range 5-10%. This is the third type of edilbay sheep - type C.

In connection with the change in the direction of selection-breeding work in coarse-wooled sheep-wool sheep breeding, specific weight of the B-type animals increased significantly with the improvement the quality of wool, with a light bones, better woolen and less expressed meat qualities.

As a result of a detailed study of the level of productive features and their severity, as well as the exterior-constitutional features of sheep the modern herd breeding farm "Brluk" we identified three constitutively productive types among them. The description of these types is basically consistent with description given by V.A.Balmont [1], but at the same time we made some clarifications regarding the characteristics of the combination of productive features and physique.

According to the definition, first type, which was called the main type, is large animals with a strong constitution, a characteristic humpbacked head, a long neck, a fairly extended body, a large size, tightened and often somewhat deflated by a fat tail. The coat color is predominantly black. Wool is mostly second-class, sometimes the first one. In animals of this type, high meat and wool qualities combine well with high wool productivity.

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The second type, called the old one, includes animals with a humpbacked head, an average neck, a slightly stretched body, a large tight-fitting fat tail. Coloring of wool - red and brown, rarely black. Wool is mainly of the third grade, with a large content of awn, dry and dead hair. Animals are highly meat productivity.

The third, or improved, type includes animals of a strong constitution with a slope toward the tender, with a light bones, with an average length neck, an average tightened fat tail. Wool is coarse, mostly of the first grade, there are individuals even with semi-coarse wool. Coloring of wool of all colors: black, red, brown.

Studying the live weight of the sheep edilbay breed three types showed that the largest weight of sheep and sheep main type have largest weight – 103,2 and 72,2 kg, respectively, and exceed the peers of the improved type by 15,3 and 7,9%, respectively. Between animals of the main and old types in the live weight the difference is not reliable and is only 4,2 and 0,4%.

An analysis was made of the distribution of animals according to quality of wool within each constitutionally productive type. It turned out that most the main type of sheep had wool second kind: among the rams - 93.8%, the ewes - 74.0%. Among animals of old type, most of the specimens have a third grade of wool: among the rams – 92,3%, the ewes – 68,8%. The animals of improved type had practically the same number individuals with the first and second grade wool.

Among the old-type sheep, there were no animals with first grade of wool, and among improved - with the third grade.

**Conclusion.** Thus, the conducted studies have shown that among edilbay sheep of the «Brlik» breeding farm West Kazakhstan region, there are three types of animals that clearly differ in their physique, level and severity of productive characteristics. The use of genetic diversity in level of productive features and biological features that result from interrelation features in a definite constitutional-productive type provides new opportunities for improving sheep herd of the Brlik breeding farm.

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