

## **GEORGIAN MEAL-AND-FUR RABBIT SPECIES AND ITS ROLE IN INCREASING THE PRODUCTION OF RABBIT BREEDING**

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At present there is plenty of material in zoo technical literature indicating various cases of heterosis. It has been ascertained that its level depends on many factors. The event is well-indicated in the mixed breeds of the same direction in their evolution process, i.e. similar in the type and the character of productivity. On the other hand the effect of heterosis is always higher in the mongrels of the mixed genotypes with eminent hereditary differences, in the mixed breeds of similar genetic structure. The effect of heterosis is usually higher with the feature of low fertility than with the feature of high fertility. The considerable influence of the features of the mother species such as quality, size, reproductive abilities, adaptation to local conditions and etc. on the level of the revelation of heterosis in crossbreeding is also confirmed.

The issue of paramount importance is to effect selection on heterosis. The revelation and level of heterosis is conditioned by the proper selection of animals according to their strength of constitution, health condition, age and used material, herewith, particular attention must be paid to the body weight, bearing in mind the type of body structure, constitution, health condition and etc. So the most special matter is to select species. As it is already known each breed has its own structure and wide variety of animals.

Current analysis of the situation of rabbit breeding shows that opportunities for intensive usage are not fully utilized in Georgia. Aiming to increase productivity of agricultural animals with good maturity, high-priced food, increase population, rise productivity, reproductive ability, look for effective methods of breeding.

The only way to solve these problems is to work out and take

complete actions based on scientific discoveries and advanced practices. The history of development of animals breeding is evident proof of the paramount importance of mixing breeds to increase productivity and forming types of animals meeting current demands. Industrial mixing of breeds is used in zoo technical practice in order to use heterosis.

For further growth in producing rabbits it is necessary to use selective effect, which is received through crossing and hybridization. So the most basic increase in productivity is received by the effect of heterosis, which achieves 5-11% through industrial crossing and 17% through hybridization with separate features. Interbreeding together with hybridization is becoming more widespread in rabbit breeding in Georgia. At present this is understood as the method of the highest mobilization of genetic potential of the animals. The stimulus for using hybridization is the age demands for the quality of commercial animals. It must be mentioned that hybridization in rabbit breeding is carried out only at huge private corporations abroad.

Georgian meat-and-fur species group is bred through the method of reproductive crossing of the breed of New Zealand white hare with Soviet rabbit, with further selection and matching. It was created in 1992 by the group of Zoo technical-Veterinary Scientific Research Institute in the rabbit breeding complex in Kumisi. The head of the group was Professor D. S. Gugashvili.

The purpose of breeding species is to create big rabbits well-adapted to food and climate conditions in Georgia.

The rabbits of this breed have strong constitution with well-developed skeleton, long body (55-56cm), chest width - 35-36cm. The body weight at the age of 120 days is average 3160g. The weight of especially big ones is 6kg, carcass weight-87%, fertility of does-8 rabbits, milking 180-200g, preservc-80%.

The rabbit has dense hair. Color of fur is brilliant black. In the first four months it has black hair. After eight months appears "voile".

The rabbits are of single breed. They are fertile according to the basic agricultural features. High fertility, that is judged by the quantity and quality of born rabbits makes major influence on increasing

productivity of rabbits.

Given tables confirm that fertilization of rabbits was highest in crossbreeds wild rabbit x Georgian and wild rabbit x Soviet rabbit 100%, that is with 15-20% more than that of pure breeds. It must be mentioned that this indicator was approximately identical to the three-cross breeds and pure breed analogues. Fertility was high in three-cross breed rabbits: wild rabbit x (Georgian x Soviet rabbit 8-5, which was 0,8-1,9 i.e. 10,4-27,1% more than that of the pure breeds of the same age.

Changes in body weight at various ages are shown on table 2. Among 120 day-old cross breeds-wild Rabbit x Soviet Rabbit x wild rabbit had the greatest body weight - 3000 g. Three-cross breeds wild rabbit x Georgian x Soviet rabbit-3049,9 g.

Tree-cross breed hybrids were with 561-8 g. more than pure breed wild rabbit and 655,2 g. more than soviet rabbit, that is 23,0-27,9 % more than pure breed of the same age. Breeds - Wild Rabbit x Georgian x Soviet Rabbit-3049-9 had greater body weight than wild rabbit of the same age- with 611,7 g; Georgian-with 596,8 and soviet rabbit with 705 respectively 25,1; 24,3 and 30,0%. So, hybrid rabbits have higher fertility and their body weight increases quicker at an early age than that of the pure breeds of the same age.

**Table 1.**

Group	Breeds	Abbreviated Pedigrees	Number of cubs		Fertilization
			Fertilized	Born	
1	Grey Giant	GG	20	16	80
2	Soviet Rabbit	SR	20	17	85
3	Georgian Meat-and-fur	GMF	20	17	85
4	Wild Rabbit	WR	20	16	80
<b>CROSS BREED HYBRIDS</b>					
5	Wild Rabbit x Soviet Rabbit	WR x SR	20	19	95
6	Soviet Rabbit x Wild Rabbit	SR x WR	20	18	90
7	Georgian x Wild Rabbit	GMF x WR	20	19	95
8	Wild Rabbit x Georgian	WR x GMF	20	20	100
9	Wild Rabbit x Soviet Rabbit x Wild Rabbit	WR x SR x WR	20	20	100
<b>THREE BREED HYBRIDS</b>					
10	Wild Rabbit x Georgian x Soviet Rabbit	WR x GMF x SR	20	17	85
11	Wild Rabbit x Georgian x Soviet Rabbit x Wild Rabbit	WR x GMF x SR x WR	20	17	85



**Х ц л а с я****ЯТЛИК ВЯ ХЯЗЛИК НЮВ ЭЦРЪЦСТАН ДОВШАНЫ ВЯ  
ОНУН ЁИНС ДОВШАН ИСТЕЩСАЛЫНЫН  
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