

## COMPARATIVE EVALUATION OF MUTTON- WOOL PRODUCTIVITY OF EWES TSIGAI BREED CRIMEAN AND AZOV INTERBREED TYPES

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*The results of sheep breeding efficiency of ewes Tsigai breed, Crimean and Azov interbred types in the conditions of SPK "Krynychne", Bolgrad Region, Odessa Oblast, by mutton-wool productivity were presented. In animals of the first and second years of age, among the ewes of Azov and Crimean types, the advantages by live weight of animals of Azov type in the first year of age – 2.27 kg, and in the second year of age – 4.11 kg ( $P > 0,999$ ) were observed. Ewes of Azov type are characterized with the best slaughter qualities.*

**Keywords:** sheep, interbreed type, Tsigai breed, productivity, selection.

**Introduction.** At present, we can observe significant changes in agriculture in our country. Sheep breeding is not an exception. Now it has lost the opportunity to increase production only by extensive way of development. Further sheep breeding growth as one of the promising sectors of animal husbandry is impossible without breeding work aimed at improving the productivity of animals.

One of the ways to increase the production of sheep is the acclimatization of highly productive breeds or creations different interbreed types in appropriate climatic zones.

According to A. Nikolaev, A.I. Yerokhin (1987), V.L. Petukhov, L.K. Ernst, I. I. Gudylin (1989), interaction genotype  $\times$  environment reflects the nonlinear relation of genotype and environment, as genotypes react differently to various environmental conditions.

To study the interaction genotype  $\times$  environment is sufficiently relevant and it requires a detailed examination and in the future will allow a better understanding of development patterns of different interbreed types of sheep.

**Material and methods of researches.** Female lambs of Tsigai breed, Azov and the Crimean interbreed types that were brought in the SEC «Krynychne» at 4 months of age were materials for researches. The difference between animals in live weight was not significant ( $P < 0.95$ ). At the beginning of the researches comprehensive assessment of ewes for phenotype and genotype and the recording of wool yield and live weight and slaughter qualities by common techniques in sheep breeding was made [2, 3].

**The results of researches.** Many factors both genetic and environmental are known to effect on the formation of sheep mutton-wool productivity.

Unequal adaptability of animals to the environment was caused by their different reactivity controlled by the genetic system. It has found that the selection and provision of realization genetic potential productivity, animals genotype depends on the climatic conditions as shown in conducted researched.

Changes in live weight, which occurred in experimental animals for the whole period, are given in table 1.

### 1. Live weight of female lambs, ewes, kg ( $\bar{X} \pm S\bar{X}$ )

Interbreed type of Tsigai breed of sheep	Age		
	4 months	1 year	2 years
Azov	22,12± 0,55	38,41 ± 0,25	53,44± 0,35
Crimean	20,65± 0,65	36,14 ± 0,43	49,33 ± 0,51

Table 1 shows that in the first and second years of age among the ewes of Azov and Crimean types in live weight difference is observed for animals of Azov type. The difference between groups was in the first year of age – 2.27 kg and in the second year – 4.11 kg and was statistically significant ( $P > 0,999$ ).

The differences between the research groups for unwashed and washed wool are presented in table 2.

## 2. Unwashed and washed wool yield of female lambs and ewes, kg ( $\bar{X} \pm S\bar{X}$ )

Interbreed type of Tsigai breed of sheep	Age			
	Female lamb of 1 year		Ewes of 2 years	
	Unwashed wool	Washed wool	Unwashed wool	Washed wool
Azov	4,63 ± 0,03	2,62 ± 0,01	4,99 ± 0,03	2,83 ± 0,01
Crimean	3,78 ± 0,02	2,14 ± 0,01	3,85± 0,03	2,12± 0,01

When female lambs of various types are grown under the same environmental conditions, difference in wool yield for animal of Azov type is observed. So female lamb of Crimean type in age of one year concede by unwashed wool yield to female lamb of Azov type on 0.85 kg, and by washed wool yield - on 0.48 kg. In two years old difference for the studied traits increased and amounted to 1.14 and 0.69 kg. The difference between groups was highly significant ( $P > 0,999$ ). This indicates that animals of Azov type, Tsigai breed have optimal metabolism, which makes it possible to realize the genetic potential in specific conditions, as evidenced by genetic and statistical analysis. The, hereditary factors as well as environmental conditions greatly influenced on the development of studied traits and on the whole body.

Meat productivity of experimental animals were studied according to the data of control slaughter that was carried out in one and two years of age (Tab. 3).

## 3. Slaughter qualities of female lambs and ewes (n=5 heads)

Interbreed type of Tsigai breed of sheep	Before slaughter live weight, kg	Slaughter weight, kg	Weight of inner fat, kg	Carcase weight, kg	Slaughter output, %
One year					
Azov	37,11 ± 0,56	17,20	0,70	16,5 ± 0,48	46,3
Crimean	36,38	16,10	0,70	15,4	44,3

	$\pm 0,45$			$\pm 0,54$	
Two years					
Azov	52,30 $\pm 0,19$	24,85	1,05	23,8 $\pm 0,35$	47,5
Crimean	48,28 $\pm 0,22$	21,85	0,95	20,9 $\pm 0,45$	45,3

Significant difference between groups was not observed at slaughter of female lambs in one year of age, although female lambs of Azov type had a slightly higher indicators concerning before slaughter and slaughter weight, increased carcass weight and slaughter output. Ewes of two years of age and Azov type had the better slaughter qualities.

### Conclusions

1. In the first and second years of age among the ewes of Azov and Crimean types in live weight difference is observed for animals of Azov type. The difference in live weight between groups was in the first year of age – 2.27 kg and in the second year – 4.11 kg and was statistically significant ( $P > 0,999$ ).
2. Female lamb of Crimean type in age of one year conceded by unwashed wool yield to female lamb of Azov type on 0.85 kg, and by washed wool yield - on 0.48 kg. In two years old difference increased and amounted to 1.14 and 0.69 kg respectively ( $P > 0,999$ ).
3. Female lambs of Azov type had better slaughter qualities. Ewes of two years of age and Azov type had the better carcass qualities.

### References

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*Богдан Н. К. Сравнительная оценка мясной и шерстной продуктивности маток цыгайской породы крымского и приазовского внутривидовых типов. Представлены результаты эффективности разведения овец цыгайской породы крымского и приазовского внутривидовых типов в условиях Одесской области по шерстной и мясной продуктивности. Между овцематками приазовского и крымского типов по живой массе установлено преимущество в пользу животных приазовского типа в годовом возрасте – 2,27 кг, в двухлетнем – 4,11 кг ( $P > 0,999$ ). Лучшими убойными качествами отличались овцематки приазовского типа.*

**Ключевые слова:** овец, внутривидовый тип, цыгайская порода, продуктивность, селекция.

*Богдан М. К. Порівняльна оцінка м'ясної та вовнової продуктивності маток цыгайської породи Кримського та Приазовського внутривидових типів. Представлено результати ефективності розведення овец цыгайської породи кримського та приазовського внутривидових типів в умовах СВК «Кричане» Болградського району Одеської області за вовною та м'ясною продуктивністю. В річному і двоохрічному віці серед вівцематок приазовського і кримського типів за живою масою спостерігаються перевага на користь тварин приазовського типу у річному віці – 2,27 кг, а у двоохрічному – 4,11 кг ( $P > 0,999$ ). Кращими забійними якостями характеризуються вівцематки приазовського типу.*

**Ключові слова:** вівці, внутривидовий тип, цыгайська порода, продуктивність, селекция.