

## THE STUDY REFLECTING THE BODY WEIGHT OF DIFFERENT BREEDS OF RABBITS

Tatiana Dabija<sup>1</sup>, Angela Macari<sup>2</sup>

<sup>1</sup>Universitatea Agrară de Stat din Moldova  
e-mail: tatianadabija@rambler.ru

<sup>2</sup>Institutul de Zootehnie și Medicină Veterinară, R. Moldova

### Abstract

*For high productivity of each brunch of animal breeding as well in rabbits rearing, it is necessary a constantly selection of the higher individuals for the next generations, choosing the best posterity with the high indices for the animals reproduction. The breeding work is impossible for future without selection. The biologic material was presented by four groups of females of White New Zealand, Californian, Chinchila, Albastru Vienez, each group was composed from six animals. All the groups had the same maintenance conditions and the same experimental period. There were studied some breeding abilities for example: females' prolfication, kits maintenance, the body weight dynamics of kits nest from the day of birth to 45 days. The body weight had been determined by weighting the nest, using the scales with the accuracy class 1, the limits of minimum weighting 0,1 g, maximum 10 kg. As well there was studied the correlation between nest weight at the parturition, and females prolfication. Under de prolfication parity the best performances had White New Zealand breed with 9,16 kits, Chinchila – 8,33, California – 8,16 and Albastru Vienez 7,66 kits. Kits maintenance is an important index and it is connected to the percent of kits surviving untie their weaning and the average of this index makes 97,01%, and vary from 100% at Albastru Vienez to 92,00% at the Chinchila breed. Under the growing dynamic and development study of rabbits there was established that the better weight gain had the rabbits of Chinchila breed, what had the average of body weight per one head at the age of 45 days – 764 g, the lowest index had California breed – 697 g.*

**Key words:** rabbits, prolfication, maintenance, weight gain, nest weight

It is difficult to establish the precisely number of rabbit's breeds what are used at the moment. There are some breeds which are considered as a variety in some countries.

The rabbis breeds can be classified under several criterions such as: under main production, body weight and fur particularities [8].

Under the main production there can be classified: meat, fur and mixed breed. Under body weight there can be classified: middle, small, huge. First of all rabbits are raised up for meat production, the index what can be determined on the alive animal, by their weighting.

A possibility of meat production increasing of rabbits it is the management of the parturitions [3, 4]. At the moment for rabbits rearing it is possible to apply four reproduction systems: moderated, intensive

and very intensive. Choosing and observing of the technology of moderated system or very intensive will lead to rabbit meat productivity increasing and to the profitability of using the spices.

For high productions in each brunch of animal husbandry as well in brunch of rabbit rearing it is necessary to do the selection work permanently of the most productive animals of the next generations, choosing as well the animals for breeding with high indices of productivity. This process it is necessary to do because of the next selective breeding.

The rabbits of different breeds have different body weight [5].

The selection for body weight development it is an important criterion of estimation for meat production selection.

At the moment of animal population establishment, it is necessary to study the percent of fecundity and maintenance during the period of parturition – slaughtering or transition to the breeding, for establishment of the kits number what is necessary for selection plan which was established for economic level of productivity [7].

The process of choosing the rabbits reproduction in advance it is held in three levels, accordingly to several economic indices. At the first level the kits are chosen for reproduction, at their age of 30,35 or 45 days. The animals are chosen by the breed standard accordingly to their specifically productive qualities [1].

Accordingly to [2] some of main indices, what have to be taken into consideration for body development are:

- the body weight at the date of birth;
- the body weight at the day of weaning;
- the daily body gain during the period of parturition weaning.

## MATERIAL AND METHOD

The used biologic material was presented by four groups of females from White New Zealand, California, Chinchila, Albastru Vienez, there were in each group – 6 animals.

There were the same conditions of rearing and the same length of experimental period. During the experiments there were studied

some indices such as: females prolificacy, kits maintenance, the dynamic of weight of kits nest from their day of birth to 45 days of life. The nest weight had been determined by weighting the nest by the scales with class of accuracy 1, the limits of weighting. There was studied the correlation between weight of the kits nest at the parturition and females proliferation. The experiments were held accordingly to [9] method.

The statistical work of dates has been done accordingly to the program Wint Ex, 2000 and using the method of [6].

## RESULTS AND DISCUSSIONS

As a result of received dates after the experiments it is necessary to make some estimations. Under the proliferation parity, the best performances had breed White New Zealand with 9,16 kits, Chinchila breed – 8,33 kits, California – 8,16 kits and Albastru Vienez – 7,66 kits (table 1).

The kits maintenance it is an important index and it is connected to the percent of kits surviving till the weaning and it's average was 97,1% and vary from 100% at the breed of Albastru Vienez to 92,00% at the breed of California.

There was a strong correlation ( $r=0,892$ ) between the females proliferation and kits maintenance during the period of growing until their weaning.

Table 1  
 The females proliferation and kits maintenance

Breed	The nest weight, g				
	at the parturition	at 7 days	at 21 days	at 35 days	at 45 days
Neozelandeză	473,3±10,22	854,3±23,20	2591,0±71,86	4105,3±118,23	6350,0±172,58
Californiană	387,6±14,73***	716,5±28,17***	2250,0±69,61**	3596,6±109,19**	5575,0±188,19**
Chinchila	417,6±10,61**	843,3±29,60	2266,3±60,30**	3503,1±95,70**	5858,8±172,56
Albastru vienez	397,0±17,92**	702,1±37,75***	2220,0±67,77**	3498,3±102,61**	5474,3±171,40**

\*\*B ≥ 0,99; \*\*\*B ≥ 0,999

The nest weight of kits at the parturition there was established by the difference of females before and after parturition. The best weight of kits nest was registered at the breed of White New Zealand – 473,33 g, and the lowest weight had the breed of Californian – 387,66.

There was established that there is a strong correlation ( $r=0,907$ ) between the weight of kits nest at the parturition and the females proliferation.

During the experiences there was studied the dynamic of kits nest weight from

their birth to the day of 45 of the life (table 2). It is necessary to mention that the most intensity of growing had the kits of White New Zealand breed, the kits nest weight at 45 days was 6350,00 g, and the breed of

Albastru Vinez had this index – 5473,00 g. There was established a strong correlation ( $r=0,852$ ) between the kits number in the nest and its weight at 45 days.

Table 2  
 The study of body weight dynamic of the rabbits of different breeds

Breed	Females prolificity, heads	Maintenance, heads	% of survaiving
New Zealand	9,16±0,307	9,00±0,258	98,10
California	8,16±0,307*	8,00±0,258*	97,95
Chinchila	8,33±0,211*	7,66±0,211**	92,00
Albastru vinez	7,66±0,211**	7,66±0,211**	100
The average	8,32	8,08	97,01

\*B ≥ 0,95; \*\*B ≥ 0,99

Despite that that ale the animals had the same conditions. After the results study, the dinamic of rabbits growing and developman there was established a beter body gain at the

breed of Chinchila and there was registered at 45 days of life a – 764 g of body weight per head, the lowest index had the breed of California – 697 g.

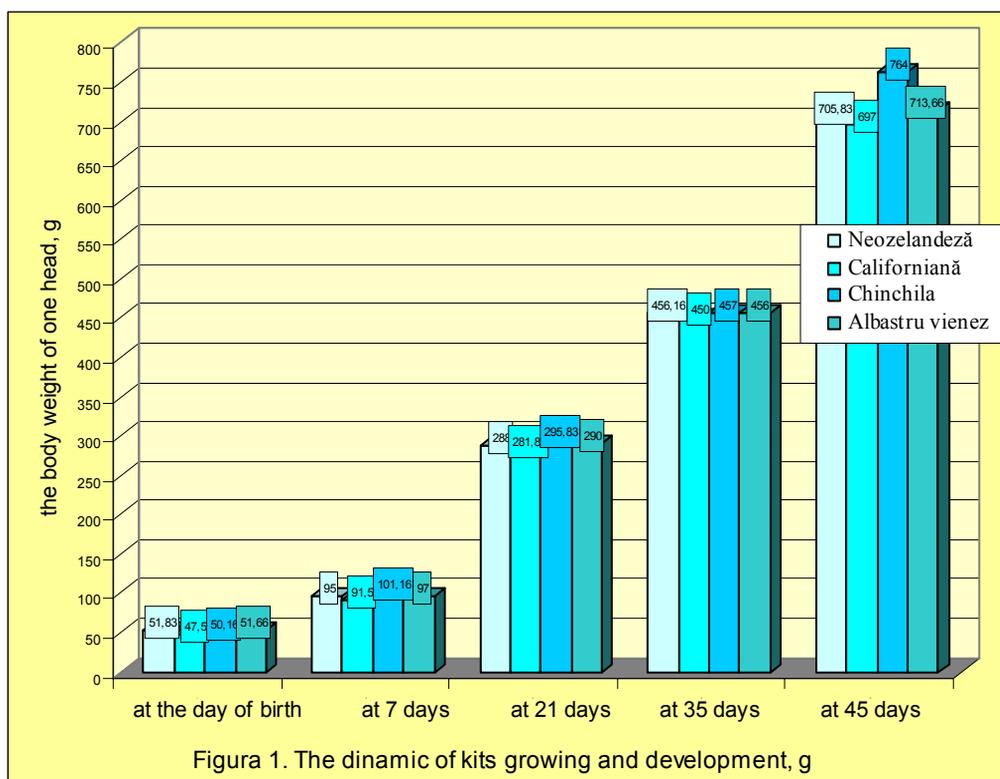


Figura 1. The dinamic of kits growing and development, g

All studied females can be characterised having good indices of prolification, what

corresponded to the standard of each breed, and the received kits had good body gain.

## CONCLUSIONS

1. The stiddied females can be characterised having good productive and breeding indices what corespund the breed standard.

2. The prolificity and kits maintenance vary in dependence of the breed, the highest prolificity had the breed of white New Zealand – 9,16 kits 9,00 alive kits and Albastru Vinez breed – had these indices 7,66 and 100 %.

3. The growing gain had the nest of kits of white New Zealand breed, and at 45 days it was – 6350,00 g, and the lowest index had Albastru Vinez breed – 5473,00 g.

4. At the rabbits from studdied groups at the age of 45 days, had highest body gain at Chinchila breed – 764 g/head, and the lowest index had California – 697 g/head.

## REFERENCES

### *Journal article*

[4] Bud, I. Posibilități de sporire a producției de carne la iepure prin dirijarea fătărilor. *Agricultorul român*. Cluj-Napica, 2003. p. 2003.

### *Books*

[1] Alexandru, A. Iepurele. Alex-Alex. 2001. p. 29 – 30.

[2] Bura, M. Ghidul crescătorului de iepuri de casă. Timișoara, 2006. p. 72 - 75

[3] Bud, I. *Creșterea și valorificarea iepurilor, animalelor de blană și vânatului*. Timișoara, 1998, 180 p.

[5] Bucataru, N., Maciuc, V. *Afaceri în creșterea iepurilor de casă și animalelor de blană*. Chișinău, 2005, 93 p.

[6] Bucataru, N. *Genetica*, Chișinău, 1993. p. 298.

[7] Van, Ilie. *Iepurele de casă*. București, 2005. p. 63 – 64.

[8] Liviu Șt. Rebreanu *Tehnologia creșterii iepurilor de casă*. Timișoara, 1989. p. 57-58.

[9] Ovsânicov, A. *Ocnovy opytnogo dela v životnovostve*. Moskva, 1976, p. 143.