

POST-EMBRYONIC CHANGES IN THE RABBIT REPRODUCTIVE SYSTEM

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Introduction. Rabbit breeding is one of the promising areas in modern animal husbandry, which, using modern equipment and reproduction technologies, can, without significant costs, satisfy the demand of the consumer market with meat products with high nutritional and biological value. However, the use of methods of intensive reproduction of these animals, in some cases, may fail, because, using modern technology, rabbit breeders do not take into account the physiological principles and features in breeding rabbits. On this basis, the control and improvement of the reproduction processes of this animal species is of great importance in the industrial breeding of rabbits.

Goal. The purpose of the study is to assess the optimal age when using rabbits in reproduction on the basis of morphometric analysis of segments of the reproductive system.

Methods. Scientific research was carried out in the laboratory of the State Agrarian University of Moldova. For the study, 45 clinically healthy rabbits were selected, aged 10 days (d) to 8 months (m), postnatal development. The organs of the reproductive system were selected from animals, which were subsequently subjected to morphometric analysis, which, according to some authors, well characterized the growth and development of the organism as a whole.

Results. The reproductive system in a female rabbit consists of two ovaries, paired oviducts, a double uterus, two cervical canals, vagina, the vestibule of the vagina and the external genital organs. The rabbit's reproductive system, in the process of postembryonic development undergoes various changes, resulting in sexual and physiological maturation of the female organism.

Analyzing the data obtained in the study of the ovaries, it was determined that the percentage of ovarian mass to body weight of the animal is as follows: at 10 days of age – 0,005%; in 1 month (m.) – 0,003%; 2m. – 0,002%; at 3m. – 0,004%; at 4 m. – 0,005%; at 5m. – 0,005%; at 6 m. – 0,004%; at 7 m. – 0,004% and at 7 m. – 0,004%. The decrease in the ratio of ovarian mass to body mass at the 2nd month of postembryonic development is due to an increase in body weight of 2,81 times in relation to animals aged one month. Morphometric linear indicators of the size of the ovaries showed a more intensive increase in the size of the ovaries, the second to the fourth month of postembryonic development.

Changes in linear morphometric parameters were also observed at the level of tubular segments of the female reproductive system. Thus, the percentage ratio of the length of the fallopian tubes to the length the body of the animal is as follows at 10 days (d) – 9,66%; for 1 month (m.) – 13,29%; in 2m. – 13,00%; at 3m. – 19,16%; at 4m. – 24,66%; at 5m. – 24,87%; at 6m. – 23,89%; at 7m. – 23,49% and at 8m. – 23,24%.

Based on the above, we observe a decrease in the growth rate of the fallopian tubes from the 4th month of postembryonic development, despite an increase in the percentage ratio to the body length of the animal at five months of age.

The uterus of a rabbit consists of two long horns that open into the vagina, separated by two cervical canals. In this context, it can be observed that the growth in the length of the uterine horns is 10,52% per 10 days; in 1m. – 12,80%; in 2m. – 12,43%; at 3m. – 19,44%; at 4m. – 13,90%; at 5m. – 13,14%; at 6m. – 11,66%; at 7m. – 10,97% and at 8m. – 10,66% in relation to the body length of the animal of each age. The growth in the length of the cervix is 0,83% in 10 days; in one month (m.) – 0,81%; in 2m. – 0,82%; in 3m. – 2,52%; in 4m. – 2,35%; in 5m. – 2,28%; in 6m. – 2,12%; in 7m. – 9,11% and in 8m. – 9,39%.

In both cases, the increase in the width of the uterus and cervix remains approximately the same throughout the study.

Analyzing the data of growth and development, it was revealed that the length of the vagina itself in relation to the body length of the animal in 10 days is 12,16%; in 1m. – 9,64%; in 2m. – 12,93%; at 3m. – 12,59%; at 4m. – 16,55%; at 5m. – 17,77%; at 6m. – 16,84%; at 7m. – 16,53%

and at 8m. – 16,33%. The length of the vestibule of the vagina is 6,76% in 10 days; in 1m. – 8,81%; in 2m. – 8,42%; at 3m. – 10,57%; at 4m. – 13,20%; at 5m. – 14,18%; at 6m. – 13,63%; at 7m. – 13,40% and at 8m. – 13,19%.

Growth in the width of this organ occurs similarly to the growth of all tubular segments of the reproductive system.

Conclusions:

1. Based on the data obtained, an increase in the growth of reproductive organs was observed during the period from the 2nd to the 4th month of postnatal development.

2. A decrease in the length of the uterus is ensured by the disappearance of the loops of the uterus and an increase in its width, as a result, a thickening of the uterine wall occurs.