



Early Stages of Postembryonic Development of Californian Rabbit Babies in an Experiment

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Annotation: The article presents information about changes in the early stages of postembryonic development of Californian rabbit children. changes in live weight, body indices and exterior indicators were studied.

Keywords: Rabbit breeding; Californian breed; height; development, body parts, length: ears, heads, torso; measurement, scales.

Introduction. Rabbit breeding is considered a productive and fast-growing branch of animal husbandry, which provides the opportunity to produce a large amount of products at a low cost per unit of cultivated product. Compared to other branches of animal husbandry, rabbit breeding is distinguished by its rapid maturity, fertility of female rabbits, reproductive characteristics, and rapid growth and development.

Sustainable development of the rabbit breeding industry, in the process of increasing the number of rabbits under care, proper storage and care of rabbit children from birth to three weeks of age, proper and rational feeding of mother rabbits with quality food feeding is of great practical importance. For example, rabbit babies are born with closed eyes, without wool (wet) and in a low state compared to other animals. This, in turn, requires attention to new-born mother rabbits and high-quality feeding. That is why it is important to keep and care for rabbit children from birth to three weeks old (until they are able to feed independently).

Material and methods. Experiments were carried out on rabbits of the Californian breed, which are kept at "Dargom Agro Velikan" Rabbit Breeding LLC (Limited liability company), located in Pastdargom District, Samarkand Region. In the experiment, the body weight of rabbit children was measured from the time of birth to the time when they could feed themselves on a special electronic SF-400 brand scale with an accuracy of ± 1 g. Some body parts of the experimental rabbits: head, ear, trunk, body, heel and tail lengths, chest circumference and chest depth were measured using a measuring tape and a circular device. Measurements were taken at birth, one week, ten days, fifteen days and twenty one (three weeks) days. The digital data obtained in the experiments were biometrically processed using the MS.Excel program, which is included in the Microsoft Office package and is designed for the preparation and processing of data tables that work under the Windows operating system program management.

Results and their analysis. Table 1 shows the growth parameters of experimental rabbits. The growth of agricultural animals is understood as the increase in quantitative parameters of animals, that is, the increase in their live weight. The analysis of the data in the table shows that the average live weight of rabbit cubs on the day of birth was 50.5 g. This indicator is 104.0 g when they reach

the age of one week, compared to the initial live weight of 2.06, 2.65 at the age of ten days, 3.31 at the age of fifteen days and 5.15 times at the age of three weeks. Increased

Table 1. Growth parameters of Californian rabbits in the first three weeks of age, cm, (n=10)

Body parts	Age, day				
	at birth	7	10	15	21
	$\bar{X} \pm S_x$	$\bar{X} \pm S_x$	$\bar{X} \pm S_x$	$\bar{X} \pm S_x$	$\bar{X} \pm S_x$
Head length, cm	3,05±0,05	3,93±0,07	4,38±0,08	4,72±0,08	5,10±0,01
Ear length, cm	1,56±0,05	2,34±0,08	3,04±0,10	4,06±0,11	5,36±0,11
Body length, cm	11,06±0,2	12,1±0,22	14,80±0,21	15,88±0,18	17,9±0,18
Chest circumference, cm	8,01±0,07	10,09±0,14	11,01±0,15	11,83±0,17	13,28±0,13
Chest depth, cm	2,21±0,08	2,63±0,04	2,81±0,05	3,01±0,05	3,62±0,06
Heel length, cm	1,9±0,03	3,06±0,04	3,94±0,04	4,67±0,02	5,23±0,05
Tail length, cm	1,73±0,02	2,52±0,08	2,8±0,02	2,99±0,02	3,52±0,03
Live weight, g	50,5±1,89	104,0±3,05	134,0±6,99	167,0±6,11	260,0±11,65

Measure the head length from the tip of the rabbit's nose to the nape of the neck, the length of the ear from the base of the ear to the tip, and the length of the body from the tip of the nose to the base of the tail using a measuring tape; the depth of the chest from the height of the chest to the sternum with a circle; chest circumference from the back of the shoulder blade along the chest using a measuring tape; the width of the chest between the two shoulder blades with a circle; Abdominal circumference was measured with a measuring tape from the waist to the entire abdomen.

From the analysis of the data in the table, it can be seen that the average head length of newborn rabbits at birth was 3.05 cm, and at the age of one week it was 3.93 cm, which is 1 compared to the initial length. .29 times, 1.44 times at the age of ten days, 1.54 times at the age of fifteen days, and 1.68 times, reaching 5.11 cm at the age of three weeks. The ear length grew as follows: the average ear length at birth was 1.56 cm, which was 51.1% of the head length. This indicator was 59.5% at the age of one week, 69.4% at the age of ten days, 86.2% at the age of fifteen days, and 104.3% at the age of twenty-one days. It was found that the length of the ears of the experimental rabbits was 4.3% longer than the length of the head by the age of three weeks.

The length of the body of rabbits at birth was 11.1 cm on average, but at the age of one week it was 1.11 times, at the age of ten days it was 1.33 times, at the age of fifteen days it was 1.42 times at the age of three weeks. and at the age of 1.63 times.

The length of the breast circumference from the first day of birth to the age of three weeks increased by 25.9%, 37.4%, 47.7%, 65.8%, respectively, compared to the time of the first birth. Correspondingly, it was found that the depth of the chest was increased by 18.6%, 27.7%, 36.8% and 64.5%.

The length of the heel compared to the length of the head was 60.6%, at the age of one week this indicator was 79.4%, at the age of ten days it was 89.5%, at the age of fifteen days it was 98.7 % and by the age of three weeks it was 102.4%. It was found that the length of the heel of the rabbits in the experiment at the age of fifteen days is almost equal to the length of the head.

The length of the tail in experimental rabbits was on average 1.73 cm at birth, 0.79 cm at the age of one week, 1.07 cm at the age of ten days, and 1.07 cm at the age of fifteen days. by 1.26 cm at birth and by 1.52 cm at three weeks of age, or 2.03 times. The tail length was 15.6-19.5% of the body length.

Calculation of body structure indices is of great practical importance in the study of the external appearance of rabbits, that is, the external structure. Body composition index refers to the percentage ratio of two or more anatomically related body part measurements. As rabbits age, various changes occur in their bodies. It becomes possible to more fully describe these changes in terms of indicators of body structure indices, calculated on the basis of body sizes obtained in experiments. body structure indexes of rabbits such as big head, wide forehead, long ears, density, weight were studied.

Table 2 below shows the body composition indices of the experimental rabbits at different age periods.

Table 2. Body structure indices of experimental rabbits during the age sections, %

Age, day at birth	Big head	Wide forehead	Long ears	Density	Severity
7	27,48	59,0	51,1	55,2	4,55
10	31,95	61,1	59,5	62,2	8,46
15	29,7	59,4	69,4	57,5	9,08
21	31,74	61,6	81,7	57,3	10,66
	29,9	60,6	99,08	56,6	14,4

The large-headedness index is an index that expresses the proportion of the head length to the body. The analysis of tabular data shows that the index of large head size in baby rabbits was 27.48% at birth and 31.95% at one week of age. It was 4.47% more than the indicator at the time of birth and recorded the highest indicator. The large head index was 29.7% at the age of ten days, and it was observed that it decreased by 2.25% compared to the age of one week. By the age of fifteen days, it has increased by 2.04% compared to the age of ten days. At the age of three weeks, it was shown to decrease by 1.84% compared to the age of fifteen days.

Wide forehead index is determined by the ratio of the widest part of the forehead to the length of the head. This index is high in fast-maturing meat farm animals. The results of the study showed that in California rabbits from the moment of birth to the age of three weeks, lim was 59.0-61.6%.

Long ear index is determined by the ratio of ear length to head length. This index is widely used in the rabbit breeding industry. Ears of rabbits should be erect, strong and proportional to each other. The shape, length and location of the ears are characteristic features of the breed. The analysis of research results showed that the long ear index of rabbits at birth was 51.14%, and the ear length was 1.86 times shorter than the head. 7 of Rabbits; 10; 15; 21-day age periods corresponded to lim 59.5-99.08%. From the analysis of the results of the index of long ears, it can be concluded that the rate of growth of ears is more active than the rate of growth of the head, and as the age of rabbits increases, the index increases relatively.

Density index is determined by the ratio of chest circumference to body length. This index makes it possible to determine the level of obesity in rabbits based on the development of muscle tissue. Also, it is through this index that rabbits are divided into conditional leptosome (narrow-bodied) and eirism (broad-bodied) constitutional types in rabbit breeding. The analysis of the data obtained on the density index of rabbits in the experiment shows that this indicator was 55.2 percent in newborn rabbits. The highest rate of 62.2% was recorded in the one-week period, and it was found to decrease until the three-week period.

Weight index is determined by the ratio of live weight to body length. The analysis of the results of the research showed that the birth weight index of rabbits was 4.55%. It was shown that this index was 8.46% at seven days old, 9.08% at ten days old, 10.66% at fifteen days old and 14.4% at the age of three weeks.

Conclusions. When newborn rabbits are born, they are hairless, fluffy, with closed eyes and 16 milk teeth. In the early stages of post-embryonic development, it is very fragile. A number of morphological and physiological changes occur in the body of baby rabbits before the age of twenty-one days: the live weight of the baby rabbits at birth was 50.5 g, but by the age of three weeks this indicator increased by 5.15 times. reached 260 g. At this age, heel length and head length are almost equal.

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