DYNAMICS OF THE CONTENT OF THYROXINE IN THE BLOOD OF HEIFERS OF DIFFERENT BREEDS AFTER LOAD ON THE THYROID GLAND THYROID-STIMULATING HORMONE

Eremenko V. I., Rotmistrovskua E G.

Kursk state agricultural Academy named after I. I. Ivanov, Kursk, Russia
Kursk state medical University, Kursk, Russia
E-mail: vic.eriomenko@yandex.ru

A deeper study of functional reserves of the endocrine glands in the early stages of ontogenesis will help to identify animals with high and low potential for the synthesis of hormones. These are important results are the development of tests for early prediction of

future productivity of cattle in different areas of their productivity, i.e. milk or meat. In this regard, the task was to study the functional reserves of the thyroid after exercise thyroid-stimulating hormone in cattle of three breeds of different productivity. The object of the study was gostinichnoe heifers black-motley breed (dairy), Simmental (combined direction), Aberdeen Angus (beef variety) and hybrids of Simmental and Aberdeen Angus breeds. All experimental groups of heifers were analogues of age. The conditions of the farming heifers were similar and consistent with their standards of feeding and management conditions. To determine functional reserves of the thyroid gland of Chicks at 3, 6 and 12 months intramuscularly injected thyrotropic hormone (TSH) in saline at a dose of 0.5 units/kg of body weight. Blood was sampled from the tail vein before administration of TSH and after 0.5, 1 and 2 hours. For the quantitative determination of the concentration of thyroxine in serum was used the method of enzyme immunoassay. The activity coefficient of thyroxine (KatG) was calculated with the formula:

Catg= (T1–T0)/T0

T0 is the basal level of thyroxine prior to the introduction of TSH.

T1 – the level of thyroxine in 2 hours after administration of TSH.

As shown by studies in gostinichnoe of black-motley breed, KatG at T4 in 3, 6 and 12 months amounted to 0.34; 0,51 and 0,56 respectively. From the Simmental breed, this coefficient was 0.37; and 0,59 0,60 respectively. The Aberdeen – Angus breed - of 0.22, and 0.40 and 0.38. Hybrids it was 0.24; of 0.45 and 0.42, respectively. Thus, it is established that the higher functional reserves of the thyroid gland have gostinichnoe animals of black-motley and Simmental breeds, animals of the Aberdeen – Angus breed and hybrids, the figure was lower.

***Keywords*:** breed, heifers, thyroid stimulating hormone, thyroxine, activity coefficients of thyroid hormones (KatG) thyroxine.

References

1. Eremenko V. I. *The functional reserves of the endocrine system in MO forecast productivity*, 194 (Kursk: publishing house of the Kursk. Gas. S.-H. AK. 2010).
2. Eremenko V. I., Polyansky V. P. The functional reserve of the thyroid gland and adrenal glands in lactating Kors Kors black-and – pastry breed of different genetic origin, *Vest Curse of the agricultural Academy*, **2**, 94 (2012).
3. Eremenko V. I., Polyansky V. P. The functional reserve of the thyroid gland and adrenal glands at the base of the slope obtained from the black-and –pastry Kors breed of different genetic origin, *Vest Curse of the agricultural Academy*, **5**, 60 (2012).
4. Eremenko V. I., Polyansky V. P. Hormonal status of tel, derived from a black-and –pastry Kors breed of different genetic origin, *Vest Curse of the agricultural Academy*, **3**, 62 (2013).
5. Blum J. W. et al. Thyroid hormones bloed metabolites an hacmatologial parameter in relationhip to milk field in dairy cows, *Anim. Product.*, **36**, **1**, 43 (1983).
6. Radchenkov P. V., Matveev V. A., Butrov E. V., Burkova E. I. *Endocrine regulation of growth and productivity of agricultural animals*, 117 (Moscow : Agronomist, 1991).
7. Aleshin B. V., Gubsky V. I. *Hypothalamus and thyroid gland*, 184 (M. Medicine, 1983).