

**THE LEVEL OF THYROID
HORMONES IN BLOOD SERUM OF PIGS
IN RELATION TO THE BREEDING FOR
IMPROVED PRODUCTIVITY**

Lazareva L.V.

*Novosibirsk State Agrarian University
Novosibirsk, Russia*

Modern approaches to breeding, raising and efficient industrial maintenance of farm animals demand objective scientific methods of evaluation.

Hormones of thyroid gland produce biological affect upon most physiological functions of organism. Thyroid hormones control growth and development of animals, the rate of basal metabolism, the exchange of proteins and fats. The key hormones of thyroid gland's follicular part are thyroxin (T_4) and triiodtyronin (T_3).

The experiment was made on Precocious Meat pigs (SM-1) of Novosibirsk breeding on the experimental training farm "Tulinskoye" of Novosibirsk State Agrarian University.

The experimental animals were in control fattening. Their age was 6 months. The data was processed statistically through computer programs MS Excel 2000, Statsoft Statistica 6.

The controls in the experiment were the progenies from 6 SM-1 boars. The content of thyroid hormones (T_3 , T_4) was explored as well as the amount of total protein and triglycerides in the blood serum of the pigs.

While exploring the value of thyroid hormones in the animals' blood in relation to meat productivity it was found that the concentration of thyroxin and triiodtyronin was higher in the pigs of longer carcasses.

The relation between hormone activity and productive traits of the animals was determined during the calculations of correlation coefficients. The correlation between T_3 and the weight of the back third of a half-carcass was equal to 0.435 ($p < 0.01$). The correlation between T_4 and fat thickness ($r = - 0.305$; $p < 0.05$) was opposite and less.

As a result of the experiment it was revealed that the progeny of the Svetly 1704 and the Soviet 1618 had the higher content of hormones in thyroid gland, the higher level of

protein and the lower number of triglycerides in blood serum.

The data obtained is the evidence of higher concentrations of thyroid hormones in the blood of pigs with improved productivity traits, they activating protein synthesis and inhibiting the mobilization of fats in organism.

The article is admitted to the International Scientific Conference "Actual Problems of Science and Education", Cuba, 2007, March 20-30; came to the editorial office on 08.12.06.

**SYSTEM ORIENTED MANAGEMENT
OF ENVIRONMENTAL SAFETY**

Shaikenova O.V.

*Togliatti State University, the chair of
management for industrial and ecological safety*

Everyone as a consumer and producer faces to some ecological situations in the everyday life or work activity. He must know what he consumes and produces from a position of environmental safety. And it is impossible to obtain this result without development of ecological culture for modern specialists and training of industrial personnel. In Russia a complete discrepancy between the level of environmental culture of industrial personnel and requirements of supporting and management of ecological safety of workers was being created. This gives a possibility to consider the development of ecological culture between students of a University and industrial personnel to be a very urgent for every metropolis nowadays, especially for Togliatti city well-known for its greatly developed ecologically destructive production.

At the Togliatti State University the students of the Chair of quality control, standardization and certification and the Chair of management for industrial and ecological safety interviewed the industrial personnel at the three major plants (**300 people**). The head count showed:

- 0,7 % know what is ecology and environmental education and realize its targets;
- 97% don't know what to do in a certain common (everyday) and manufacturing situation;