

Таким образом, исследования показали, что у свиней белорусской мясной породы более сильное влияние паратипические факторы оказывали на возраст достижения живой массы 100 кг и толщину шпика, что объясняется повышенной изменчивостью данных признаков.

Влияние интенсивности роста отцов на своих потомков подтверждает генетическую предрасположенность данного признака, что позволит эффективнее вести отбор животных в направлении повышения среднесуточных приростов и снижения затрат корма в этой породе.

#### ЛИТЕРАТУРА

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### **EFFECT OF DIFFERENT THAWING METHODS OF MEAT ON CHEMICAL COMPOSITION AND THE CONCENTRATIONS OF NITRATES, NITRITES AND SODIUM CHLORIDE IN SMOKED PORK SIRLOIN**

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The objective of study was to determine the influence of different thawing methods of pork meat on chemical composition and the concentrations of nitrates, nitrites and sodium chloride in smoked pork sirloin.

The experimental materials comprised hybrid fatteners (PIC) with live body weight of about 100 to 110 kg, purchased from one producer. The sex ratio was 1:1. Over the fattening period, all the animals were kept under comparable feeding and housing conditions. Slaughter and post-slaughter processing of carcasses graded into classes E and U of the EUROP classification system were carried out in accordance with the regulations currently in force. Half-carcasses were chilled in a two-stage system. Samples of *m. longissimus dorsi* were taken from the left and right half-carcasses in amount of (30 samples) of normal quality. In experiment, the longest back muscles (20 samples) were deep-frozen in an air blast freezer and freeze storage for two weeks. After appointed time of storage, muscles were defrosted, applying modern, microwave method (10 samples) as well as the traditional one, in atmospheric air (10 samples). The obtained research material: (cold and thawed muscles) underwent the process of curing with the use of brine produced by one of Polish companies and also massaging processes and smoking, in order to manufacture ready product-smoked loin.

On the basis of obtained results it can be stated that the smoked pork sirloin produced from the muscles thawed out by applying the microwave method showed to have higher concentrations nitrites in comparison to the loin produced from the muscles thawed in atmospheric air. An analysis of the nitrate content of smoked sirloin revealed that it was the lowest in the samples produced from pork thawed in a

microwave oven, compared to those produced from pork thawed in the atmospheric air and subjected to chilling. Concentrations of sodium chloride in smoked pork sirloin was a similar level in the experimental groups under the analysis.

## **EFFECTS OF BLUE LUPIN IN DIETS FOR LAYING HENS ON EGG-LAYING PERFORMANCE AND EGG QUALITY**

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The objective of this study was to determine the effect of blue lupin seeds as a native source of protein on production parameters and egg quality of laying hens aged from 18 to 34 weeks.

The experiment was performed on 150 Lohman Brown hens allocated to three experimental groups with 50 replicates each. All birds were kept individually in cages during the first 16 weeks of the laying period and feed complete mixtures with various sources of vegetable protein: diet A – with soybean meal, rapeseed meal and sunflower meal; diet B – with soybean meal, rapeseed meal and 10% of blue lupin, diet C- with soybean meal, rapeseed meal and 20% of blue lupin.

The use of blue lupin together with the soybean meal and rapeseed meal had positive impact on selected production results. Feed intake was lower by 1,5-3.0% and the feed conversion ratio calculated for one egg was better by 3,8-4,3% in comparison the hens fed diet A. No significant difference in total number of eggs and egg mass was found between all experimental groups. The analyzed experimental factor significantly affected the egg quality parameters. The positive effect was for yolk color, which was darker in eggs from hens fed the diet containing blue lupin than in eggs from treatment A. The shell thickness also was better when diets with blue lupin were used, as compared to diet with sunflower meal.

The results of the study indicate that diet supplementation with blue lupin seeds as a protein source allowed to achieve good production results and egg quality of young hens.

## **AFTER SLAUGHTER CARCASS QUALITY IN RELATION TO THE SPECIES OF GRAIN LEGUMES AND THE ADDITION OF FEED ENZYMES**

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In the time of intensive crop and animal production there is a growing demand for high-protein feed. In the temperate zone the seeds of coarse-grained legume plants are an ideal source of nutritional protein. Those plants are: pea and faba bean. The addition of feed enzymes may improve the digestibility of nutritional elements and the use of feed and limit its negative health properties.