

## **The effect of probiotic and herbal additives on the productivity and meat quality of turkeys**

Krzysztof Lipiński, Joanna Kaliniewicz, Jan Tywończuk, Małgorzata Stasiewicz

### **Summary**

The aim of the present study was to determine the effect of the application of probiotic and herbal additives to the diets for turkeys on their productivity and meat quality. The experiment involved 240 turkey hens of BIG 6 breed, randomly divided into three groups with four replications in each. The diet of turkeys in the control group consisted of breeders mash with no feed additives. The experimental group II received probiotic additive (*Lactobacillus lactis*  $2 \times 10^8$  CFU/g) in the amount of 0.5 kg/t added to the mash. The experimental group III received herbal additive with antibacterial activity (mix of essential oils from oregano, chili, and cinnamon), which was added in the amount of 1 kg/t. The body weight and feed conversion rate (FCR) were controlled during the experiment. The efficiency of fattening was evaluated on the basis of the European Efficiency Index (EEI). Post-slaughter analysis was performed in the 15<sup>th</sup> week. The investigation concerning the chemical composition of meat was carried out after slaughter in the breast muscle. It was observed that application of the probiotic additive to the breeders mash for turkeys increased the productivity, expressed as the body weight; however, it did not influence the FCR and birds health status. The application of the herbal additive to the turkey diet did not affect the fattening results. Meat obtained from the examined turkeys was characterized by corresponding concentrations of dry matter, crude ash, total protein, and crude fat.

Key words: turkeys / probiotic / herbal additives / productivity results / meat quality