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Resistance of bacteria isolated in pigs large scale production using a garlic-*based* preparation (*Allium sativum*) and mixtures of probiotic bacteria *Enterococcus faecium*, *Lactobacillus rhamnosus* and *Lactobacillus fermentum*

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The increasing resistance of bacteria and residues of antibiotics in animal products influenced the gradual withdrawal from use of antibiotic growth promoters in animal feed. In this study an assessment was made of the effect of the preparation produced on the basis of garlic (*Allium sativum*), Allivet™ (Centaur, Poland) and the mixtures of probiotic bacteria *Enterococcus faecium*, *Lactobacillus rhamnosus* and *Lactobacillus fermentum* – on bacterial resistance in various technological groups of pigs in farm conditions. Animals were allocated to two experimental groups A - garlic extract and B - probiotic mixture and 1 control group (C). The garlic preparation Allivet™ was administered to the sows individually in a dose of 10 ml/sow every 3 days, from the 6th week before the planned delivery to weaning the piglets. For piglets, from the time they started to consume solid feed (7-8 days old), a dose of 1 ml/10 kg b.w./day was administered every 3 days. The mixture of probiotic bacteria *Enterococcus faecium*, *Lactobacillus rhamnosus* and *Lactobacillus fermentum* was administered individually to the adopted dose of 2 g/animal/day, from the 6th week before delivery to weaning piglets. The piglets were given the probiotic mixture individually from the moment of introducing a solid feed to a dose of 2 g/animal/day. Rectal swabs were obtained from sows at 6 and 3 weeks before the planned delivery, and from piglets at 1, 3, 4, 8 and 11 weeks of age. Collected material was cultured for aerobic bacteria and investigated for the presence of microorganisms such as *Salmonella spp*., *Campylobacter spp*. and *Yersinia spp*. and yeast-like fungi. In summary, the study presents differences in the formation of bacterial resistance depending on the test group receiving the additive of garlic extract and probiotic bacteria in relation to the control group.

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