VPH-017

USE OF ANTIMICROBIALS IN FINNISH SWINE FARMS AND ITS ASSOCIATION WITH ON-FARM BIOSECURITY

V. Sali [1], J. Yun [1], J. Muurinen [2], L. Seppä-Lassila [2], J. Suomi [2], P. Tuominen [2], S. Nykäsenoja [3], A.L. Myllyniemi [3], O. Peltoniemi [1], M. Heinonen [1].

[1] Department of Production Animal Medicine, Faculty of Veterinary Medicine, University of Helsinki, Helsinki, Finland; [2] Finnish Food and Safety Authority Evira, Risk Assessment Research Unit, Helsinki, Finland; [3] Finnish Food and Safety Authority Evira, Microbiology Research Unit, Helsinki, Finland.

We need to find effective tools for disease prevention in animal production, and evaluate farms' disease status to ensure animal welfare and public health. Moreover, there is need to reduce antimicrobial usage (AMU) because of increasing emergence of antimicrobial resistance. The aim of this pilot study was to investigate factors linked to AMU in pig farms.

The study included seven farrow-to-finish, three sow and three fattening farms according to their total animal number to small, medium and large herds. Biosecurity evaluation was made during a herd visit by using Biocheck.UGent™. Medical information was collected for 1.5-year period by using Finnish swine health care system (Sikava). Herds were allocated to a completely randomized design by the total number of the animals of the herds [Large (n = 4): 2462.8 ± 249.5, Medium (n = 4): 1503.8 ± 243.9, Small (n = 5): 519.2 ± 161.0].

During 1.5-year period 14 391 antimicrobial treatments were administered to 17 686 animals. According to preliminary results, higher AMU was found in large herds compared to medium or small herds (LS means ± SE; 3158.0 ± 688.0 vs. 585.3 ± 688.0 or 878.8 ± 615.3, $P < 0.05$). Large variation in antimicrobial usage was found between herds. The biosecurity score was not associated with the total number of animals of the herds nor the AMU of the experimental herds.

Large differences in antimicrobial usage can be partially explained by different housing systems in which the movement of animals as well as disease pressure vary considerably. In Finland, only little information is available about on-farm measures taken to avoid pathogen transmission between and within herds. Further analysis will evaluate associations between certain diseases and medications used to treat those conditions. Moreover, associations between biosecurity and AMU to certain age groups will be investigated more precisely.