

# **Associations between antimicrobial prescription patterns, purchases of vaccines and prevalence of lesions found at slaughter in Danish sow herds.**

## **Background**

Antimicrobial resistance is a global concern and many countries pursue approaches to reduce antimicrobial use (AMU) in livestock, including pig production. In Denmark, the Yellow Card Initiative were introduced in 2010, setting limits for AMU for each age group at herd-level. Since then, the limits have been reduced several times. The lowest AMU limit was set for the age group sows incl. piglets, why a further reduction in AMU limits for this age group has challenged sow herd owners. The pig producers and livestock associations are worried that complying with official AMU restrictions could jeopardize animal health.

## **Objective**

The objective of this study was to investigate the associations between AMU, vaccination and lesions found at slaughter in Danish sow herds.

## **Materials and Methods**

Conventional sow herds with more than 100 sows in the years from 2013 to 2017 were included in the study. Register data on antimicrobial prescription and purchase of vaccines were extracted from the Danish VetStat database. Records of lesions found at slaughter were extracted from the Danish meat inspection database. Multivariable linear regression models were used to test the associations between variables representing AMU and vaccination as well as the herd-prevalence of different types of lesions found at slaughter. Herd size, herd type, herd health status and year were included as potential confounders.

## **Results**

The results from the study will be presented at the conference. The expected impact of the study is to contribute with knowledge about the use of register data to explain animal health at herd-level and to provide information about ways to comply with official AMU restrictions without jeopardizing animal health.