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In the past ten years, antimicrobial use has decreased in Danish pigs, increased in calves

In 2019, Danish pig producers reached the target for reduction of antimicrobial usage set by the MRSA action plan. In contrast, antimicrobial use in calves has increased considerably over the last ten years. These are some of the findings in this year's DANMAP report from Statens Serum Institut and the National Food Institute, Technical University of Denmark.

Around 75% of the total veterinary-prescribed antimicrobials are used for treatment in pigs. As such, there are many initiatives aimed at promoting prudent antimicrobial use in pigs.

The frequency with which pigs are treated with antimicrobials has decreased by 30% over the past decade. On a given day in 2019, a total of 2.3% of all Danish pigs received some sort of antimicrobial treatment, which is equivalent to the previous year. In comparison, the figure for 2010 was 3.3%.

This is one of the findings in the 2019 DANMAP report.

Milestone reached
In 2019, Danish pig producers reached the target of the MRSA action plan of a 15% reduction—when measured in kilograms—in antimicrobial use since 2014. They reached the goal a year later than hoped, but in return with an overall 16% reduction.

There has also been a modest 7% reduction in the use of medicinal zinc oxide between 2018 and 2019. Zink oxide is used to manage diarrhea in piglets, but the substance may select for resistant bacteria such as MRSA in pigs. Furthermore, most of the zinc oxide ends up in soil via the manure, where it constitutes an environmental problem. Therefore, the European Commission has decided that the sale of the drug must cease by June 2022.

”When the phasing out of zinc oxide in the pig production isn’t progressing more quickly than what we are seeing, it could be because the industry is awaiting results from research projects aimed at finding good alternatives, which do not require antimicrobials,” Head of Division Flemming Bager says.

Increased antimicrobial use in calves
Only 13% of antimicrobials used in Danish animals are used for cattle. While treatment intensity in adult cattle decreased by 18% over the past decade, it increased by 39% in calves and young cattle under 12 months. In the latter age group, the drugs are predominantly used to treat respiratory disease.

The types of antimicrobials used most frequently by the cattle industry are among the types that medical doctors use to treat humans. However, they are not the critically important antimicrobial types that are saved for treatment of serious or life-threatening infections in humans.

Many non-compliances
The report also outlines a control campaign carried out by the Danish Veterinary and Food Administration, DVFA, in 2019 to assess compliance with the rules for the correct use of antimicrobials for group treatment of pigs. In the campaign, the DVFA visited 200 pig producers and 35 veterinarians affiliated with the herds.

The results show that approximately one third of both producers and veterinarians did not comply with the legislative requirements. This mainly pertains to inadequate records related to the use of antimicrobials (28%) and for inadequate compliance with the veterinarians' written treatment instructions (13%). None of the non-compliances warranted a police report.

Read more
Since 1995, the DANMAP programme has monitored the use of antimicrobials in humans and animals in Denmark, and the occurrence of antimicrobial resistance in bacteria in animals, people and foods.

Download the DANMAP report from DANMAP's website. A factsheet about antimicrobial resistance is also available from the DANMAP website.

Read more about the DVFA control campaign of group treatment of pigs on DVFA's website (available in Danish only).

Find more information on how antibiotic usage in humans has developed in a press release on the DANMAP website: The usage of antibiotics for humans keeps decreasing in Denmark.

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