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Antimicrobial use data from Danish organic pig herds

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Objectives

- 1) Compare prescription patterns for organic and conventional pig herds
- 2) Study associations between antimicrobial use and lesions found at slaughter in organic herds



Data from 2016

Herd-level antimicrobial prescription data extracted from **VetStat**

Information regarding herd type and number of animals extracted from **CHR**

Prevalence of lesions found at slaughter extracted from **Meat inspection data**



VetStat: The Danish Veterinary Medicines Statistics Program covers sales of veterinary prescription medicine for all pig herds in Denmark

CHR: The Central Husbandry Register covers herd-level information about number of animals, type of herd and geographical location.

Meat inspection data: Based on recordings made by official technicians at Danish abattoirs

Results

Organics pig herds in 2016 (N=122)

Corresponds to 2 % of the total number of herds in Denmark

Organics pig herds with antimicrobial prescription in 2016 (N=57)

133 kg active compound prescribed for organic pig herd in 2016

Corresponds to 0.2 % of the total amount of active compound prescribed for pigs in DK

Table 1. Antimicrobial prescription data from Danish organic and conventional herds in 2016. Doses are calculated based on information from The Danish Veterinary and Food Administration. In 2016, 31,806,238 pigs were produced in Denmark of which approx. 99 % are conventional and 0.8 % are organic (source: VetStat and CHR)

Age group	Indication	Doses/produced animal/year		Distribution pr. age group	
		Conventional	Organic	Conventional	Organic
Weaners (7-30 kilos)	Gastrointestinal	5.61	0.31	80 %	65 %
	Respiratory	0.68	0.15	10 %	30 %
	Arthropathy	0.72	0.03	10 %	5 %
Finishers (>30 kilos)	Gastrointestinal	1.00	0.19	68 %	54 %
	Respiratory	0.15	0.02	10 %	7 %
	Arthropathy	0.32	0.14	22 %	40 %

Gastrointestinal indications
The most frequently used indication in both organic and conventional pigs

For organic herds
Larger proportion of indications:
• Respiratory (weaners)
• Arthropathy (finishers)

Antimicrobial use and lesions found at slaughter for organic herds in 2016 (N=44)

Comparing **two groups**: Herds with antimicrobial prescriptions (N=33) and herds with no antimicrobial prescription (N=11)

- Herds with no antimicrobial prescription had higher prevalence of arthropathic and gastrointestinal lesions
- The prevalence of respiratory lesions were the same in the two groups

There were no associations between lesions found at slaughter and the indication for which prescriptions were issued

Conclusion

Differences in prescription patterns and antimicrobial use might reflect differences in herd conditions and restrictions on antimicrobial use for organic and conventional pig production in Denmark.