

The Finnish approach to prevent post-weaning diarrhoea in piglets without zinc oxide

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Background and objectives

Zinc oxide was used in 16 % of Finnish piggeries during 2018 for weaners to prevent post-weaning diarrhoea¹. The use of antimicrobials in Finnish pig production is low compared to several other European countries. However, the antimicrobial resistance of *E. coli* bacteria from porcine enteritis is alarming although the FINRES results have not been representative of the whole Finnish porcine enteritis *E. coli* population². The national goal is to stop using zinc without increasing the usage of antimicrobials and without worsening the pig welfare.

Material and methods

Cooperation of different organisations – producers, stakeholders and central authority - is continuously utilised. Herd veterinarians visit farms regularly and save their observations about animal health and welfare in Sikava (Stakeholders health and welfare register for swine). Sikava collects data concerning pig health, welfare and antimicrobial usage of Finnish swine herds. The data is available for farmers, herd veterinarians and authorized slaughterhouse.¹ Sikava and Animal Health ETT informs and encourages producers to carry out good biosecurity and preventive measures on farms and has recently updated the “Guide for weaning piglets” to help producers to manage piglet health around weaning³. Veterinary faculty of Helsinki University takes care of systematic education about disease prevention methods around weaning for veterinary students. Diagnostic samples from diarrheic weaners are submitted to Finnish Food Authority and from the laboratory farm-specific resistance profiles of enterotoxigenic *E. coli* are provided to veterinarians. Indication-based recommendations for the use of antimicrobials in animals have been in place in Finland since 1996.⁵ In summary, benefits of efficacious herd health work are actively promoted

Results

A series of short webinars to educate herd veterinarians in their advisory work is being organised in cooperation between ETT, Finnish Food Authority and Helsinki university.

The amount of ZnO in medicated feed has declined 56 % from 2015 to 2017, and total selling of ZnO medicinal product in 2017 was 3103 kg. In the same period, the amount of antimicrobials in medicated feed has not risen.⁴ During 2018 herd veterinarians visited 2691 times farms with weaners. Sikava data shows that in 39 % of the visits the prevalence of post-weaning diarrhoea was 0–1%, in 53 % prevalence was 1–5 % and only in 7 % of the visits the prevalence was over 10 %.¹

Conclusion and discussion

Systematic multidisciplinary actions involving all parties involved in pig health are necessary to achieve the national goal. It is useful to produce material for herd health work together cross-sectionally as cooperation between different organisations. Short webinars effectively remind practitioners about current issues and provide educational material for their daily work. Education of veterinary students and veterinarians is important, because they are an essential source of information for farmers to rely on.

The choice of antibiotic drug therapy should always be based on the resistance profiles from samples. Regular sampling and susceptibility testing should be carried out if group treatment or repeated treatment of the same disease is necessary. The focus should be in preventive actions and management.

References

- (1) Sikava (Stakeholders swine health and welfare register), www.sikava.fi
- (2) [FINRES-Vet 2016-2017](#), Finnish Veterinary Antimicrobial Resistance Monitoring and Consumption of Antimicrobial Agents.
- (3) Guide for weaning piglets ([Porsaiden vieroitusopas](#) 2018); only available in Finnish.
- (4) [Sikojen lääkerahujen valmistus](#) (in Finnish)
- (5) Recommendations for the use of antimicrobials in the treatment of the most significant infectious and contagious diseases in animals ([English version 2018](#))