

Assessment of antibiotic use in breeding and corresponding fattening farms in relation to health status, management and conditions of feeder pig transports

St. Hartmann^{1*}, A. Riklin^{1*}, G. Schüpbach-Regula², Ch. Nathues², E. Fuschini³, H. Huber⁴, X. Sidler¹

* These authors contribute equally

¹Departement of Farm Animals, Swine Medicine Unit, Vetsuisse Faculty, University of Zurich, ²Veterinary Public Health Institute (VPHI), Vetsuisse Faculty, University of Bern, ³SUISAG, Pig Health Service, Sempach, ⁴Institute of Veterinary Bacteriology, Vetsuisse Faculty, University of Zurich

Key words

Risk factors, breeding farms, fattening period, transport, antibiotic use

Aim of the study

The aim of the study was to define specific risk factors in breeding and fattening farms and risk factors during transport of feeder pigs, which directly influence animal health negatively. Knowing and optimizing these risk factors, antibiotic use can be minimized.

Material and methods

During Mai 2011 and Mai 2012 101 transports were escorted all around Switzerland. 164 breeding farms were visited once and 45 breeders interviewed by telephone. 101 fattening farms were visited three times: at the day of the animal's arrival, two weeks later and in the middle of the fattening period. At the end of the fattening period we collected our data with a questionnaire and also got the slaughter protocols. Further more we calculated the antibiotic use in pig production for each group of age with the animal treatment index (Blaha et al., 2006).

Results and significance

Breeding farms

The main problem of the sows was MMA, which influences the antibiotic use most. On average, the sows were treated 0.9 days per year (2.3 times farrowing) with antibiotics. During the suckling period, the piglets were treated with antibiotics on average 0.5 days. Prophylactic antibiotics were used in 42% in ring systems, compared to 18% in breeding farms. Weaners were treated on average 4.4 days. In 86% the antibiotics were used prophylactically at the beginning of weaning period to avoid diarrhea.

Transport

55% of the trucks were cleaned and disinfected before arrival at the breeding farm. 24% were dirty or charged with pigs from other farms. The driver entered the fattening farm in 46% and in 16% both breeding and fattening farms. The slaughterhouse has been entered once before continuing to the fattening station. In total 10 producers were absent while loading or unloading their animals.

Fattening farms

Every fattening pig was treated with antibiotics on average 4.8 days. Almost 80% of the total antibiotic use in fattening period was used prophylactic. Prophylactic oral antibiotic application had no positive side effect neither on mortality rate or frequency of later parenteral or oral antibiotic treatments.

Publications, posters and presentations

Hartmann, St.; Riklin, A.; Schüpbach-Regula, G.; Nathues, Chr.; Fuschini, E.; Sidler, X.; Erhebung von Risikofaktoren beim Einstellen von Mastferkeln – Teil1: Zucht, Schweiz. Arch. Tierheilk. 2013, Hartmann, St.; Riklin, A.; Schüpbach-Regula, G.; Nathues, Chr.; Fuschini, E.; Huber, H.; Sidler, X.; Erhebung von Risikofaktoren beim Einstellen von Mastferkeln – Teil2: Transport, Schweiz. Arch. Tierheilk. 2013, Riklin, A.; Hartmann, St.; Schüpbach-Regula, G.; Nathues, Chr.; Fuschini, E.; Sidler, X.; Erhebung von Risikofaktoren beim Einstellen von Mastferkeln – Teil3: Mast, Schweiz. Arch. Tierheilk. 2013
15th Seminar SVSM Grindelwald (07.09.2012), SGD-Tagung Olten (17./24.01.2013), Suissporcs Höck Kirchberg (23.11.12), Hendschikon (10.01.13), Ersigen (13.02.13) und Gisikon (07.01.2013)

Project 1.11.14

Project duration January 2011 – December 2012