Daily Routine Changes in Young Group-Housed Swine Infected With Salmonella

Janet H. Higginson a, Jeffrey T. Gray b, Cate E. Dewey a, Tina M. Widowski c & Suzanne T. Millman a d

a Ontario Veterinary College, University of Guelph, Guelph, Ontario, Canada
b Department of Microbiology & Immunology, Des Moines University
c Ontario Agricultural College, University of Guelph, Guelph, Ontario, Canada
d Veterinary Diagnostic and Production Animal Medicine, and Biomedical Sciences Departments, Iowa State University, Ames

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Illness can result in compromised welfare and altered needs for the sick nonhuman animal. This research was done to determine alterations in the daily routine of groups of young pigs containing an infected individual. Twelve groups of 5 Landrace/Yorkshire weaned pigs \((n = 60\) pigs) were housed in separate biosecure rooms. One animal was randomly selected from each group as the seeder animal and given \(10^7-10^8\) colony forming units of *Salmonella Typhimurium* orally on Day 0. Pens were videorecorded during daytime hours and 5-min scan samples were used to assess behavior from Day \(-1\) to Day \(+6\) of the trial. Observers were able to identify pigs by individual markings and were blind to treatment. Mixed model analyses with repeated measures statements to account for correlation were constructed.

The amount of time spent performing various activities, such as lying, standing, and moving, did not differ between seeder animals and their penmates \((p > .05)\). There was a significant day effect, with lying decreasing and standing increasing by day as the trial progressed \((p < .0001)\). The amount of time spent at the feeder was not significantly different between seeders and their penmates.

Correspondence should be sent to Janet H. Higginson, Department of Population Medicine, Ontario Veterinary College, University of Guelph, 50 Stone Road East, Guelph, Ontario N1G 2W1, Canada. Email: jhiggins@uoguelph.ca
(p > .05); however, the amount of time at the feeder increased in all animals by day until Day +5 of the trial (p < .0001).

In conclusion, in these small groups of young swine in a stable social hierarchy, the amount of time spent performing various activities did not appear to alter with a low dose of *Salmonella*. The welfare of these animals may not be compromised during nonsevere *Salmonella* infection.

**Systematic Review of Swine Euthanasia Methods and Welfare Measures Reported**

Christa Irwin, Gabriel Young, Suzanne T. Millman, Scanlon Daniels, Sherrie Niekamp, and Alex Ramirez

1Department of Veterinary Diagnostic and Production Animal Medicine, Iowa State University, Ames
2Department of Biomedical Sciences, Iowa State University, Ames
3Department of Population Medicine, Ontario Veterinary College, University of Guelph, Guelph, Ontario, Canada
4Circle H Animal Health, LLC, Dalhart, Texas
5National Pork Board, Clive, Iowa

This topic reviews the process used to gather, screen for relevance, and assess the quality of current literature regarding published methods of swine euthanasia as well as the summary of the results of the data analysis, including a description of the welfare measures included in papers describing euthanasia. More than 4,500 citations have been collected using terms for “euthanasia,” “slaughter methods,” and “swine”; preliminary screening removed articles that were either not relevant to the topic of swine or euthanasia/slaughter methods or not in English.

The second level of screening segregates primary research articles from editorials/opinions, surveys, or other narrative reviews. Only primary research is used for the final quality assessment review and analysis, but review papers are used to check the thoroughness of the reference list. The final set of literature evaluates and compares measurements of pain and aversion, the achievement of death, and other physiologic parameters described in the euthanasia paper. The