A randomised clinical trial on the efficacy of oxytetracycline dose through water medication of nursery pigs on diarrhoea, faecal shedding of Lawsonia intracellularis and average daily weight gain - DTU Orbit (11/11/2018)

Oral treatment with antimicrobials is widely used in pig production for the control of gastrointestinal infections. Lawsonia intracellularis (LI) causes enteritis in pigs older than six weeks of age and is commonly treated with antimicrobials. The objective of this study was to evaluate the efficacy of three oral dosage regimens (5, 10 and 20mg/kg body weight) of oxytetracycline (OTC) in drinking water over a five-day period on diarrhoea, faecal shedding of LI and average daily weight gain (ADG). A randomised clinical trial was carried out in four Danish pig herds. In total, 539 animals from 37 batches of nursery pigs were included in the study. The dosage regimens were randomly allocated to each batch and initiated at presence of assumed LI-related diarrhoea. In general, all OTC doses used for the treatment of LI infection resulted in reduced diarrhoea and LI shedding after treatment. Treatment with a low dose of 5mg/kg OTC per kg body weight, however, tended to cause more watery faeces and resulted in higher odds of pigs shedding LI above detection level when compared to medium and high doses (with odds ratios of 5.5 and 8.4, respectively). No association was found between the dose of OTC and the ADG. In conclusion, a dose of 5mg OTC per kg body weight was adequate for reducing the high-level LI shedding associated with enteropathy, but a dose of 10mg OTC per kg body weight was necessary to obtain a maximum reduction in LI shedding.

General information
State: Published
Organisations: National Veterinary Institute, University of Copenhagen, Svinepraksis.dk
Contributors: Larsen, I., Hjulsager, C. K., Holm, A., Olsen, J. E., Nielsen, J. P.
Number of pages: 8
Pages: 52-9
Publication date: 2016
Peer-reviewed: Yes

Publication information
Journal: Preventive Veterinary Medicine
Volume: 123
Issue number: 1
ISSN (Print): 0167-5877
Ratings:
BFI (2018): BFI-level 2
Web of Science (2018): Indexed yes
BFI (2017): BFI-level 2
Scopus rating (2017): CiteScore 2.26 SJR 1.144 SNIP 1.31
Web of Science (2017): Impact factor 1.924
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 2
Scopus rating (2016): CiteScore 2.2 SJR 1.249 SNIP 1.361
Web of Science (2016): Impact factor 1.987
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 2
Scopus rating (2015): CiteScore 2.1 SJR 1.282 SNIP 1.177
Web of Science (2015): Impact factor 2.182
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 2
Scopus rating (2014): CiteScore 2.37 SJR 1.27 SNIP 1.407
Web of Science (2014): Impact factor 2.167
Web of Science (2014): Indexed yes
BFI (2013): BFI-level 2
Scopus rating (2013): CiteScore 2.49 SJR 1.264 SNIP 1.529
Web of Science (2013): Impact factor 2.506
ISI indexed (2013): ISI indexed yes
Web of Science (2013): Indexed yes
BFI (2012): BFI-level 2
Scopus rating (2012): CiteScore 2.45 SJR 1.265 SNIP 1.436
Web of Science (2012): Impact factor 2.389
ISI indexed (2012): ISI indexed yes
Web of Science (2012): Indexed yes
BFI (2011): BFI-level 2
Scopus rating (2011): CiteScore 2.24 SJR 1.194 SNIP 1.295
Web of Science (2011): Impact factor 2.046
ISI indexed (2011): ISI indexed yes
Web of Science (2011): Indexed yes
BFI (2010): BFI-level 2
Scopus rating (2010): SJR 1.156 SNIP 1.284
Web of Science (2010): Impact factor 2.07
Web of Science (2010): Indexed yes
BFI (2009): BFI-level 2
Scopus rating (2009): SJR 1.032 SNIP 1.338
Web of Science (2009): Indexed yes
BFI (2008): BFI-level 2
Scopus rating (2008): SJR 1.056 SNIP 1.258
Web of Science (2008): Indexed yes
Scopus rating (2007): SJR 1.009 SNIP 1.353
Web of Science (2007): Indexed yes
Scopus rating (2006): SJR 1.06 SNIP 1.277
Web of Science (2006): Indexed yes
Scopus rating (2005): SJR 0.931 SNIP 1.414
Web of Science (2005): Indexed yes
Scopus rating (2004): SJR 0.812 SNIP 1.146
Web of Science (2004): Indexed yes
Scopus rating (2003): SJR 0.846 SNIP 1.323
Web of Science (2003): Indexed yes
Scopus rating (2002): SJR 0.857 SNIP 1.427
Web of Science (2002): Indexed yes
Scopus rating (2001): SJR 1.045 SNIP 1.48
Web of Science (2001): Indexed yes
Scopus rating (2000): SJR 0.623 SNIP 1.261
Web of Science (2000): Indexed yes
Scopus rating (1999): SJR 0.647 SNIP 1.005
Original language: English
Keywords: Lawsonia intracellularis, Oxytetracycline, Pig, Randomised clinical field trial, Treatment dose
DOIs: 10.1016/j.prevetmed.2015.12.004
Source: FindIt
Source-ID: 2289801206
Research output: Research - peer-review › Journal article – Annual report year: 2016