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home <mark>page</mark> about <mark>us</mark> contact

us

Table of Contents

VETMED 2015

VETMED

2014

VETMED

2013

VETMED

2012

VETMED

2011

VETMED

2010

VETMED

2009

VETMED 2008
VETMED
2007
VETMED 2006
VETMED
2005 VETMED
2004
VETMED 2003
VETMED
2002
VETMED 2001
VETMED
Home
Editorial
Board Cor Authors
For Authors
- Authors - Declaration

- Instruction to Authors
- Guide for

Authors

- Fees
- Submission

Subscription

Veterinarni Medicina

Mycobacteria in peat used as a supplement for pigs: failure of different decontamination methods to eliminate the risk

L. Matlova, M. Kaevska, M. Moravkova, V. Beran, J.E. Shitaye, I. Pavlik:

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[fulltext]

Peat used as a feed supplement for piglets has favourable dietetic qualities; however, its frequent contamination with potentially pathogenic mycobacteria (PPM) has been shown to pose a potential risk to piglet health. The purpose of the present study was to investigate possible ways of devitalising mycobacteria. Examination of 118 samples from various types of commercially available peat (natural peat, packed peat for horticulture and specially processed peat intended for piglet feeding) showed that PPM were present in 84 (71.1%) samples. Mycobacterium avium subsp. hominissuis (82.1%) was the most frequent mycobacterial isolate.

In addition, from a natural locality where peat is mined and stored in large piles for up to four months, mycobacteria were detected in peat samples collected from the surface and from up to 25 cm in depth. We used different physical and chemical procedures for peat decontamination (peracetic acid, formaldehyde, steam, and microwave radiation) in attempting to devitalise the mycobacteria in peat. We found that PPM can be reliably devitalised with 1.0% peracetic acid, or 5.0% formaldehyde. However, under field conditions, when using bulk amounts of peat, none of the above procedures were shown to be suitable. Based on these results, the feeding of peat to piglets is confirmed as a high-risk practice.

Keywords:

zoonosis; mycobacteriosis; feed safety; *Mycobacterium avium* complex

[fulltext]

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