

Global Veterinary Summit

August 31- September 02, 2015 Orlando-FL, USA

The effects of potassium diformate on the early stage of weaning piglets

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In practical, the loose of weaning piglets such as diarrhea, growth retardation usually happen in the first two weeks after weaning. Potassium diformate (KDF), an acidifier works as a potential non-antibiotic growth promoter has been shown to improve the performance in piglets growing- finishing pigs and sows. But it is not yet known whether KDF influence the gastrointestinal bacterial flora in the first two weeks after weaning. Therefore, a total of 180 piglets weaned at 28 days of age were allocated randomly into two groups, with 6 replicates in each group and 15 piglets in each replicate. Piglets in the control group were fed the basal diet, whereas the KDF-treated group was fed basal diet supplemented with 10 g/kg KDF. After 2 weeks feeding, KDF improved the growth performance, the apparent digestibility of nutrients and decreased the diarrhea index and frequency. Furthermore, KDF increased the relative copies of *Lactobacilli* in the digesta of stomach and ileum, but did not change the relative copies of *Lactobacilli* in the jujunum, caecum and rectum digesta. KDF did not change the relative counts of *Enterobacteria* in the stomach digesta but decreased it in the jujunum, caecum and rectum digesta. However, the Shannon index and band number of DGGE profiles did not show difference between the control and the KDF-treatment. Altogether, our data suggests that the influence of KDF-treatment on the relative counts of *Enterobacteria* and *Lactobacilli* in the gastrointestinal gut may contribute to the improvement of growth performance and health in weaning piglets.

Biography

Xia Dong had completed her PhD from Nanjing Agricultural University, China. She was a teaching staff at Nanjing Agricultural University from 1992-2006. In 1997-1998, she attended one year training course at Larenstein International Agricultural College of Deventer, the Netherlands. She had twice working experience at the Department of Functional Genomics & Bioregulation at Institute of Farm Animal Genetics Mariensee, Germany. She is a Senior Researcher in Animal Environment & Welfare at the Institute of Animal Husbandry & Veterinary Sciences, Shanghai Academy of Agricultural Sciences.

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