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Dietary Potassium Diformate in Sow Nutrition in Latin America — Impact on Sows and Piglets

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Abstract

Potassium diformate, a double-salt of formic acid, has been shown in numerous trials to improve health and performance in piglets, growing-finishing pigs and sows. Thus, potassium diformate (KDF) has been approved in the European Union as the only non-antibiotic growth promoter for use in swine. The effect of KDF is often described as strong antimicrobial and digestibility enhancing. However, data on its use in sows under tropical conditions are scarce. The objective of the present study was to assess the effect of KDF on feed intake in sows and its impact on the subsequent piglets, under hot and humid conditions in Latin America.

The study was carried out on crossbred sows during late pregnancy. The experiment was conducted at a commercial farm in Caldas, Colombia. In total, 180 Duroc × Large White sows were used. The sows were randomly allotted to 2 treatment groups. Group 1 served as a control in which sows were fed a pelleted corn-soy based feed, without supplemented antimicrobial agents. Sows in group 2 were fed the same diet containing 5 kg t^{-1} KDF. Feed and water were available *ad libitum*. Experimental feeding of sows started one week prior to farrowing and finished at weaning, 3 weeks post-partum. Data on feed intake in sows and the piglet weight were recorded and analysed using the t-test. The results are given as mean \pm SD and a confidence level of 95 % was defined for these analyses.

Sows fed potassium diformate at a dosage of 5 kg t^{-1} showed no difference in feed intake from 7 days prior to farrowing till farrowing. However, the feed intake in treated sows was significantly increased by 800 g d^{-1} from farrowing onwards. Furthermore, the litter weaning weight tended ($p = 0.06$) to be higher at day 21 (63.7 kg vs. 66.0 kg for control and treatment respectively). These results show that the inclusion of potassium diformate into the diet of sows can improve feed intake and the subsequent performance of piglets under tropical conditions. This is in agreement with earlier observations of KDF in temperate climates.

Keywords: Feed intake, piglet weaning weight, potassium diformate, sows, tropical conditions