EFFECTS OF POTASSIUM DIFORMATE ON PIGLETS

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The Biotechnology Institute

Agricultural Biological Gene Center

Scientific and Technological Information Institute in agriculture

Institute for Agri-food standards and testing technology

Institute of animal husbandry and veterinary Science
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Animal husbandry
- Poultry
- Pig science
- Small ruminant
- Animal environment & welfare
Local breeds in Shanghai

Shanghai white Pig
Litter size 13.

Pudong white Pig
Litter size: 15.

Hu sheep
mature early, tender meat.

Meishan pig
Litter size: 16

Chongming Goats
Animal Environment & Welfare

- Agricultural endocrine disruptors on the reproductive function
  - Hormones variation
  - Reproductive performance
  - Secondary organ development
  - Mating behavior

Nutrition, environment & Welfare

- Sow: Diet fiber, gut microflora, fertility & healthy
- Weaning piglet: non antibiotic feeding

EFFECTS OF POSTASSIUM DIFORMATE (KDF) ON WEANING PIGLETS

HCOOH·HCOOK

KDF: Control diet + 1% KDF

N=6, 15 male piglets in each replication
<table>
<thead>
<tr>
<th>Item</th>
<th>Control</th>
<th>KDF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plasm IGF-1 (ng/mL)</td>
<td>11.69 ± 1.90</td>
<td>8.92 ± 0.54</td>
</tr>
<tr>
<td>Hepatic IGF-1 (ng/mg protein)</td>
<td>0.37 ± 0.01</td>
<td>1.06* ± 0.03</td>
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</table>

Mean ± SEM, N=6, P≤0.05
Internal control: 18S rRNA
Conclusion
✓ Addition of 1% KDF to the diet have positive effect on the growth performance in the weaning piglets, and this improvement may associate with the regulation of GH axis and hepatic glucose homeostasis.

Question?

Dietary KDF

KDF: Control diet + 1% KDF

N=6, 15 male piglets in each replication

At the 2nd week
The Effects of Potassium Diformate on the Early Stage of Weaning Piglets

[Bar charts showing the effects of Potassium Diformate on different sections of the digestive tract of weaning piglets. The charts display data for the stomach, jejunum, ileum, cecum, and colon, comparing control and KDF treatments. The charts illustrate changes in microbial composition and diversity.]
Addition of 1% KDF can decrease the level of LPS in the serum.

Addition of 1% KDF to diet do not change the digesta pH of GI, it decrease the diversity of the microflora and the ratio of Enterobacteria copies in the digesta, but this influence effect are differ in different part of GI.
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[Logos: SHANGHAI ACADEMY OF AGRICULTURAL SCIENCES]