Effects of increasing Gleptoforte dosage in newborn pigs on sow and litter performance

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Introduction

- Newborn piglets are likely to develop iron deficiency due to insufficient iron deposits at birth and from extremely high growth rates prior to weaning. This iron deficiency can cause lower numbers of red blood cells circulating, fatigue and death. In the swine industry, the most typical iron injection dose used is 200 mg. Iron injections improves the newborn piglets growths rate and hematological iron levels. Unfortunately, there are some issues on the amount that is injected, compared to injecting a booster before weaning the piglets. Therefore, piglets need a supplemental iron injection before they reach 3 days old. Gleptoforte is an injectable iron that contains gleptoferron and is used to avert anemia in newborn piglets. The most appropriate amount of the injectable iron for the genetics we have today, has not been established and supported by data

Objective

The purpose of this study was to analyze the effects of increasing Gleptoforte doses in newborn pigs on sow and litter performance.

Experimental Procedures

In this 21 day farrowing study, a total of 336 (DNA 241x600) newborn piglets were used to analyze the effects of increasing Gleptoforte dosage on suckling pig performance and blood parameters. A total of 28 litters were used and the number of piglets were all made even on the days of farrowing. The piglets were processed and six barrows and six gilts were taken from each litter. Using a completely randomized design the piglets were assigned to one of six treatments, leaving 56 piglets for each treatment.

The treatments include: 1) control, 2) 50 mg Gleptoforte, 3) 100 mg Gleptoforte, 4) 150 mg Gleptoforte, 5) 200 mg Gleptoforte, and 6) 200 mg Gleptoforte with a booster on day 11 of farrowing. Piglets were weighed on day 3 and 11, and on weaning day. These weights were used to calculate average daily gain during farrowing. One barrow per litter, from each treatment, were used to collect blood from the jugular vein. Blood was collected on day 3, 11 and on day 21. The different blood parameters that were measured included: hemoglobin, hematocrit, serum Fe, and total iron binding capacity. The feed used during lactation

References

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Results and Discussion

- When comparing treatments 1 through 5 (0mg – 200 mg Gleptoforte) P= 0.001.
- When statistical analysis was ran comparing the 200mg dosage and 200mg + 100 mg dosage different alpha values were used.
- Treatment that lacked an iron injection produced the piglets with the poorest growth performance and blood parameters.
- Piglets that were given 100 mg dosage of Gleptoforte showed the greatest growth performance.
- Piglets that were given 200 mg + 100 mg dosage of Gleptoforte ended up having the hematological criteria that improved the most.
- However, the 100 mg booster did not prove to effect piglets growth performance when being compared to the 200 mg dose.