

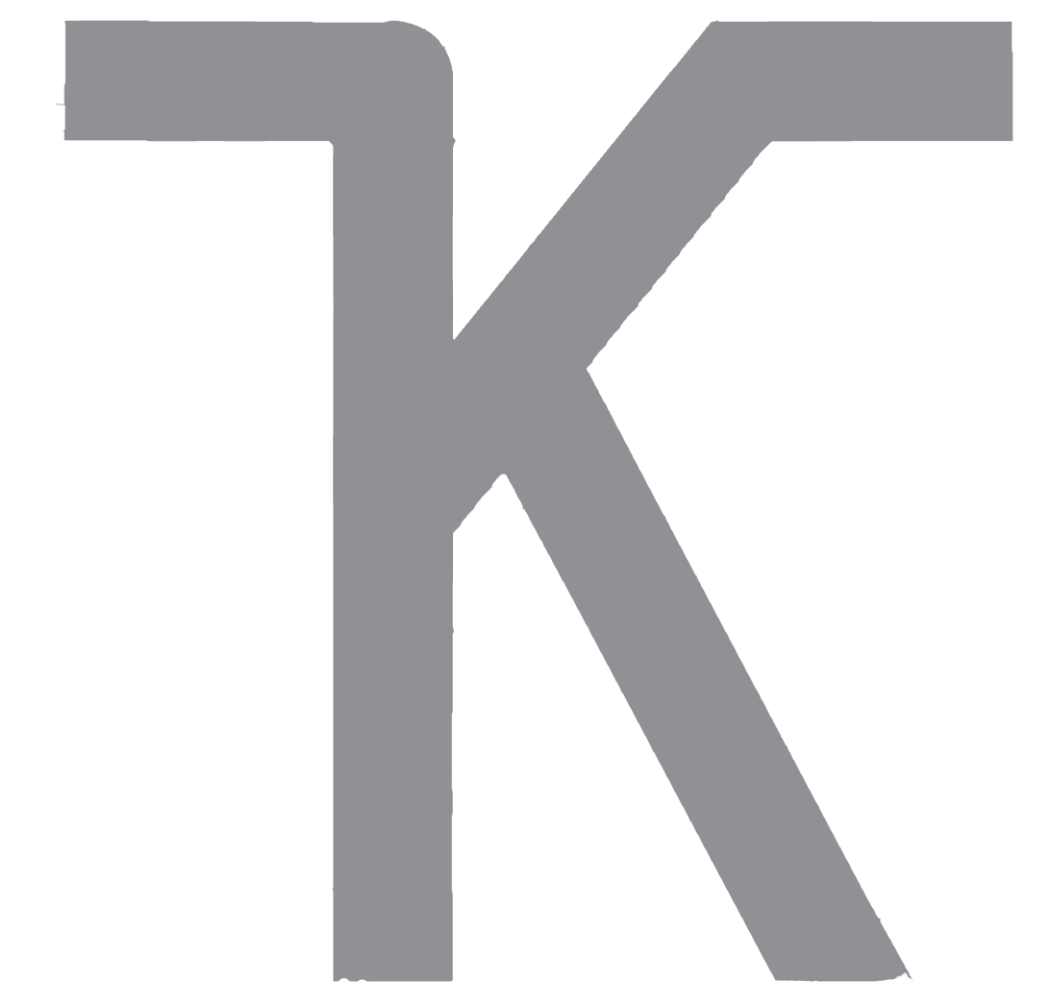
# Effects of increasing Gleptoforte dosage on Iron Storage and Growth in Neonatal Pigs To 21 Days of Age

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## Introduction

- Neonatal pigs are specifically susceptible to iron deficiency due to low iron stores at birth and rapid growth rate.
- In the swine industry, it is commonplace to dose piglets at birth with an injection of iron. Although this injection has proven to be effective in terms of preventing anemia, Gleptoforte would be a more cost effective option for the industry.
- This study was conducted to determine what level of Gleptoforte would be the most effective in preventing anemia, thus, promoting growth, in piglets up to 21 days of age.



## Objective

To determine the appropriate dosage of Gleptoforte for it to be a viable replacement for the current iron injection given to piglets at birth.

## Materials and Methods

- This experiment was conducted in the Farrowing and Nursery barns at the Kansas State University Swine Teaching and Research Center in Manhattan, KS.
- 336 piglets from 28 different litters were randomized into pens of 6 gilts, and 6 barrows, with 56 piglets per treatment, respectively.
- The six treatments were as follows: negative control with no injection, 50, 100, 150, 200, 200mg plus a 100mg booster at day 11 of life.
- Gleptoforte contains 200mg of iron per 1ml. Therefore, injections were measured at the following levels: 0, 0.25, 0.50, 0.75, 1.0, 1.0mL plus 0.50mL at day 11 of life.
- All piglets were weighed and only barrows had blood drawn three times throughout the 21 days they were on study. These data were collected at days 3, 11, and 21. Day 3 being processing into the nursery, and day 21 being weaning.
- Blood parameters evaluated were that of Hemoglobin(Hgb), Hematocrit(Hct), Serum Fe, and Total Iron Binding Capacity (TIBC), with the expectation that each criterion would change in a beneficial way.
- The feed fed during the time piglets spent in the nursery contained 110mg/kg added iron from ferrous sulfate.

## Conclusions

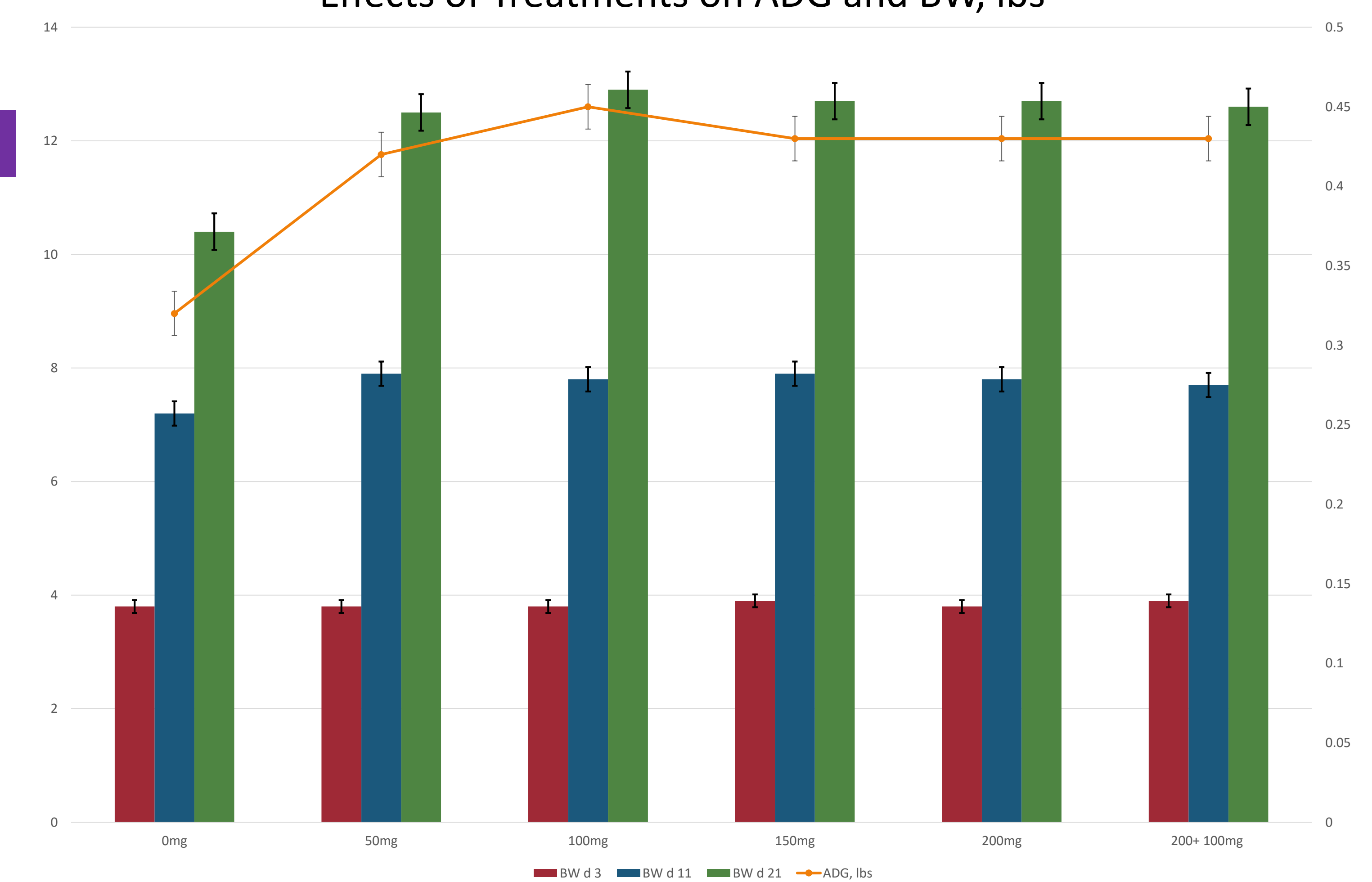
- The dosage of 100mg of Gleptoforte yielded the greatest positive change in growth performance.
- There was improved hematological data points with the 200 + 100mg treatment, above the 200mg treatment, but there was no observable difference in growth performance.
- A lack of iron injection yielded the worst growth performance and blood parameters.



## Future Work

Future experimentation may be required to determine the ideal conditions and time of dosage delivery for the most productive results Gleptoforte.

Effects of Treatments on ADG and BW, lbs



Effects of Treatments on Blood Parameters

