

Effect of increasing GleptoForte dosage in newborn pigs on sow and litter performance



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Introduction

- Pigs in the farrowing house are susceptible to iron deficiency due to inadequate stores in their body at birth, accompanied by rapid growth rate.
- There has been substantial evidence of the importance of giving iron injections within 3 days of birth.
- Commonly, swine producers administer an injection of 200 mg at birth, but there has been little evidence if a single dose is adequate, or if performance improves when a booster is given.
- Gleptoforte, an alternative injection to iron dextran, contains gleptoferron and can be used to prevent anemia in baby pigs.
- Little evidence has been established confirming the appropriate dose of Gleptoforte needed to prevent anemia in newborn pigs.

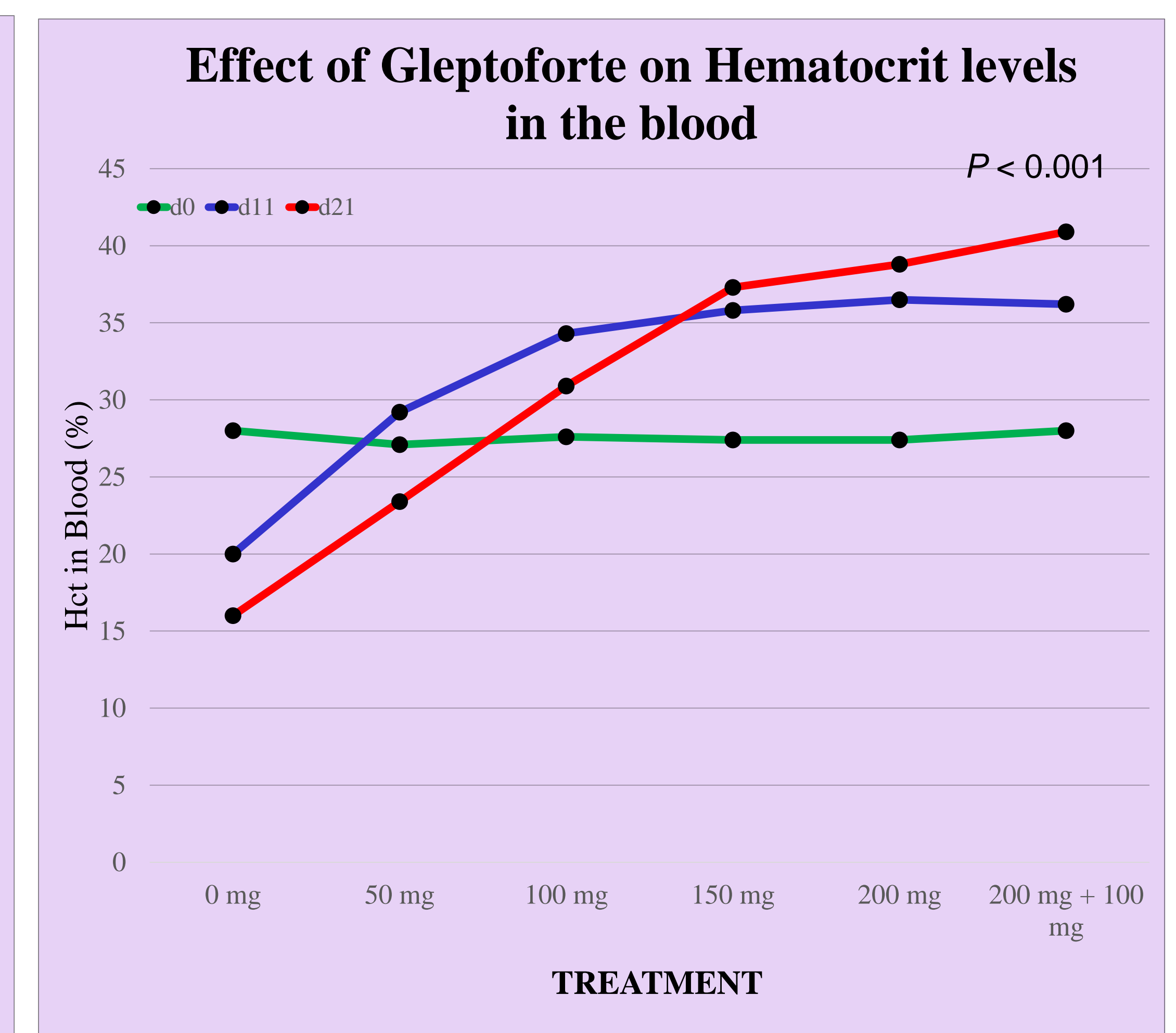
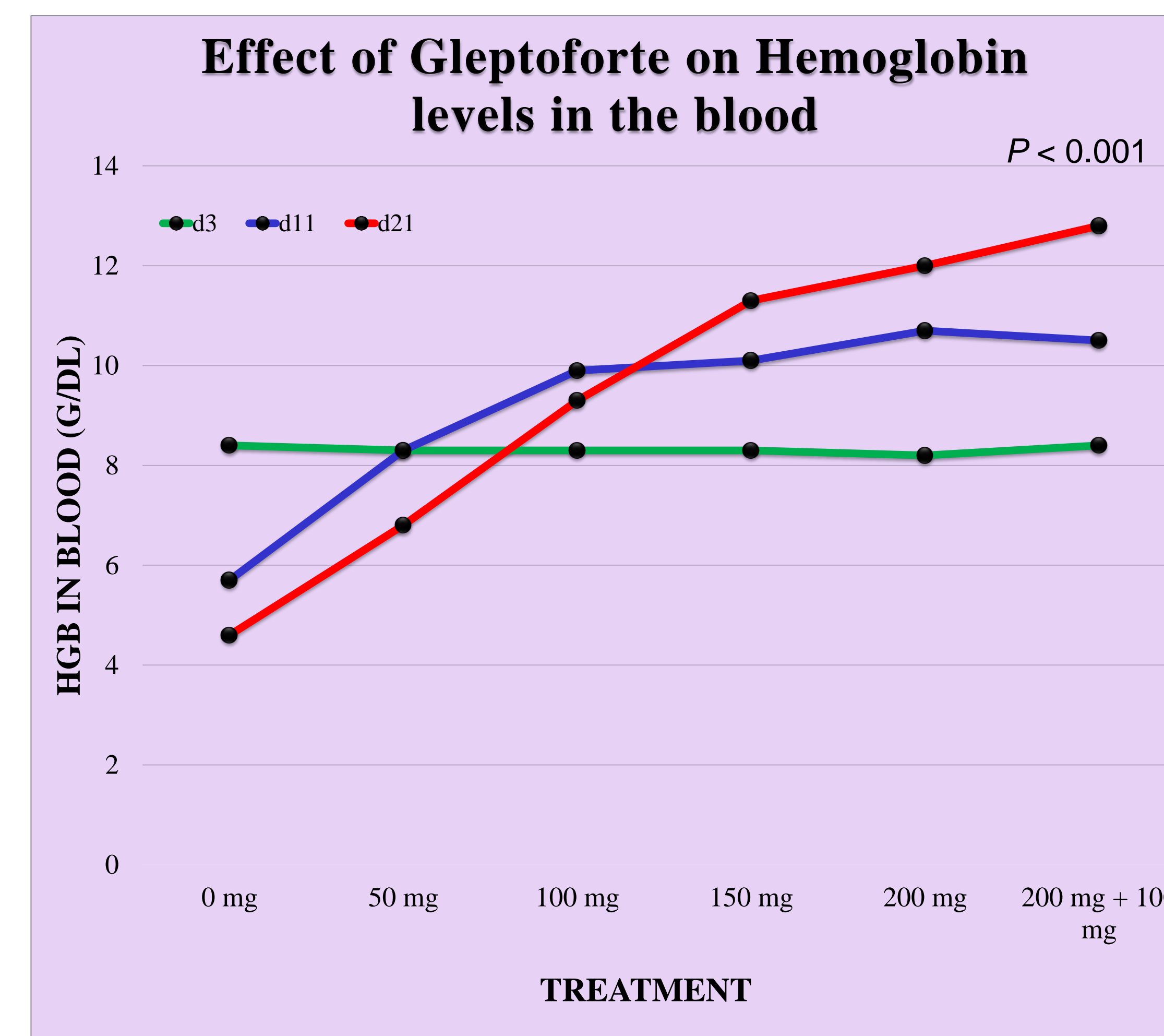
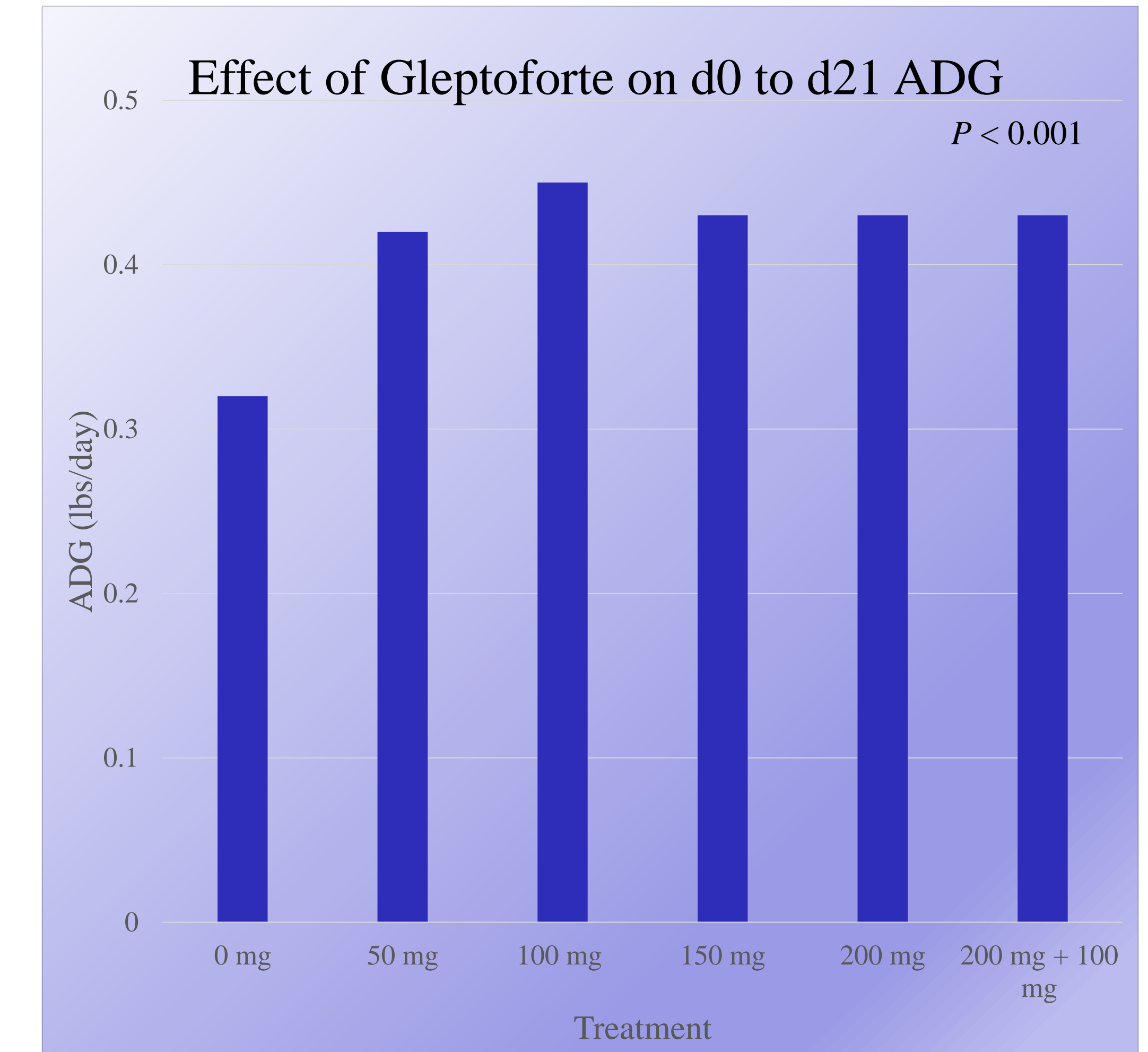
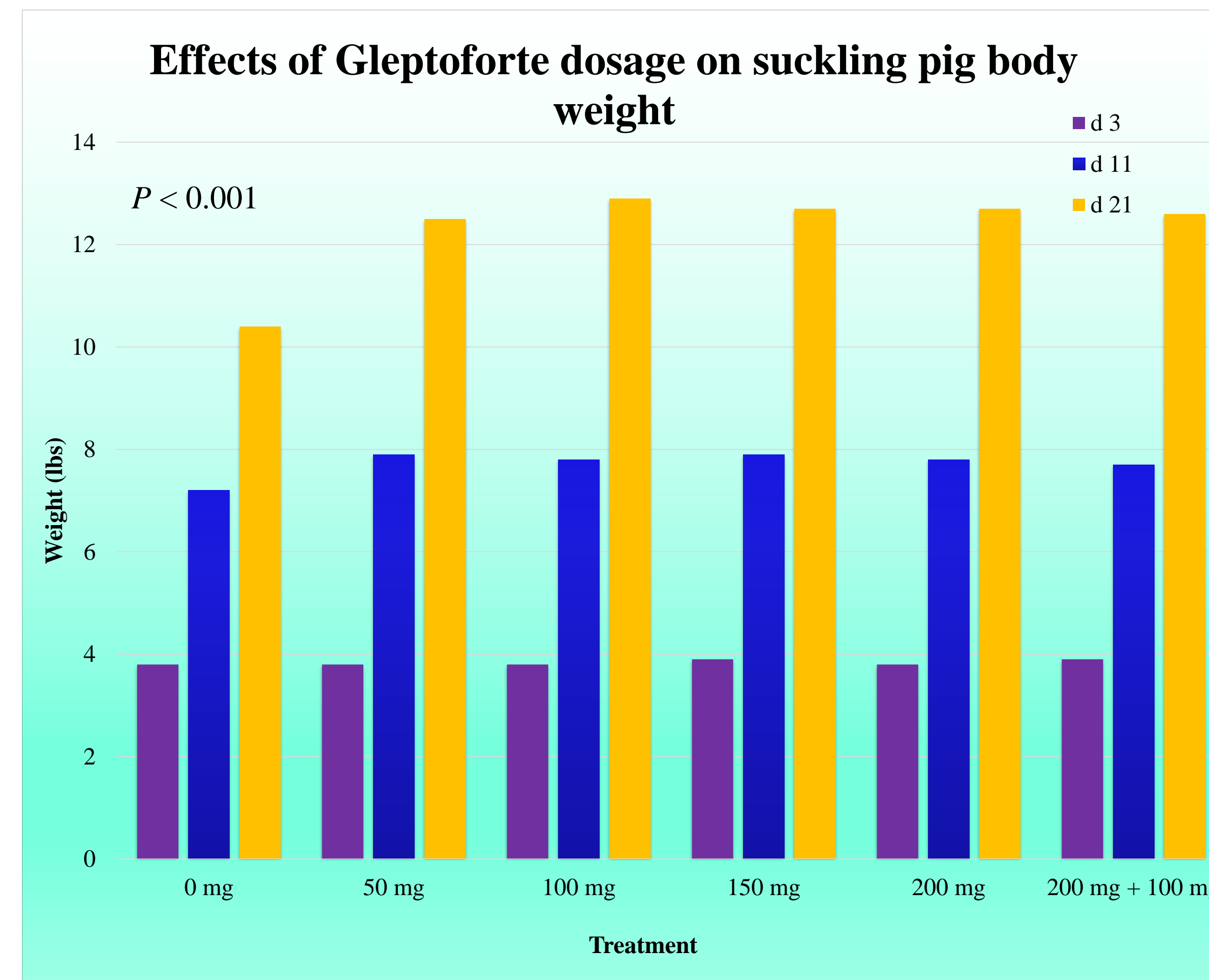
Objective

To evaluate the effects of increasing dosage of GleptoForte at birth in newborn pigs on sow and litter performance.

Materials and Methods

- A total of 28 litters were utilized, 12 pigs from each litter, for a total of 336 pigs on trial.
- Number of pigs per sow was equalized on each day of farrowing.
- Six barrows, and six gilts from each litter were randomly assigned to one of 6 treatments, one barrow and one gilt per treatment.
- Treatments consisted of: a negative control receiving no supplemental iron injection (0 mg), a 50 mg injection, a 100 mg injection, a 150 mg injection, a 200 mg injection and a 200 mg injection at processing (d 3) plus a 100 mg booster at d 11 of farrowing.
- These treatments equated to injections of 0 ml, 0.25 ml, 0.5 ml, 0.75 ml, 1.0 ml, and 1.0 ml at birth and 0.5 ml booster respectively.
- Pig weights were collected at processing (d 3), midway (d 11), and at weaning (d 21) to calculate ADG for each interval as well as an overall ADG.
- Blood was collected from one barrow per treatment per litter on the day of processing (d 3), midway (d 11), and at weaning (d 21) for measurement of hematological parameters.
- Hematological parameters measured included: Hemoglobin (Hgb), Hematocrit (Hct), Serum Fe, and Total Iron Binding Capacity (TIBC).
- Lactation feed was supplemented with 110 mg/kg added iron from ferrous sulfate.
- Alpha value = 0.05

Results



Conclusions

- ADG increased in the farrowing house as the dosage of Gleptoforte was increased (*P*=0.001), and hit a maximum of 0.45 with the 100 mg injection.
- Body weight at d21 increased with increasing dosage of Gleptoforte (*P*=0.001), also with a maximum occurring at 100 mg of 12.9 lbs.
- There was no evidence of improved performance in the 200 mg + 100 mg treatment when compared to 200 mg alone. However, a significant difference in hematological parameters was found between the 200 mg and the 200 + 100 mg treatments, with an increased level of Hgb (*P*=0.011) and Hct (*P*=0.046).
- The injection of 100 mg Gleptoforte resulted in the best performance of the pigs in the farrowing house, in contrast to the traditional injection of 200 mg.