



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

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Introduction

- Inadequate iron stores and rapid growth make newborn pigs more susceptible to iron deficiency
- Injection of 200 mg iron is commonplace
- Concern over level provided with one injection vs booster
- GleptoForte=injectable iron used to prevent anemia in newborn piglets
- Little data available confirming appropriate level to inject

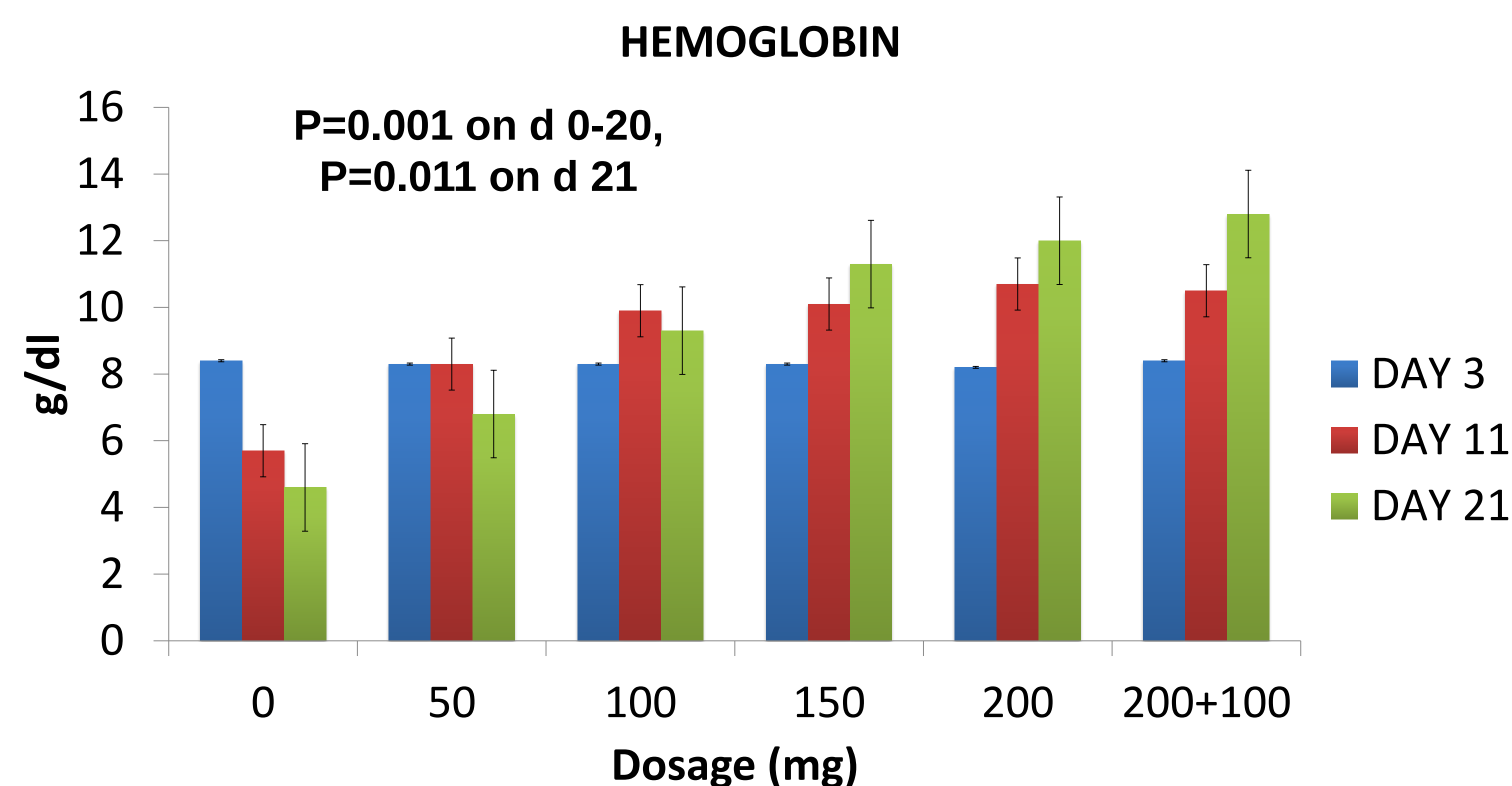
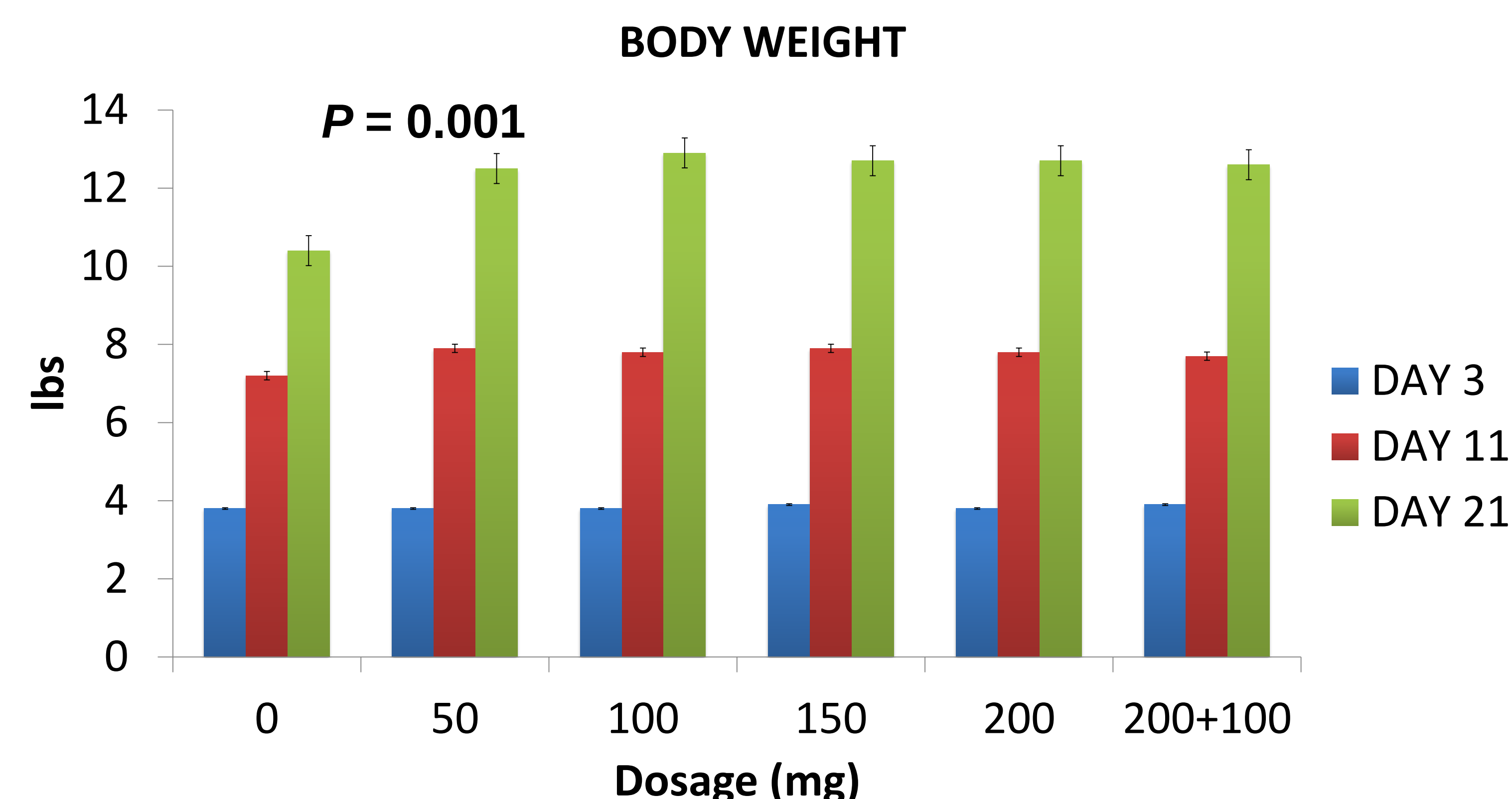
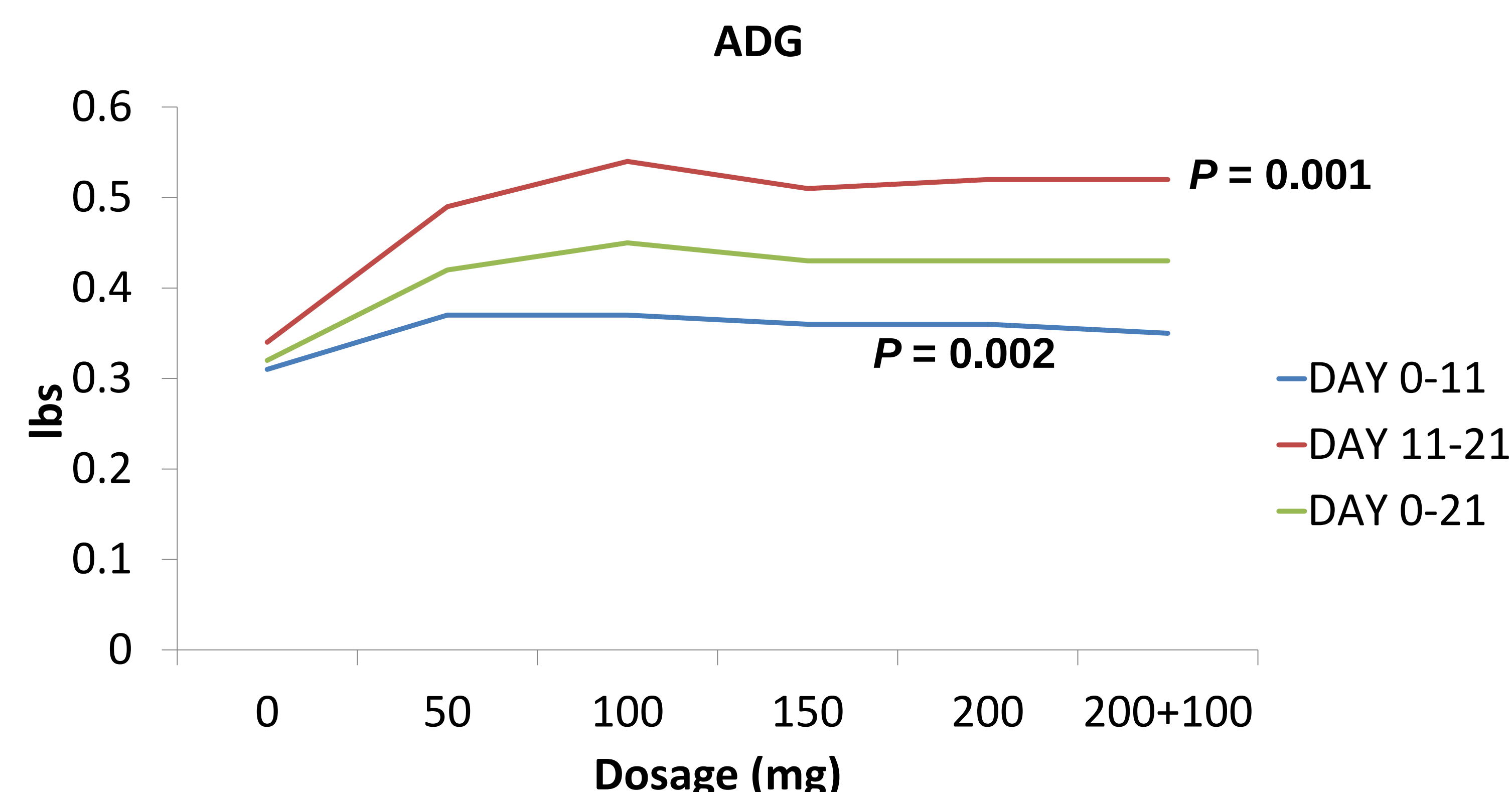
Objective

- Evaluate the effects of increasing dosage of GleptoForte in newborn pigs on sow and litter performance by measuring ADG, and iron levels in hemoglobin and hematocrit
- The main objective is to find out the appropriate amount(s) of GleptoForte that when administered by injection provide the greatest growth performance and health in newborn piglets

Experimental Design

- 336 newborn pigs used in 21-day study
- Total of 28 litters used with number of pigs per sow equalized on each farrowing day
- Day 3 after birth: all piglets weighed, six barrows, six gilts per litter allotted to treatment under completely random design; 56 piglets per treatment
- Treatments: negative control receiving no iron injection, and increasing levels of iron from GleptoForte to achieve either 50, 100, 150, or 200 mg plus 100 mg booster @ day 11 of farrowing
- 1 ml of GleptoForte = 200 mg iron, so injection dosage = 0, 0.25, 0.50, 0.75, 1, and 1 plus 0.50 booster
- Piglets weighed at day 11 to calculate ADG during farrowing
- One barrow per treatment per litter used for blood collection via jugular venipuncture on day 3, 11, and 21
- Blood criteria measured: Hemoglobin (Hgb), Hematocrit (Hct), Serum Fe, and Total Iron Binding Capacity (TIBC)

Effects on ADG, Weight & Hemoglobin



Results & Discussion

- Day 3-11: ADG increased ($P=0.002$) with increasing dosage of GleptoForte
- Day 11 ending body weight of piglets increased ($P=0.0018$) with increasing dosage of GleptoForte
- Day 11-21: ADG of piglets increased ($P=0.001$) with increasing dosage of GleptoForte
- Overall, ADG and ending BW increased with increasing dosage of GleptoForte
- No evidence of difference in performance in all three periods between the 200 mg and 200 mg + 100 mg injections of GleptoForte → suggests the booster injection of 100 mg at day 11 did not provide any additional benefits compared to the 200 mg injection with no booster
- No evidence of difference observed of hematological data measured on day 3 prior to iron injection
- Hgb: a treatment x day interaction ($P=0.001$) was observed with Hgb increasing on day 11 and 21 with the 0 mg treatment having the lowest and the 200 mg treatment having the highest Hgb values
- Day 21: significant difference ($P=0.011$) was observed between the 200 mg and 200 mg + 100 mg treatments with 200 mg + 100 mg having the higher Hgb value
- Summary:
- Lack of iron injection resulted in the poorest growth and blood parameters of iron status on suckling piglets, as expected
- However: administration of 100 mg of GleptoForte resulted in the greatest growth performance
- Administration of 200 mg + 100 mg GleptoForte resulted in improved hematological criteria but did not influence suckling piglet growth performance compared to 200 mg alone