

Getting weaned pigs off to a great start: What we have learned to reduce stress and improve performance.

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US Weaned Pig Overview

- Wean Age ~21-22 days average
- Mostly Duroc-sired
- Mixed health status (PRRS, Myco, PCV, SIV)
- Large groups of pigs placed into nurseries
 - Some on trucks up to 24 hr before placement
 - 25-100 pigs per pen
 - Barns with up to 25,000 pigs under 1 roof
- Performance (Metafarms, 2023):
 - 44 days on feed
 - 0.40 kg ADG
 - 1.58 F/G
 - 4% mortality



US Weaned Pig Overview

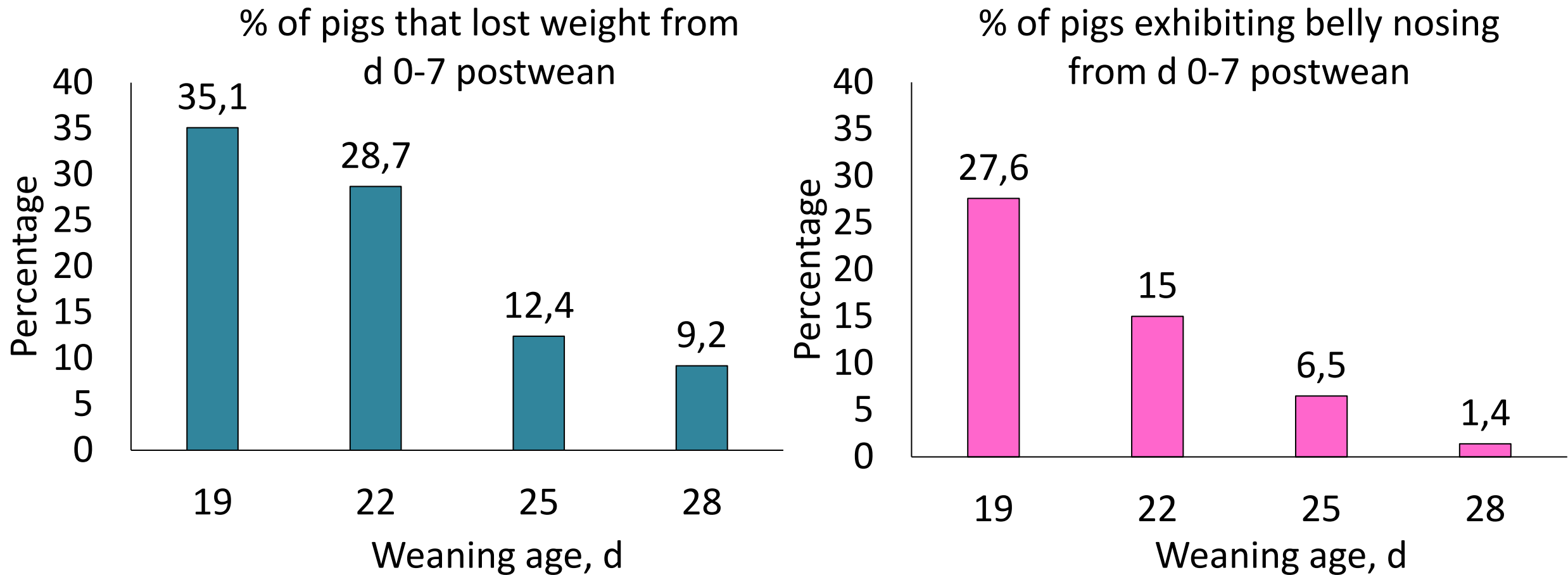
- Nutrition
 - ZnO still used (3,000 ppm for 10 days and 2,000 ppm for the next 14 days)
 - Feed-grade antibiotics still used in many situations
 - Relatively simple diets
 - Some plasma, little fish meal
 - Relatively high CP still used (20-22% CP)
 - Starting to consider fiber
 - Increasing use of ABC-4 concept



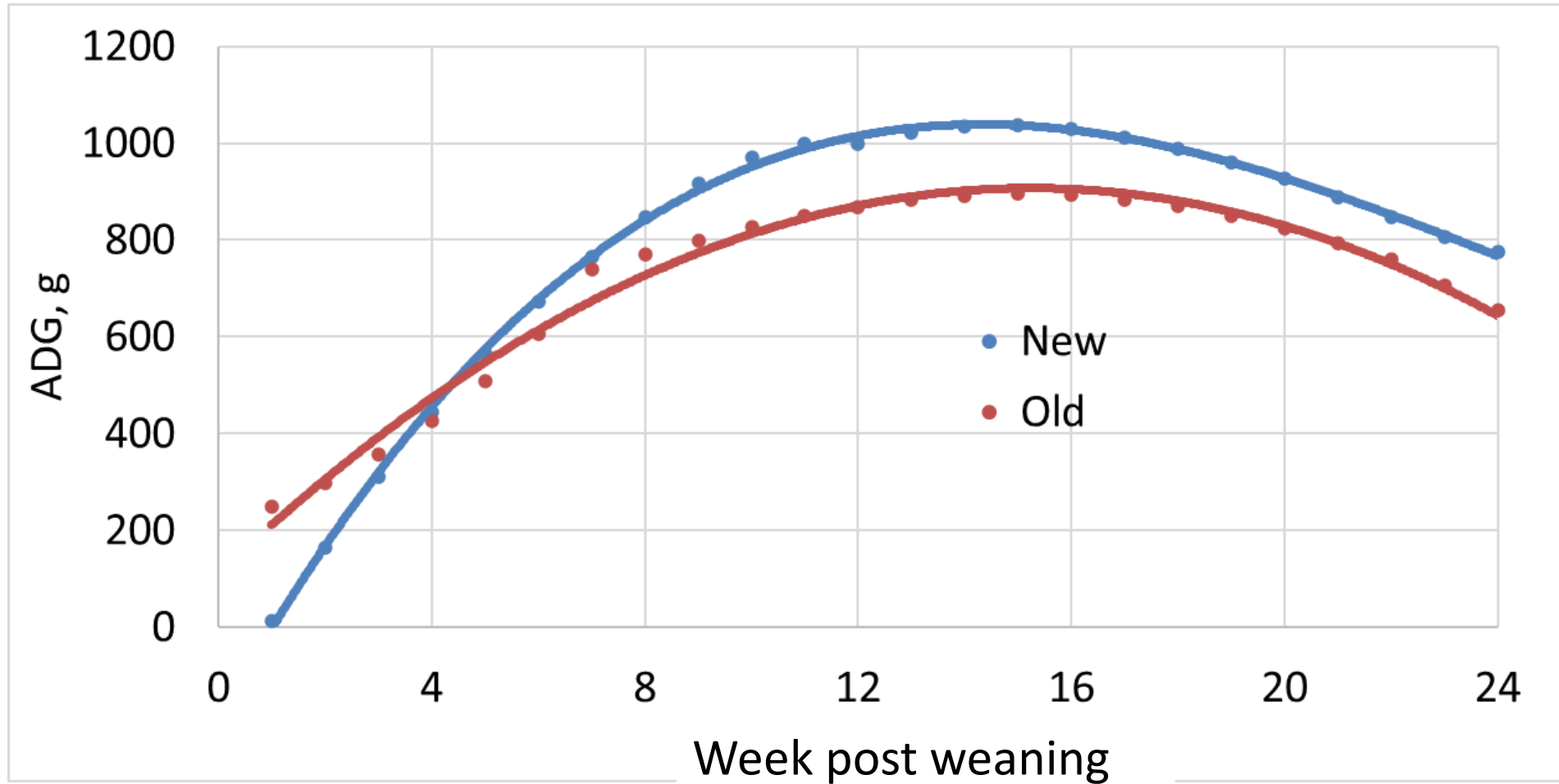
Recent KSU research to help pigs get started in the nursery

- Production/Management
 - Increasing wean age
 - Genetic comparison
 - Providing creep feed pre-wean
 - Considering attractants in nursery feeders
- Nutrition
 - CP level
 - SID Lys:CP
 - Acid binding capacity

Weaning age on weight loss and belly nosing during first week after weaning



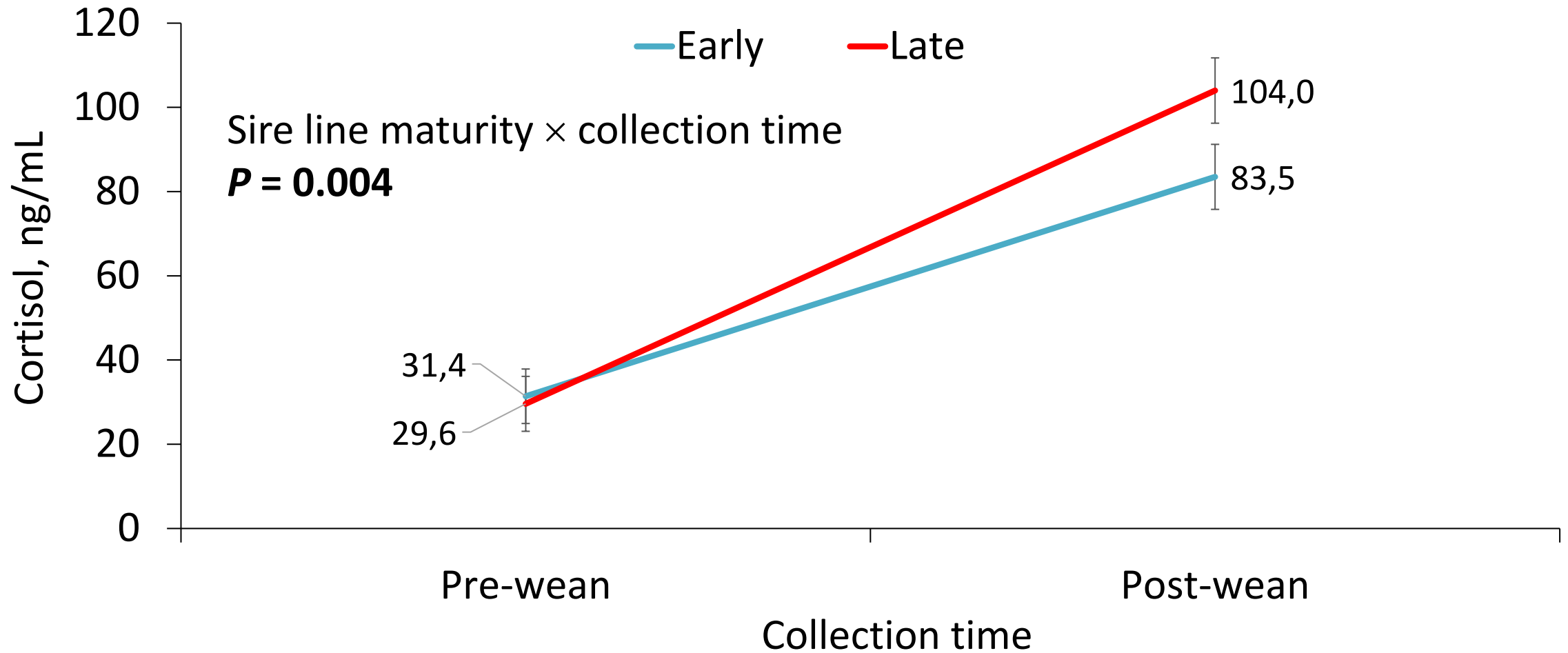
Genetics plays a major role in how pigs transition to the nursery



Comparison
of growth
curves from
1995 to 2020

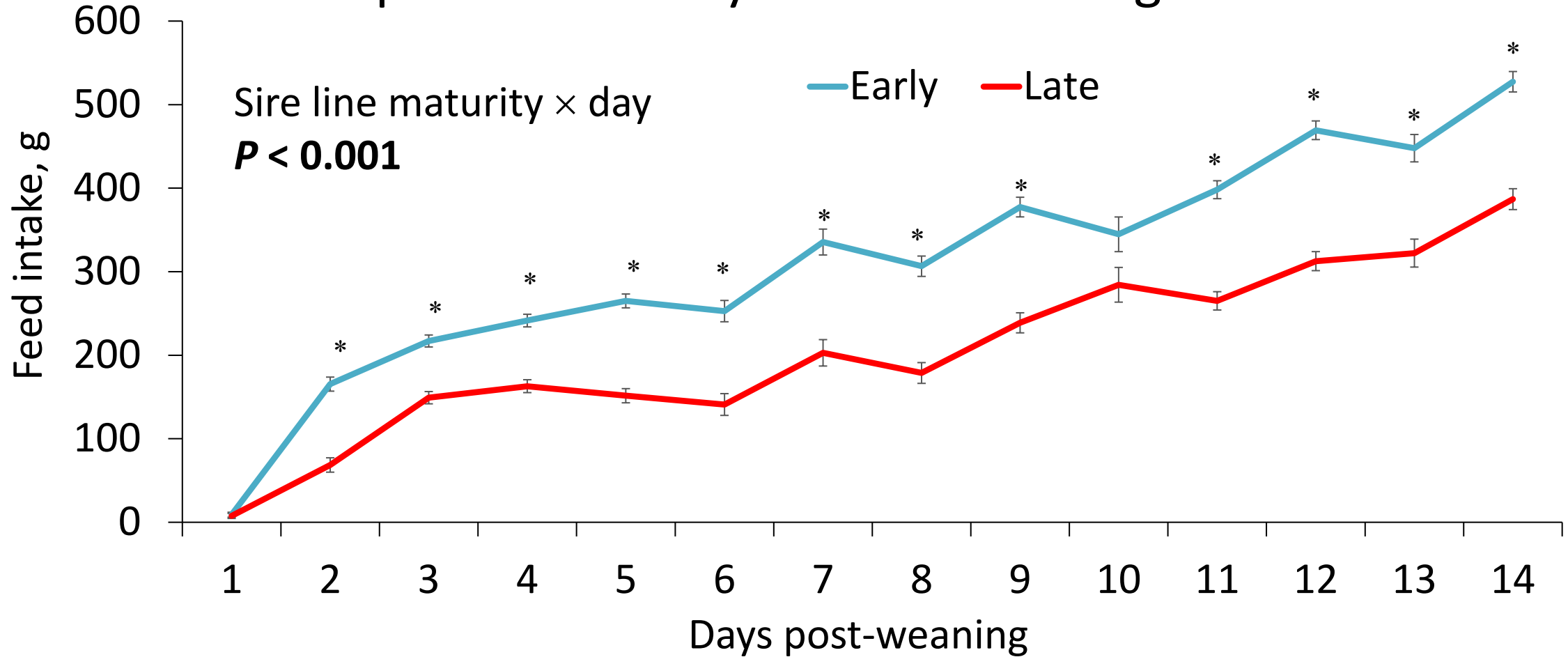
Genetic differences in response to stress

Comparison of Early vs Late maturing Duroc lines



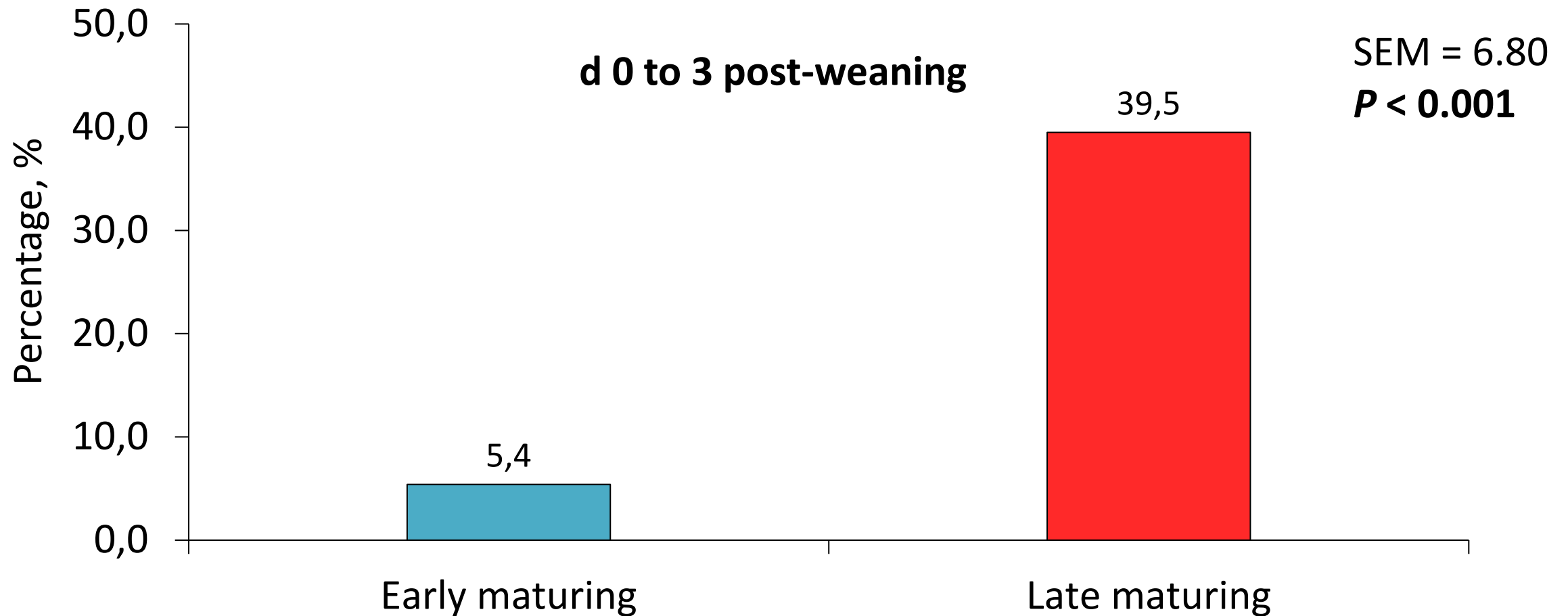
Genetic differences in feed intake after weaning

Comparison of Early vs Late maturing Duroc lines

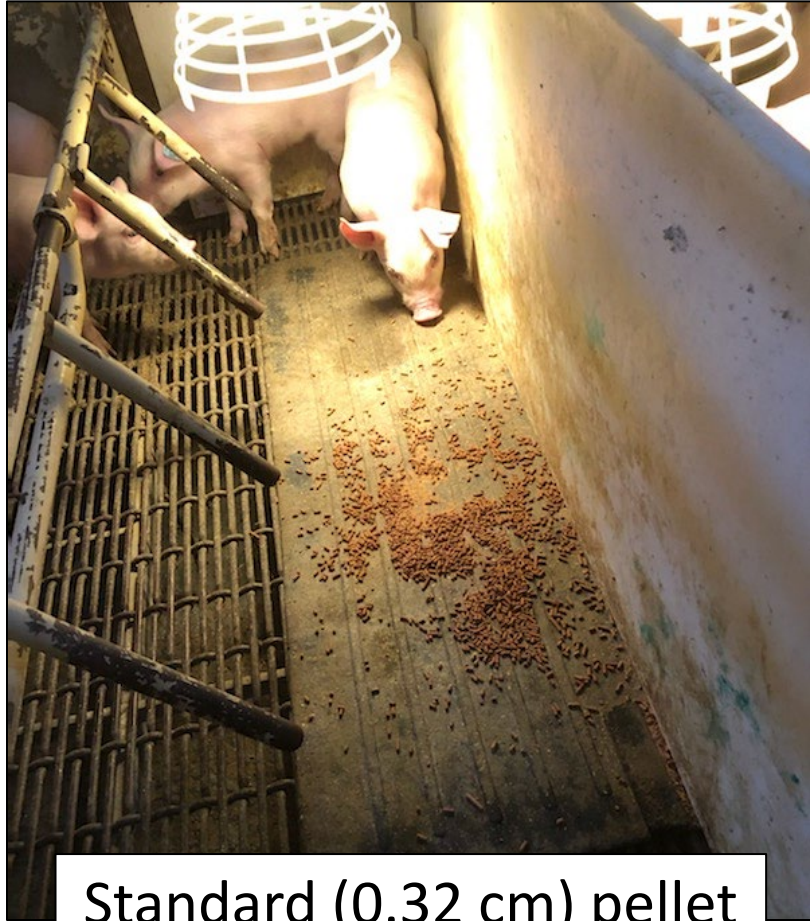


Body weight loss in early nursery

Comparison of Early vs Late maturing Duroc lines



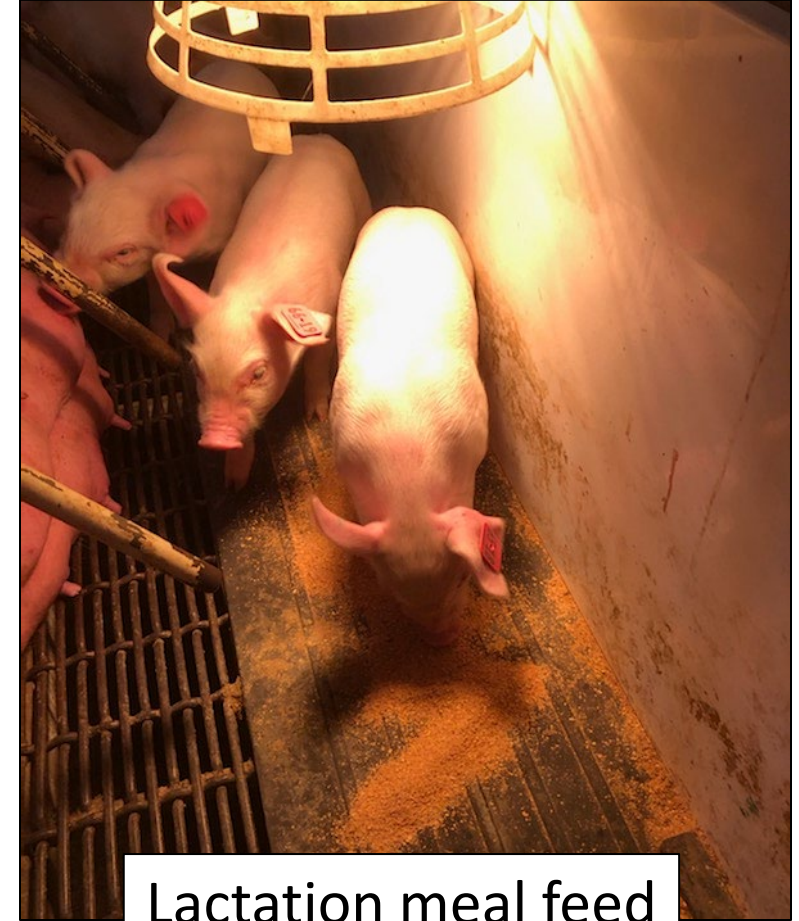
Floor feeding creep feed



Standard (0.32 cm) pellet



Large (1.27 cm) pellet



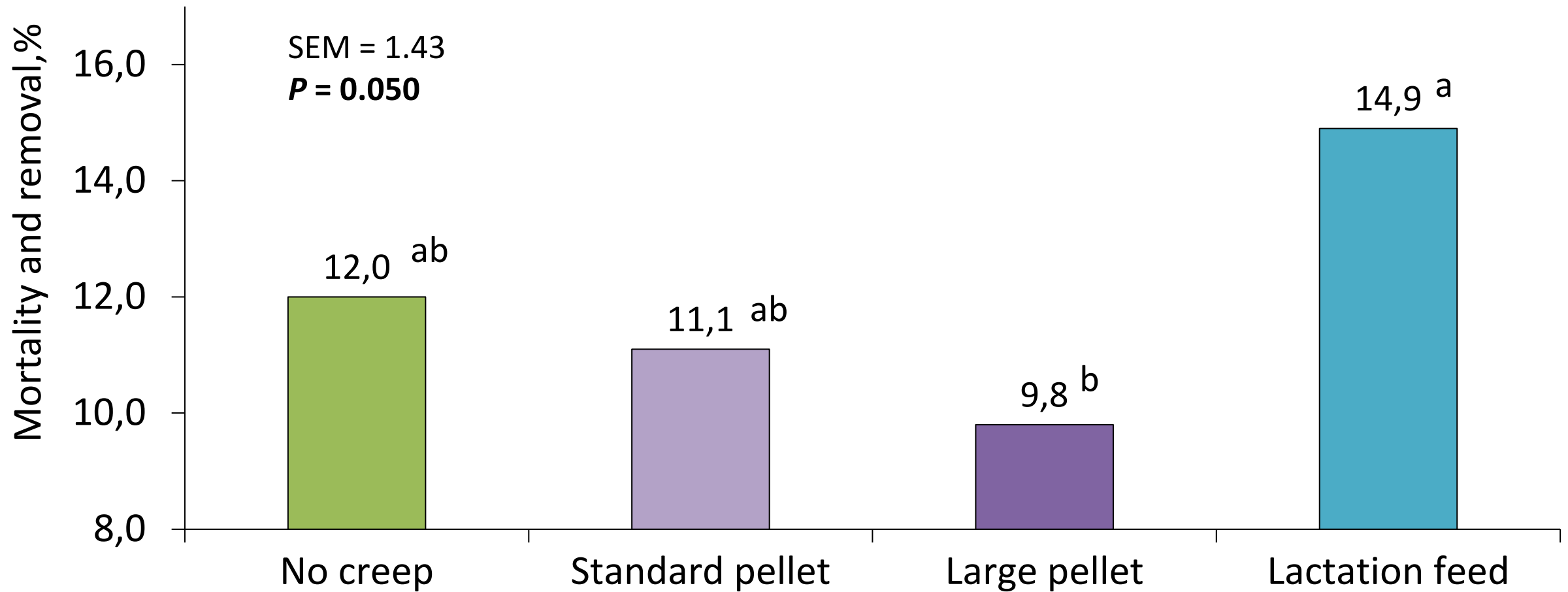
Lactation meal feed

Growth performance, d 0 to 36

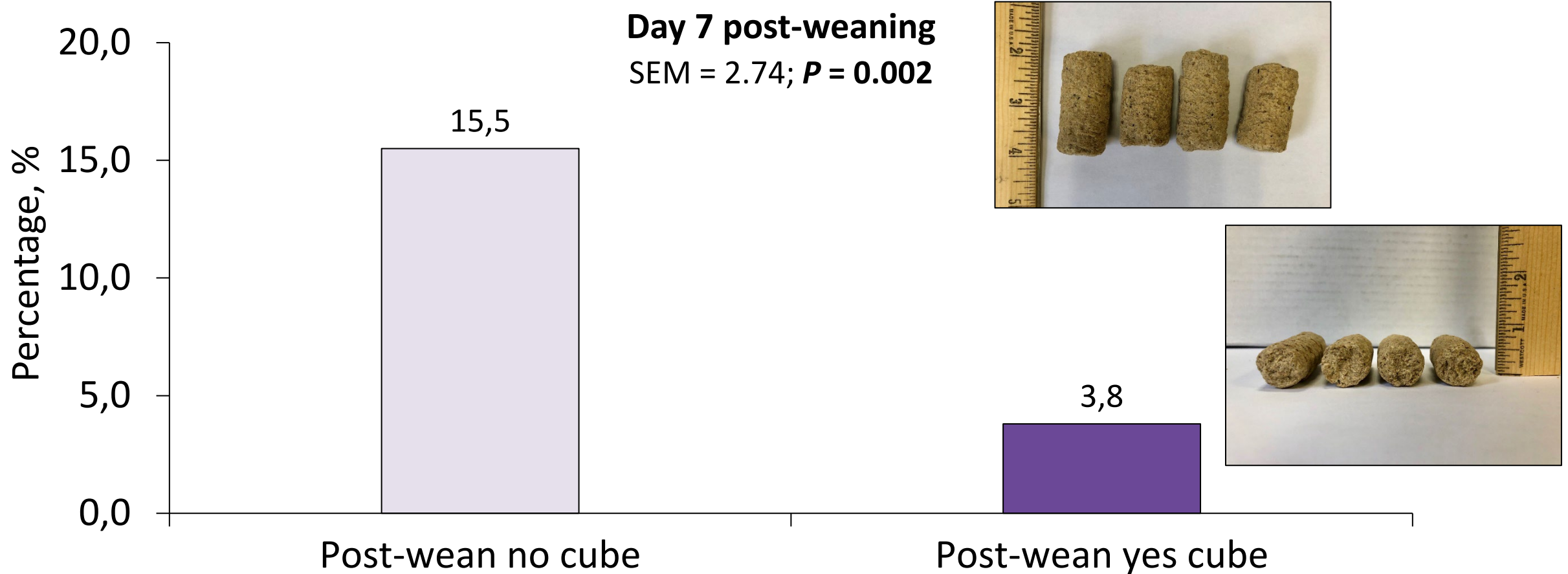
per pig placed



Mortality and removals

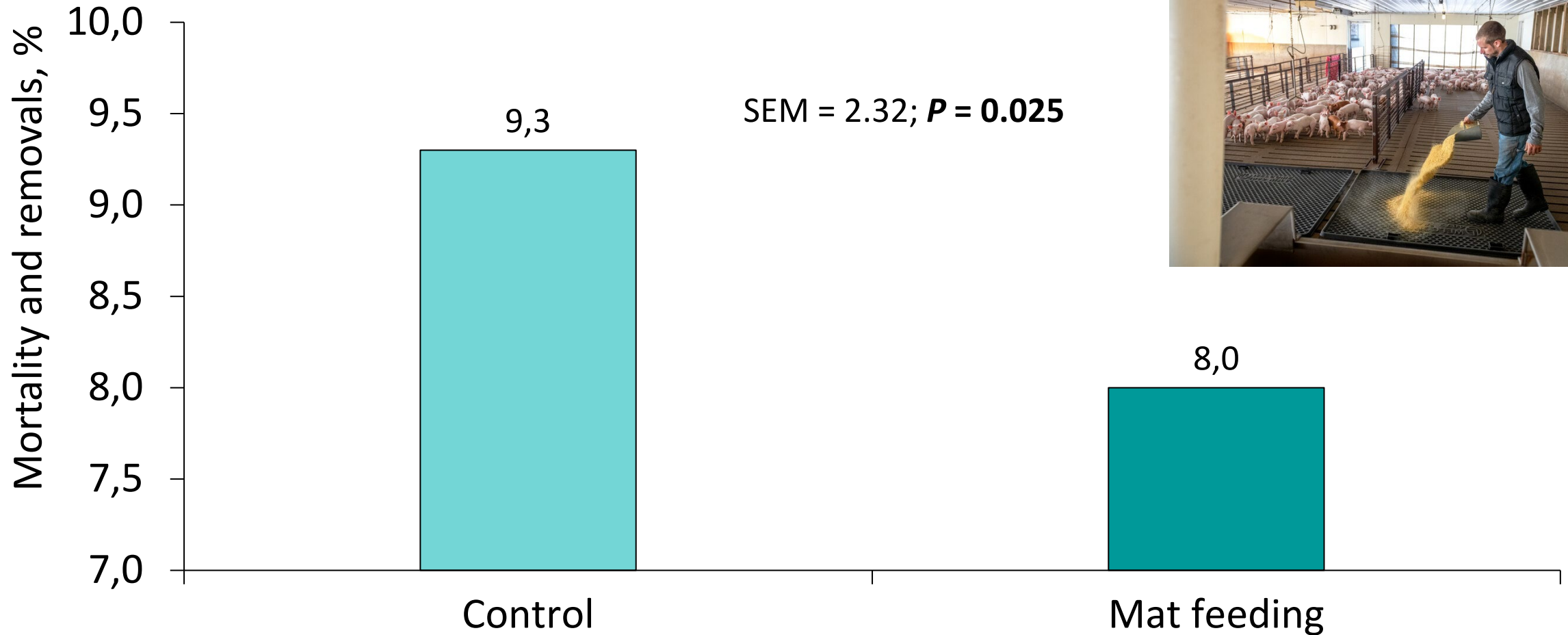


Effects of enrichment cubes after weaning on body weight loss in early nursery

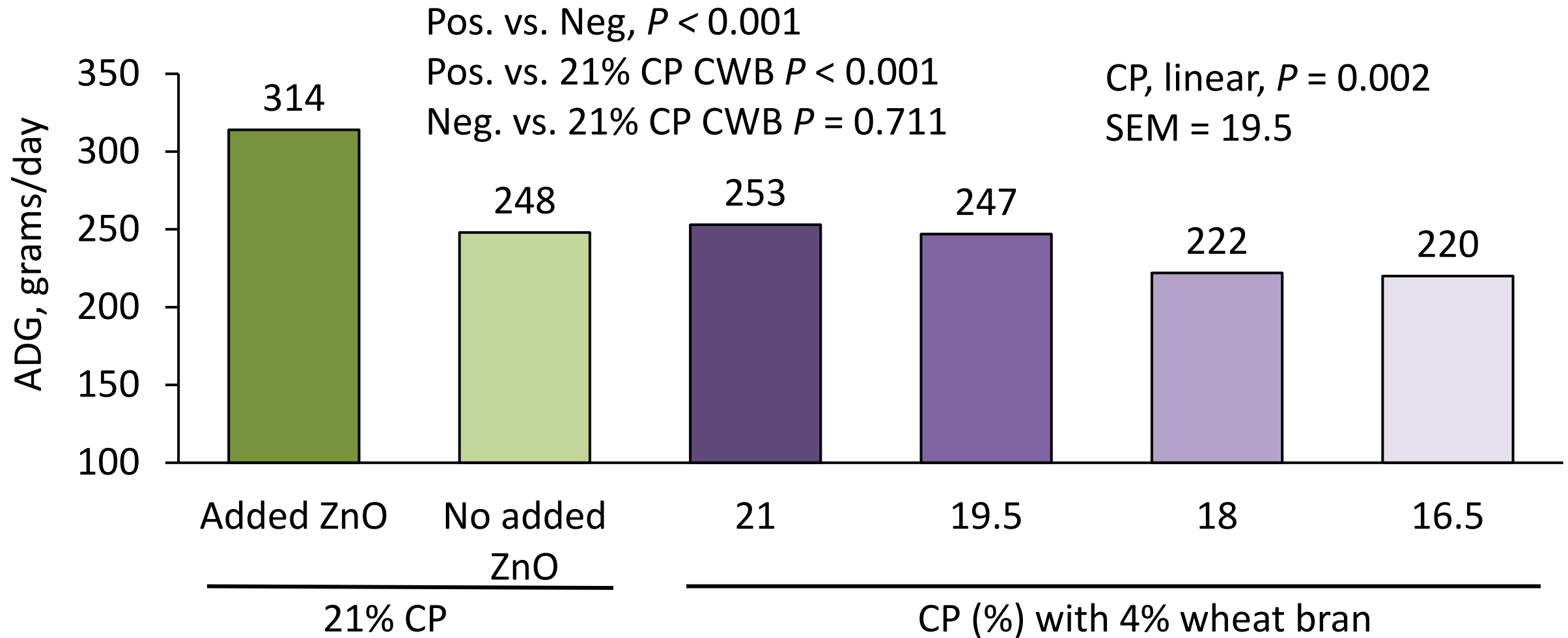


Impact of mat feeding on mortality and removals

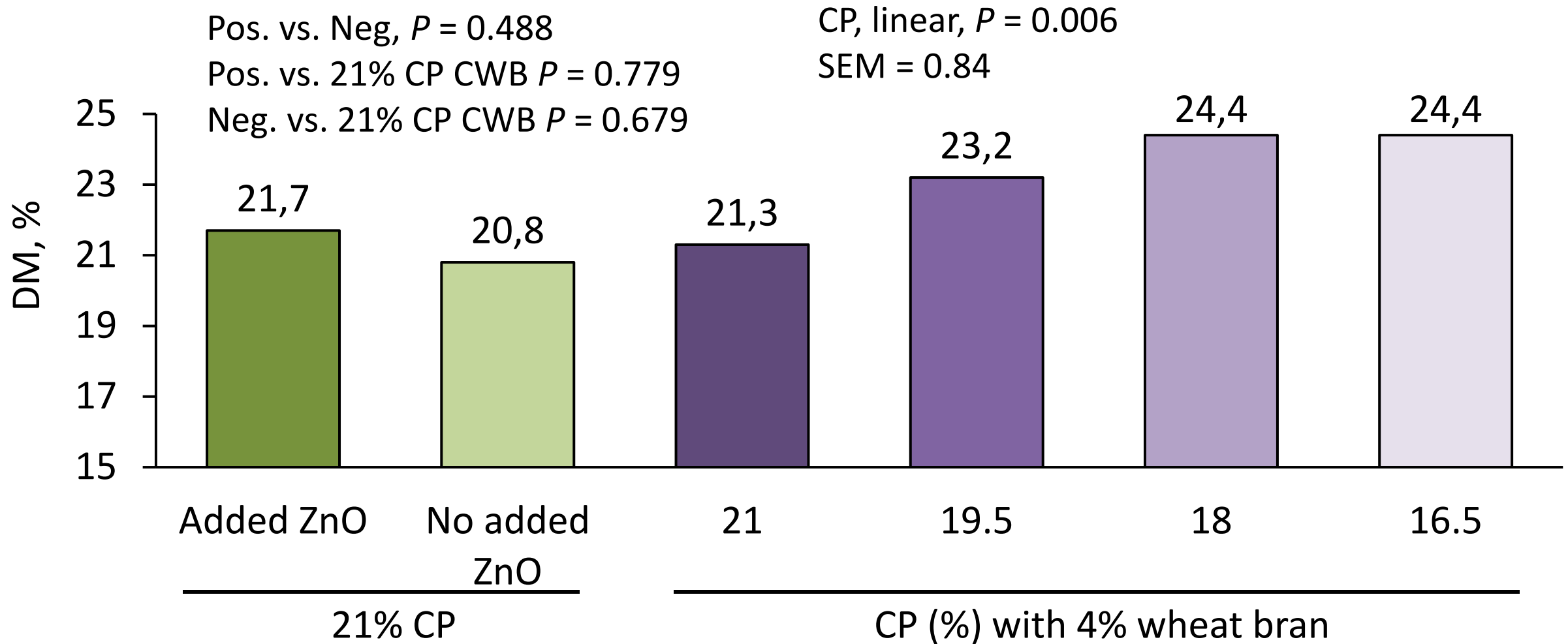
3 experiments combined



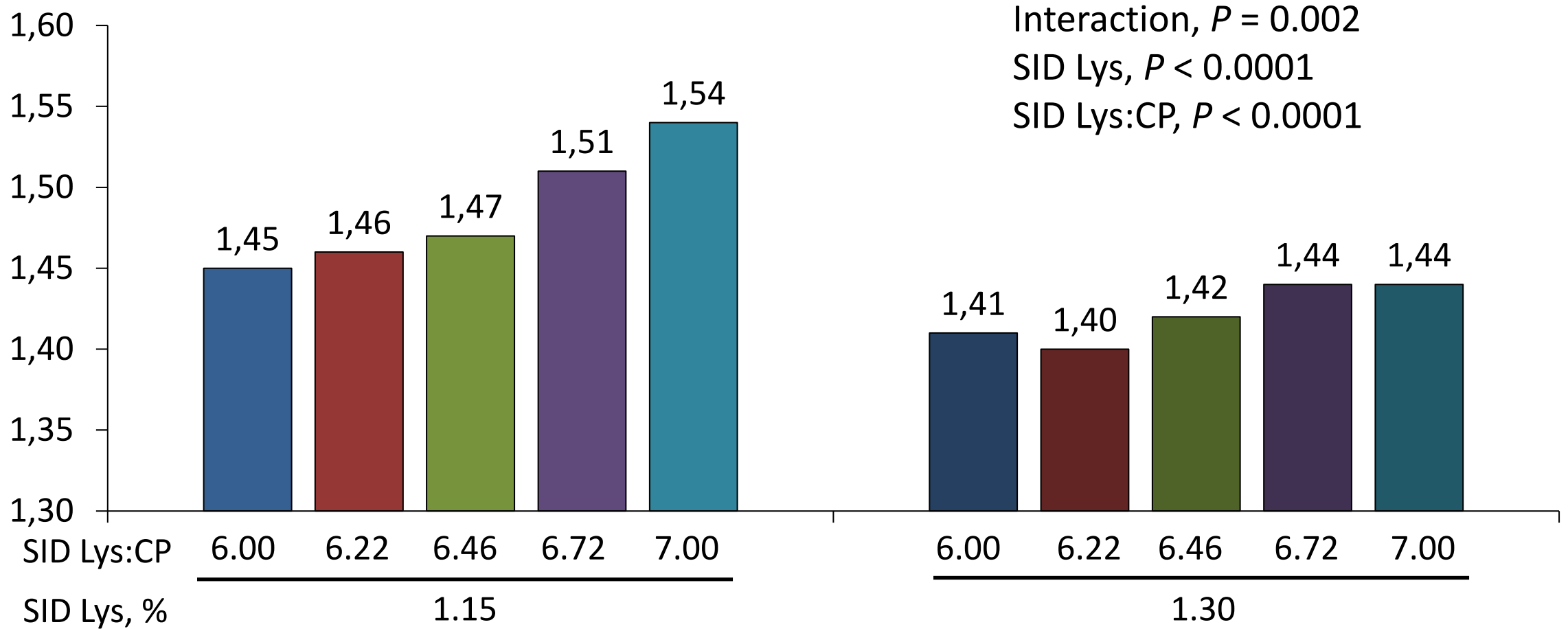
Effect of low crude protein in combination with wheat bran on ADG from 5-11 kg



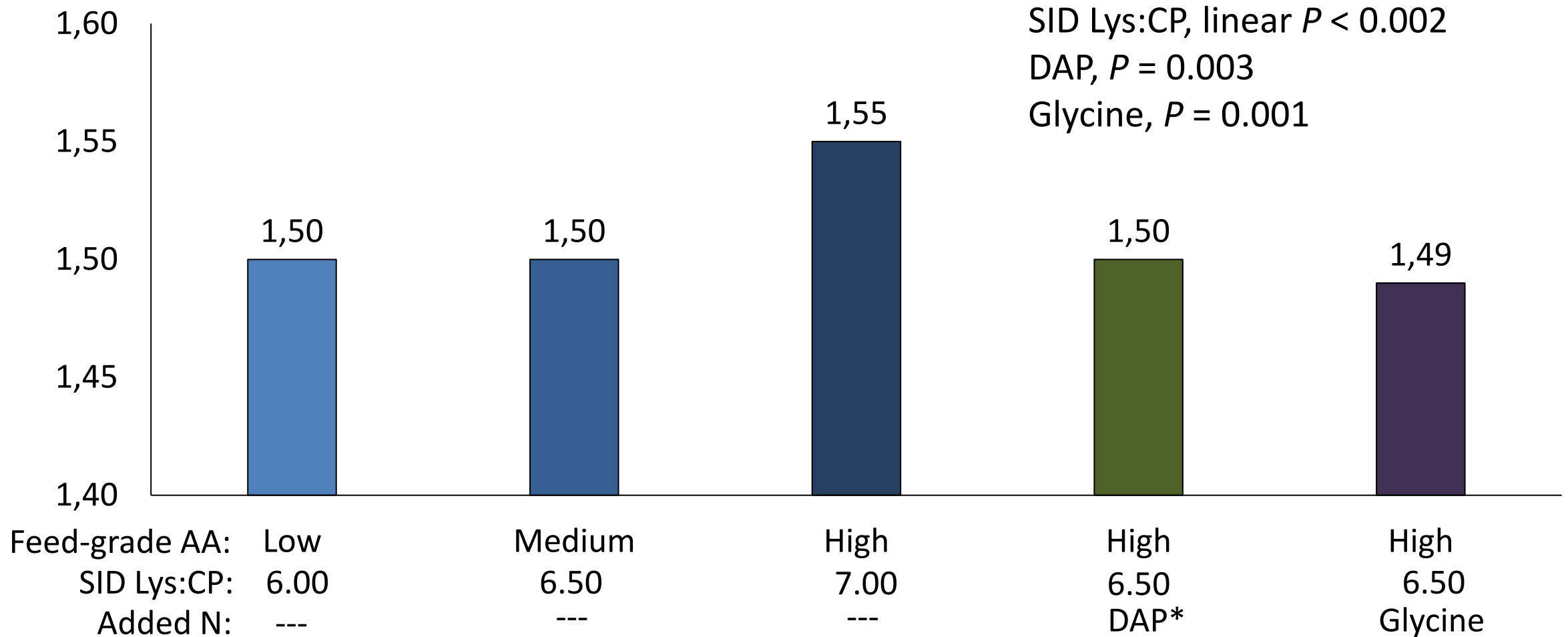
Effect of low crude protein in combination with wheat bran on d 21 fecal dry matter



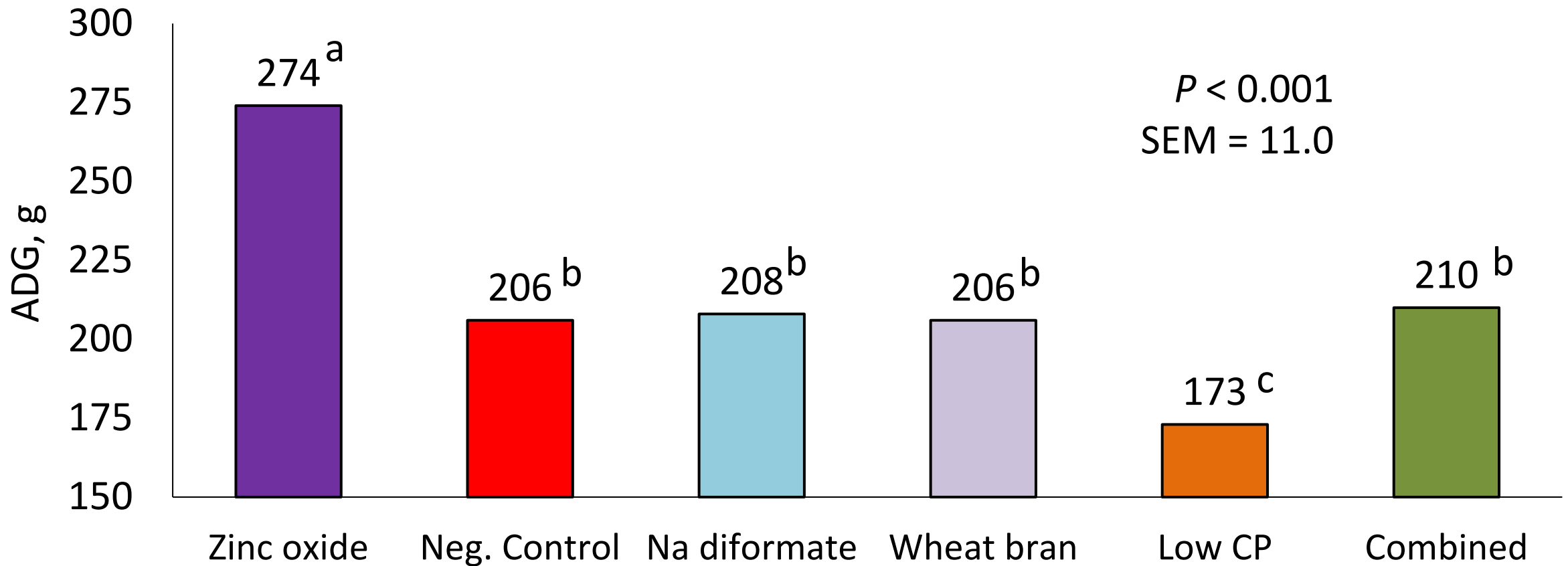
Effects of SID Lys and SID Lys:CP on F/G



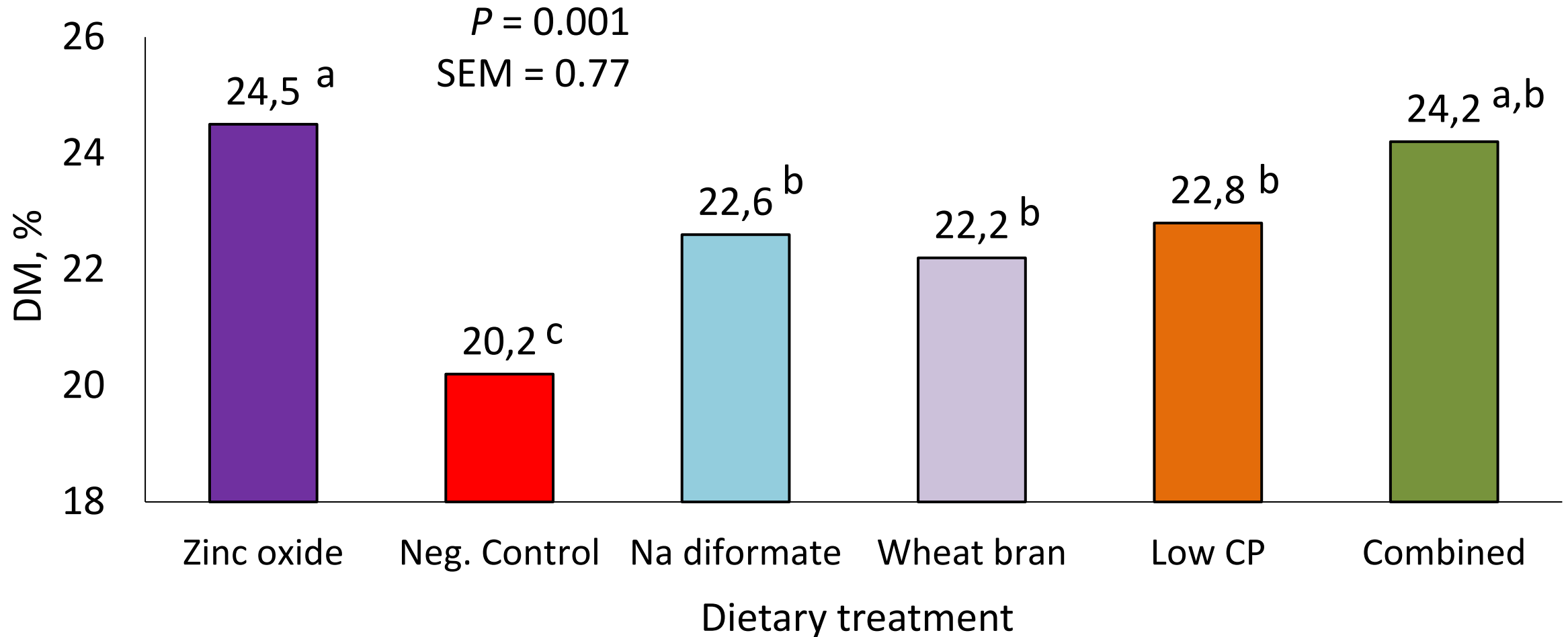
Effect of feed-grade AA inclusion and added N on F/G



Evaluation of nutritional strategies to replace ZnO on ADG from d 0 to 25

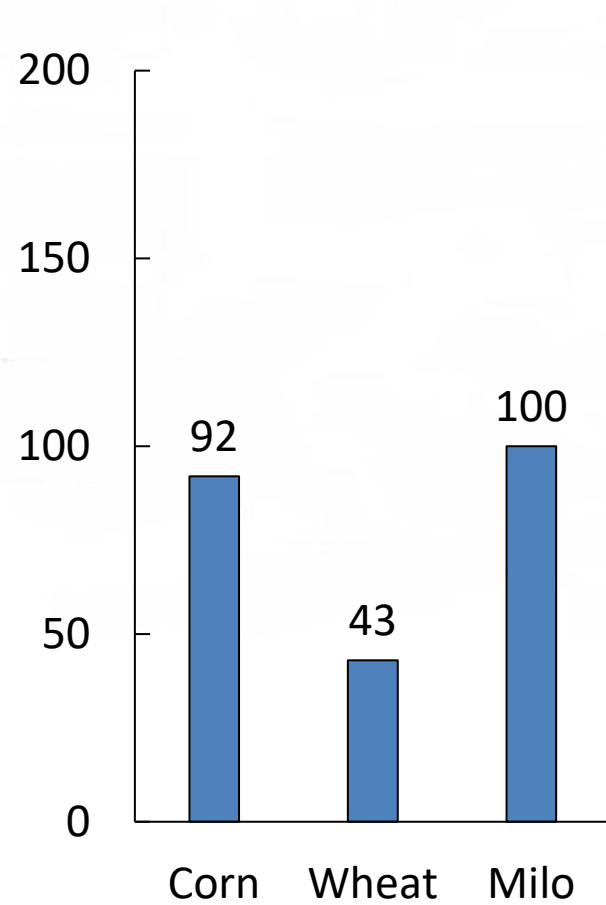


Evaluation of nutritional strategies to replace ZnO on mean fecal dry matter

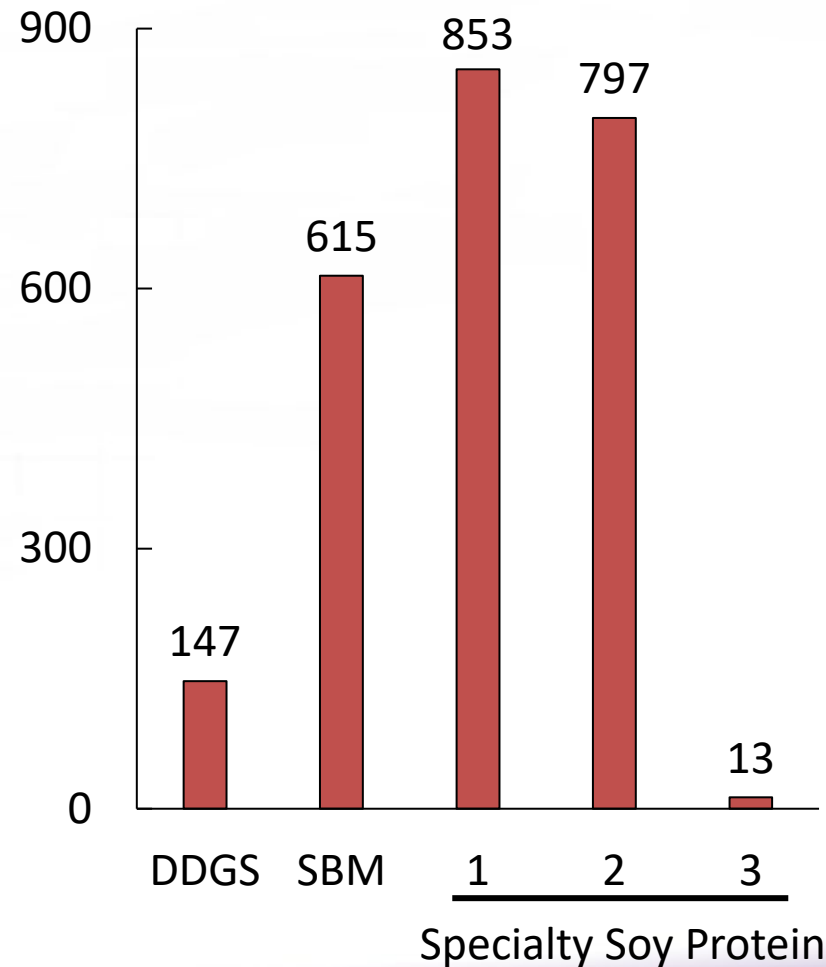


ABC-4 of Common Ingredients (meq)

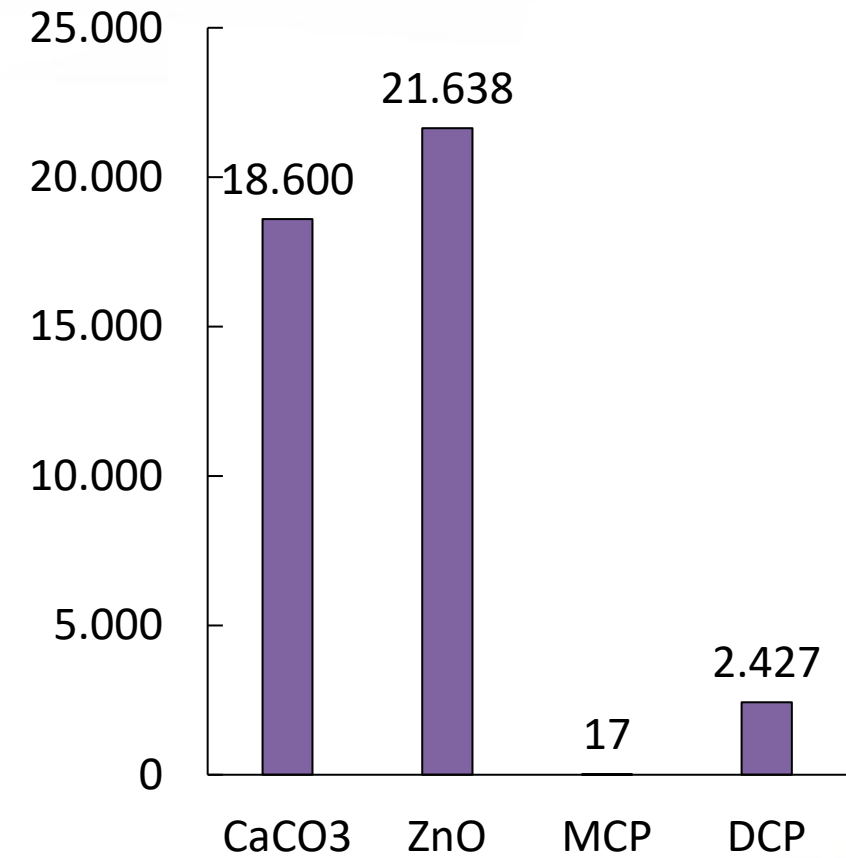
Grains



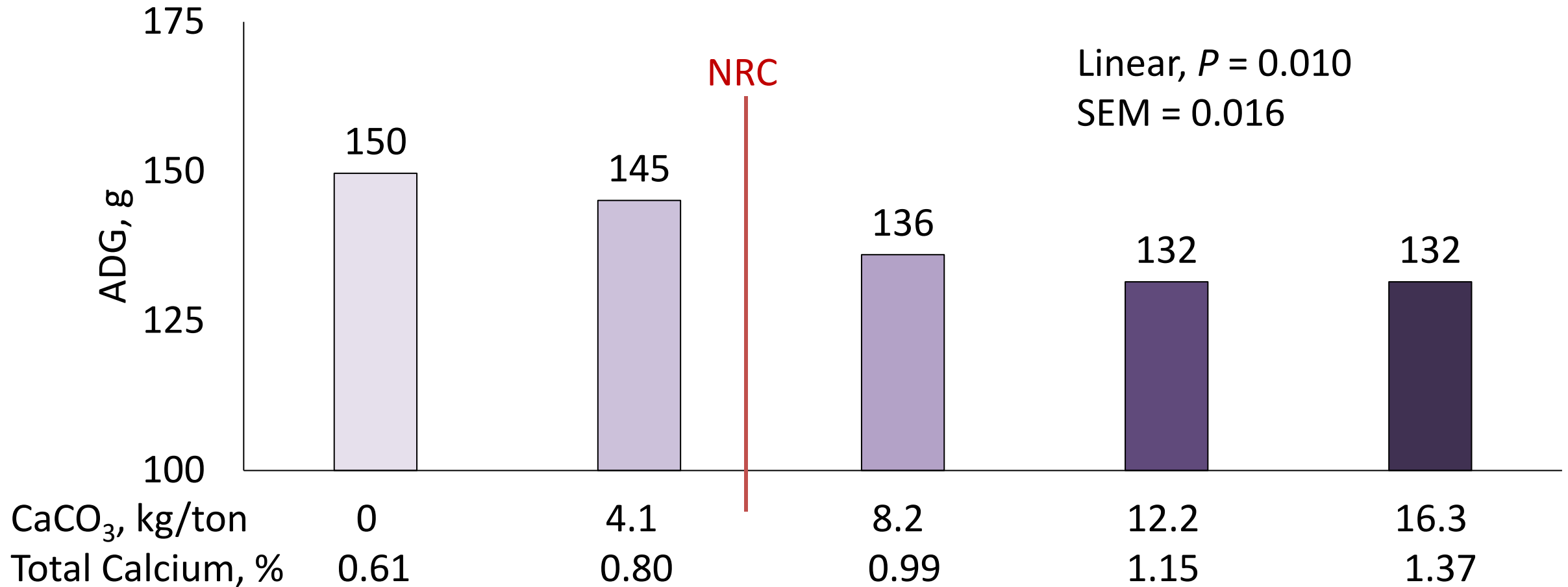
Plant Proteins



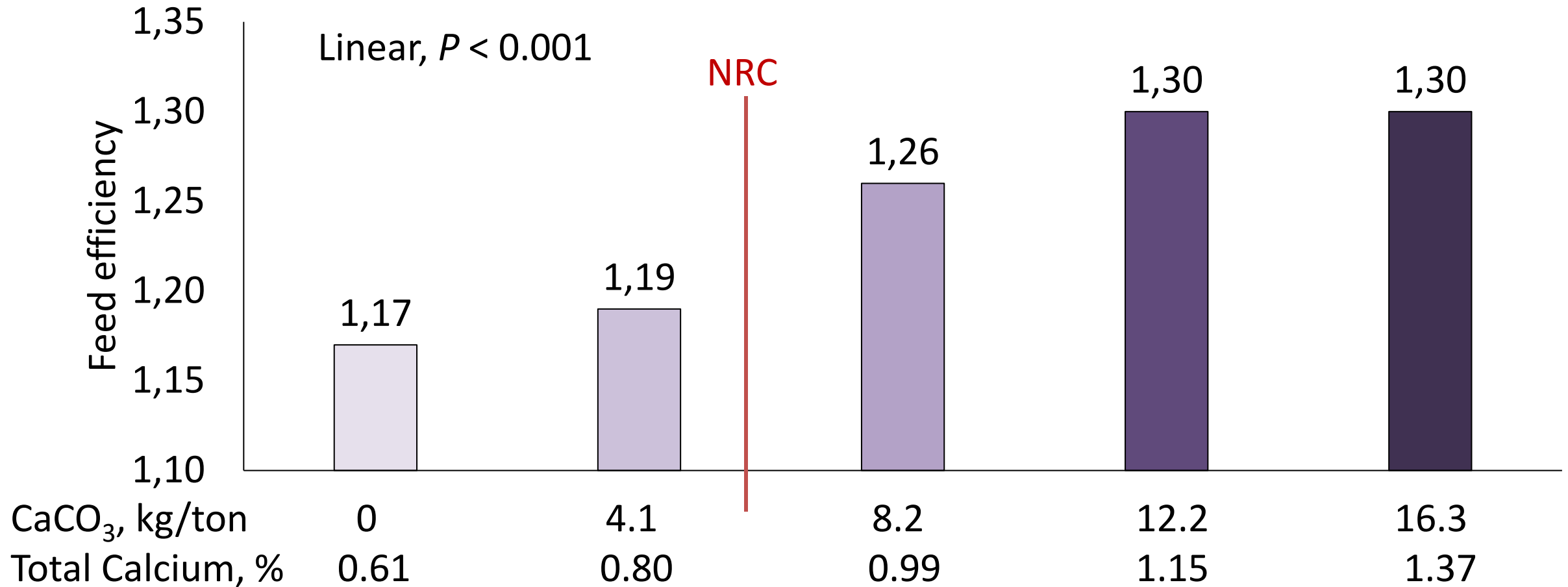
Minerals



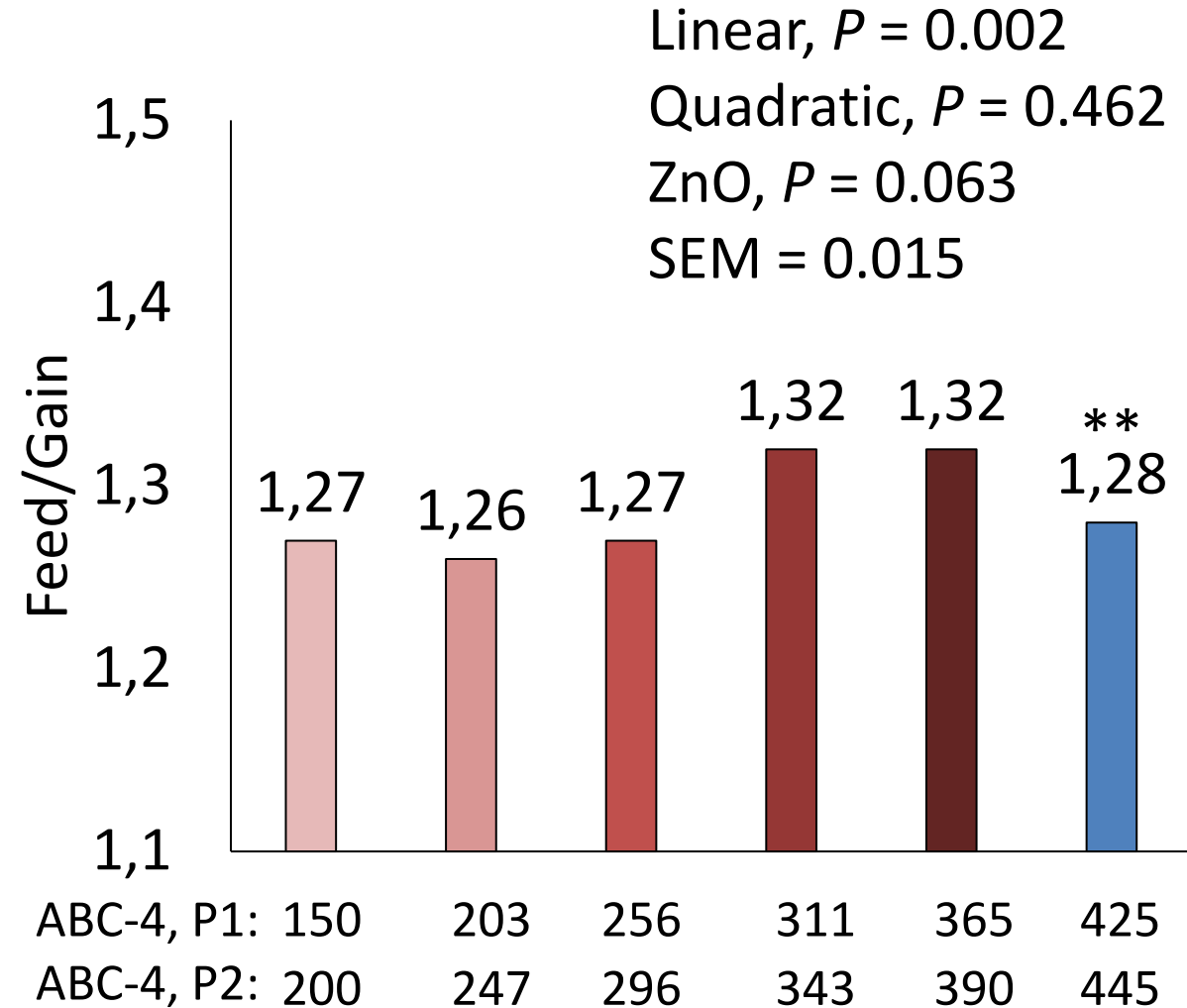
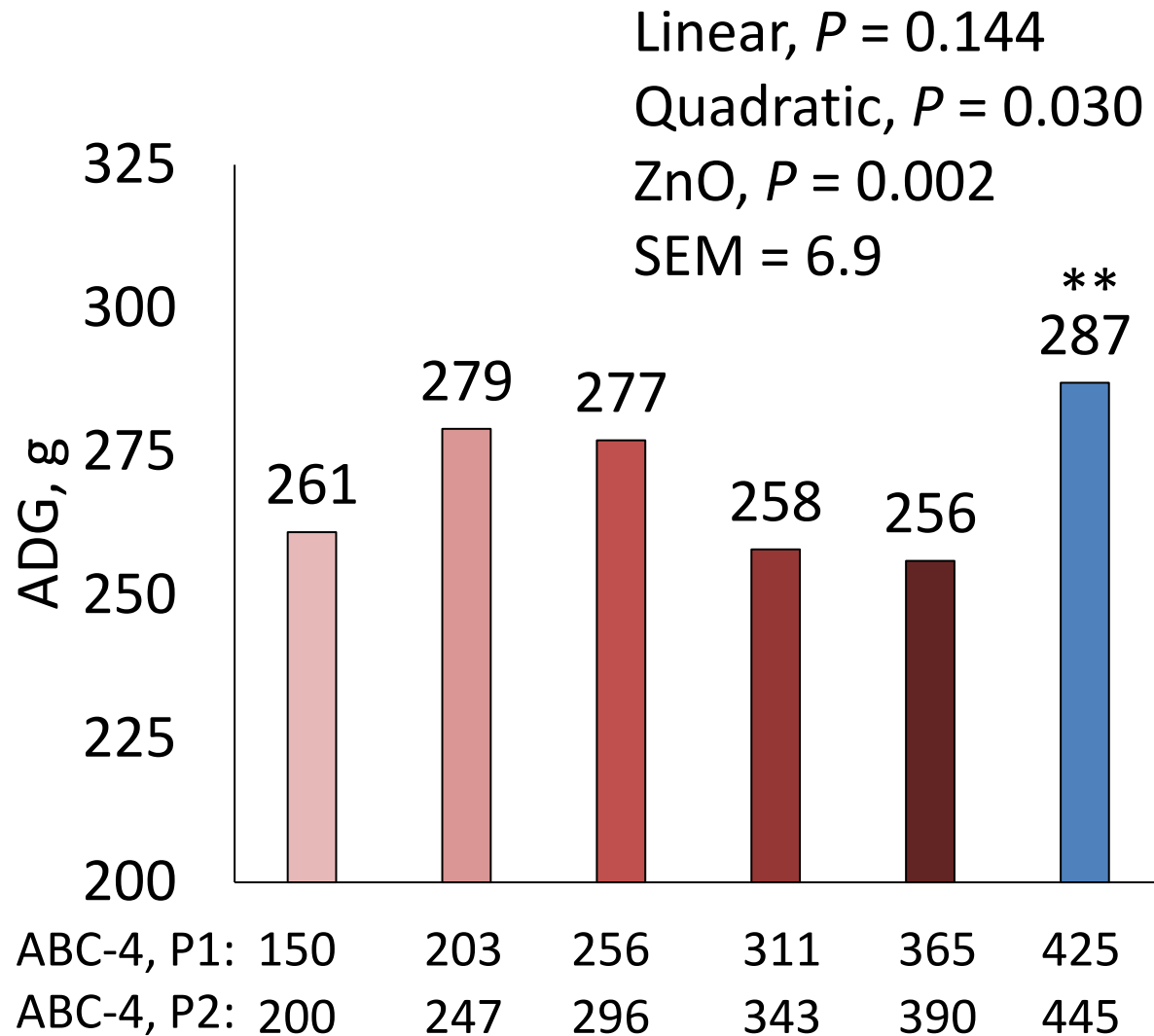
Effects of calcium carbonate level on d 0-14 ADG



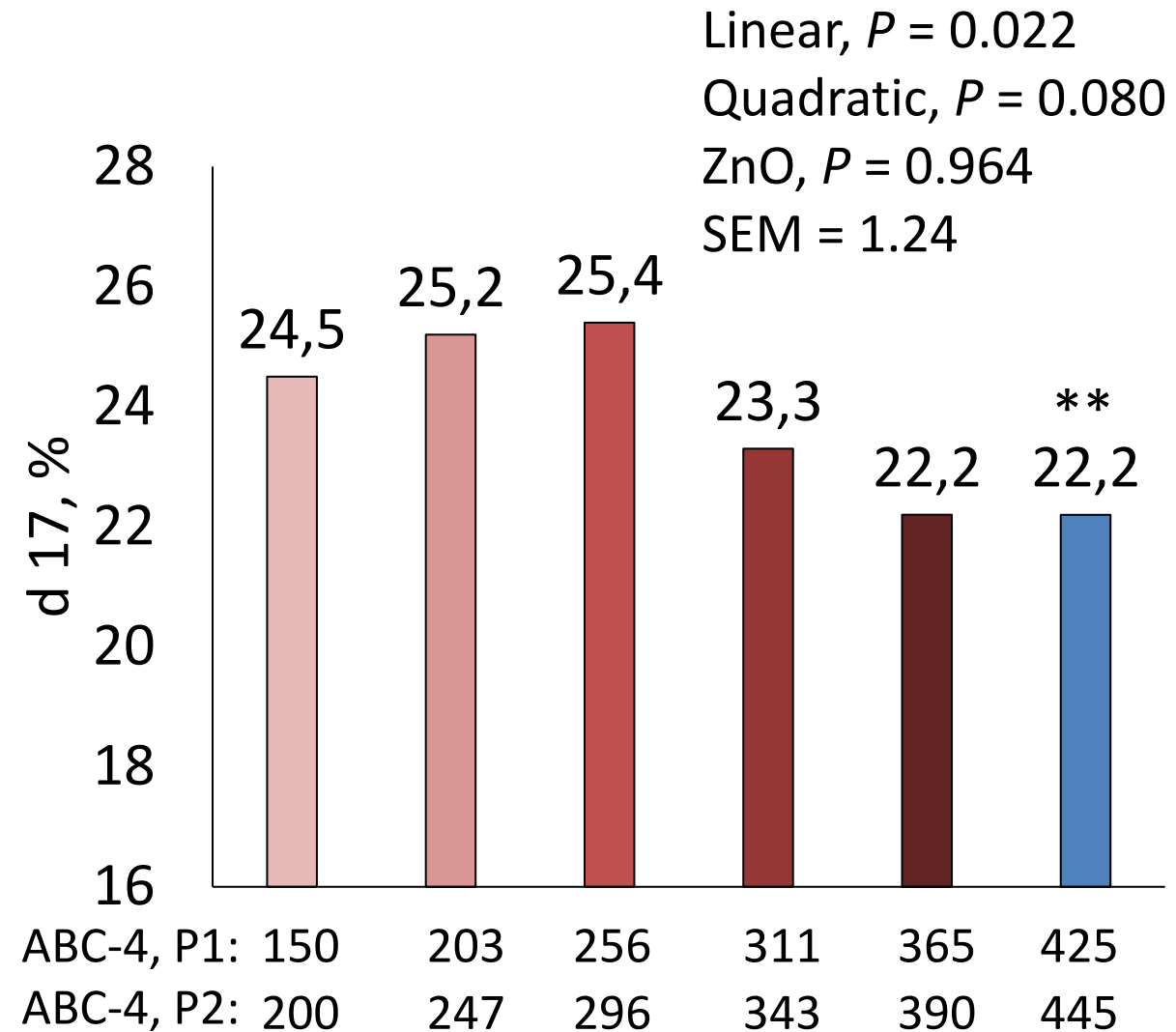
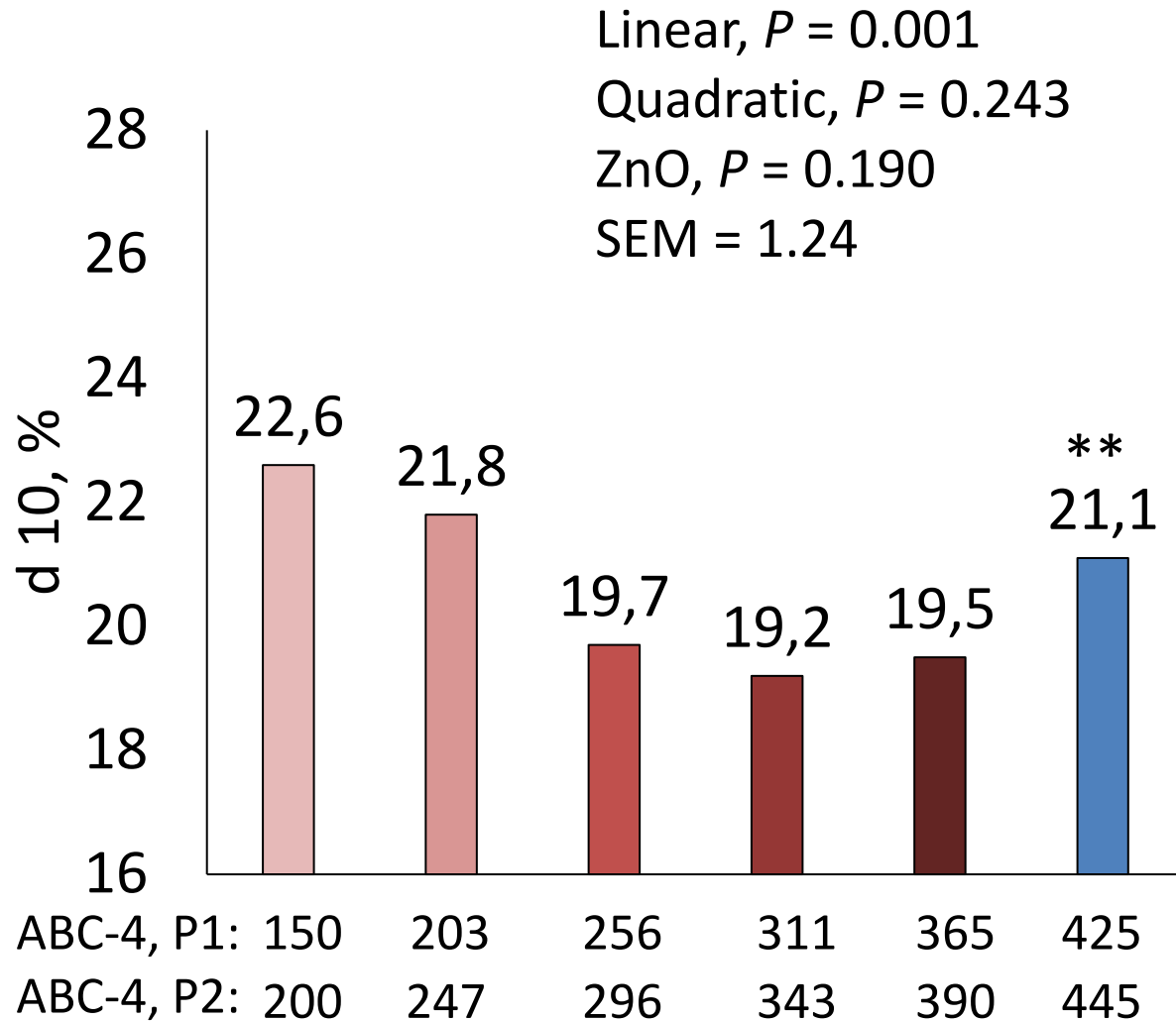
Effects of calcium carbonate level on d 0-14 F/G



Effects of ABC-4 on Growth Performance, d 0 to 23



Effects of ABC-4 on Fecal Dry Matter, d 10 and 17



What have we learned about getting pigs started in the nursery?

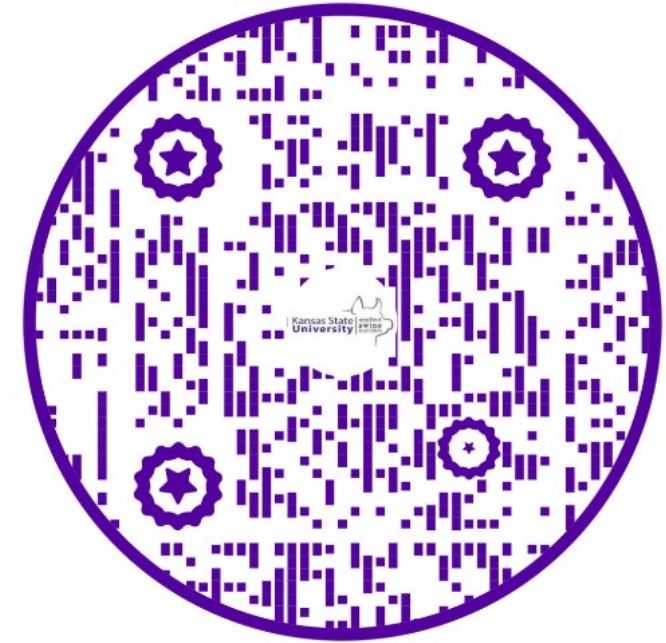
A multi-factorial approach is needed!

- Management
 - Increase wean age
 - Consider genetic impacts
 - Reduce management stressors (immunity, hygiene, housing, creep feeding, etc.)
- Dietary
 - Right feed to the right pigs at the right time
 - Reduced CP balanced with SID Lys:CP
 - ABC-4 (lower limestone, ingredient selection, acidifiers)
 - Fiber
 - Feed additives (phytase and other enzymes, copper, alternative Zn sources, etc.)

Is this the secret for increasing feed intake and weight gain?



Thank you



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