

CGC Efficiency Study Feeding Results

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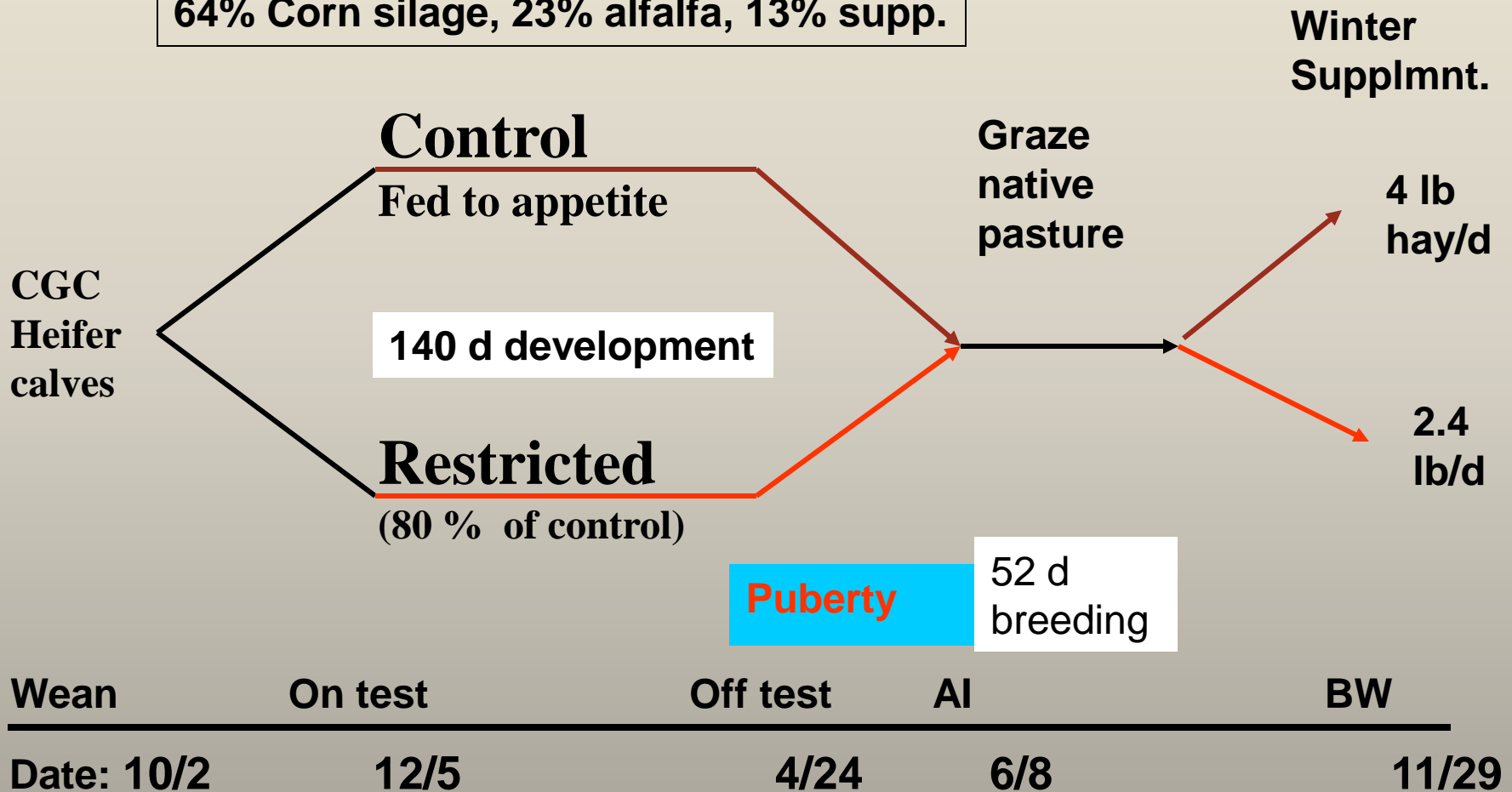


Acknowledgments

- Brooke Shipp
- Andy Roberts
- Mike MacNeil
- Lee Alexander
- Brad Eik
- Fort Keogh Farm & Feedlot Crew:
Benny Bryan, Justin Kiel, Diana Beeler,
Brian Lester, Lynn Scheid

Experiment Design for Heifer Calves

64% Corn silage, 23% alfalfa, 13% supp.



Calan gate individual feeding system

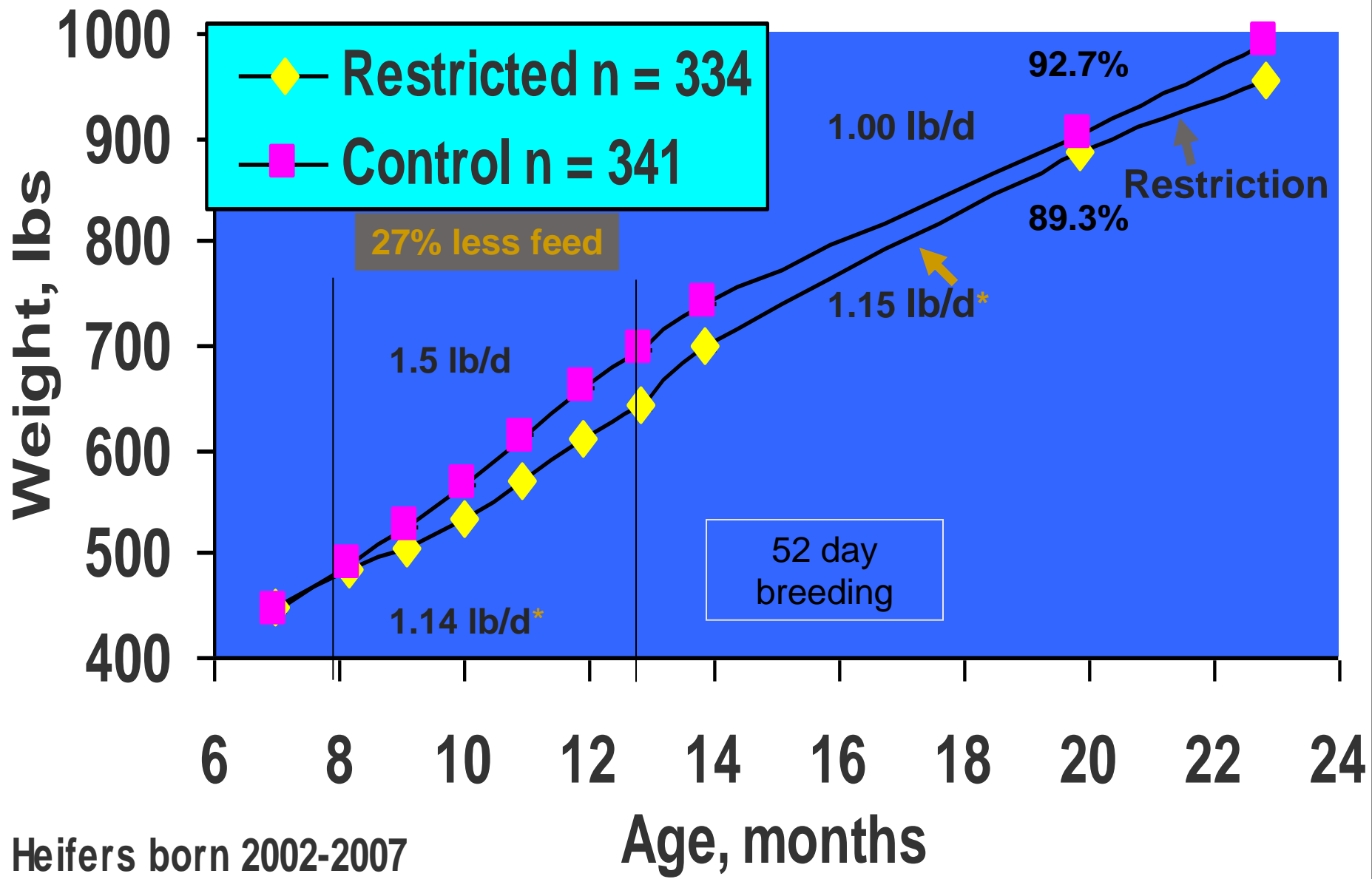
Dec – April, 140 days



Fed as Control or 20% Restricted

1/22/08

Fort Keogh Heifer Development Study



Background

- Bull calves also receive 2 levels of nutritional input
- Little work to assess feedlot performance and carcass characteristics

Objective

- Evaluate impacts of 2 levels of supplemental feed provided to cows during late gestation and 2 levels of feed provided to their sons during postweaning development on subsequent feedlot performance and carcass characteristics

Experimental Design



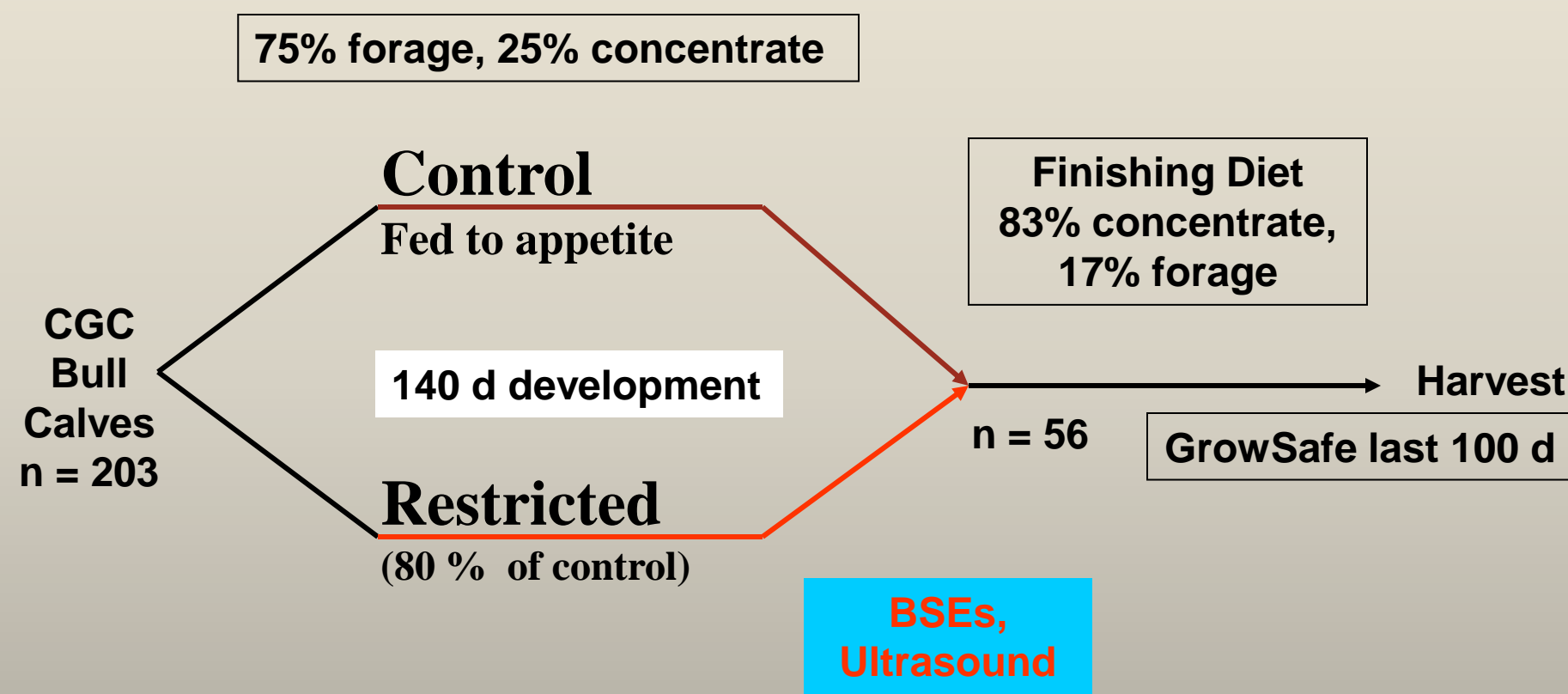
Cattle – Dam Treatments

- Stable composite population, **CGC**
 - 1/2 Red Angus, 1/4 Charolais, 1/4 Tarentaise
- 2 levels winter supplementation, based on quality and availability of dormant forage
 - Marginal (**MARG**)
 - Adequate (**ADEQ**)

Cattle – Dam Treatments

- Supplemented with alfalfa every other day
 - 6 Dec to 17 Feb
 - 4 (ADEQ) or 2.5 (MARG) lb/d equivalent
- Moved to calving pastures
 - 22 or 18 lb/d alfalfa hay

Experiment Design for Bull/Steer Calves

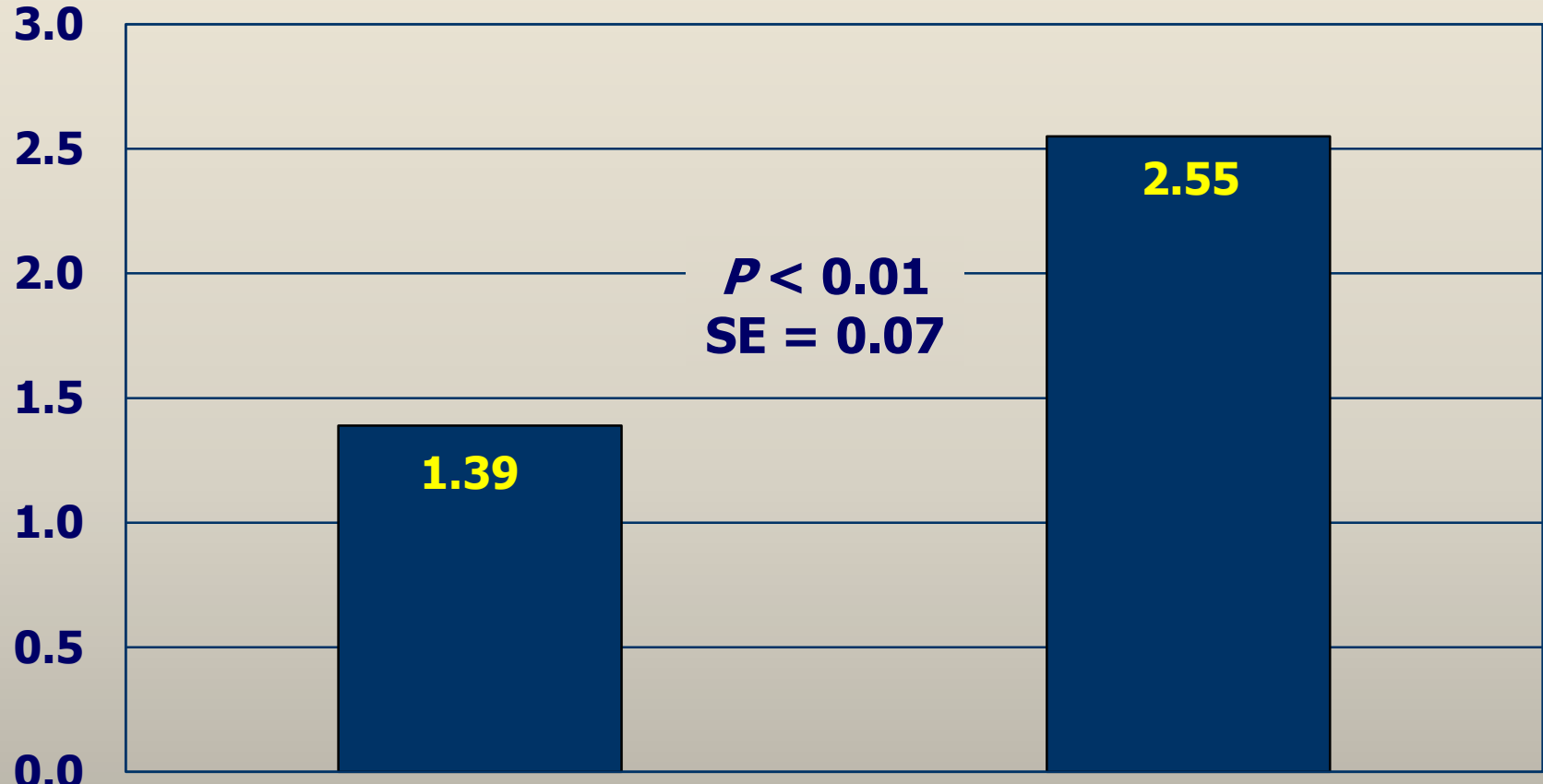


Wean	On test	Off test	Band castrate	Harvest
Date: mid-Oct	mid-Nov	early May	early June	11/18

Results – Postweaning Phase



Postweaning Average Daily Gain (lb/d)

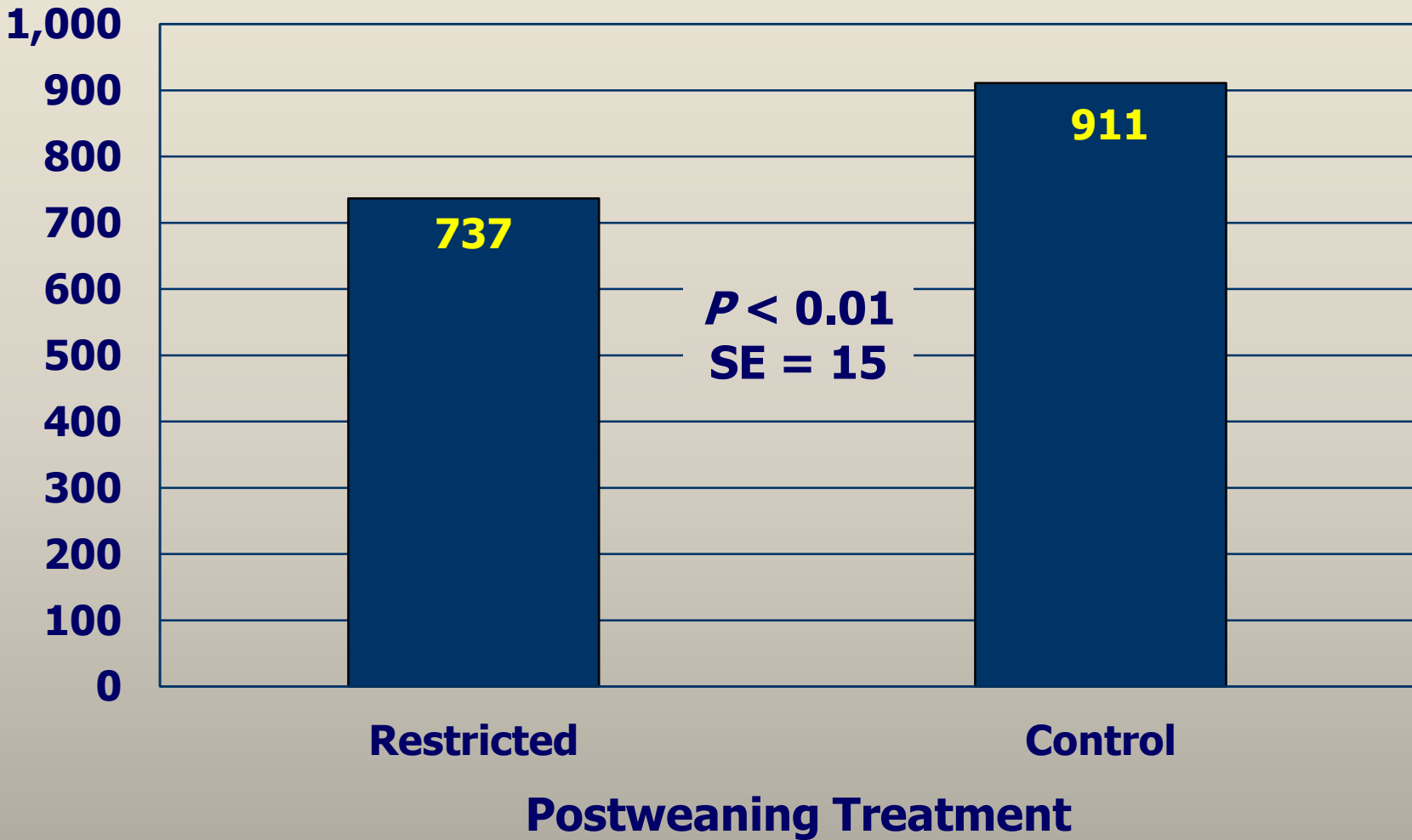


Restricted

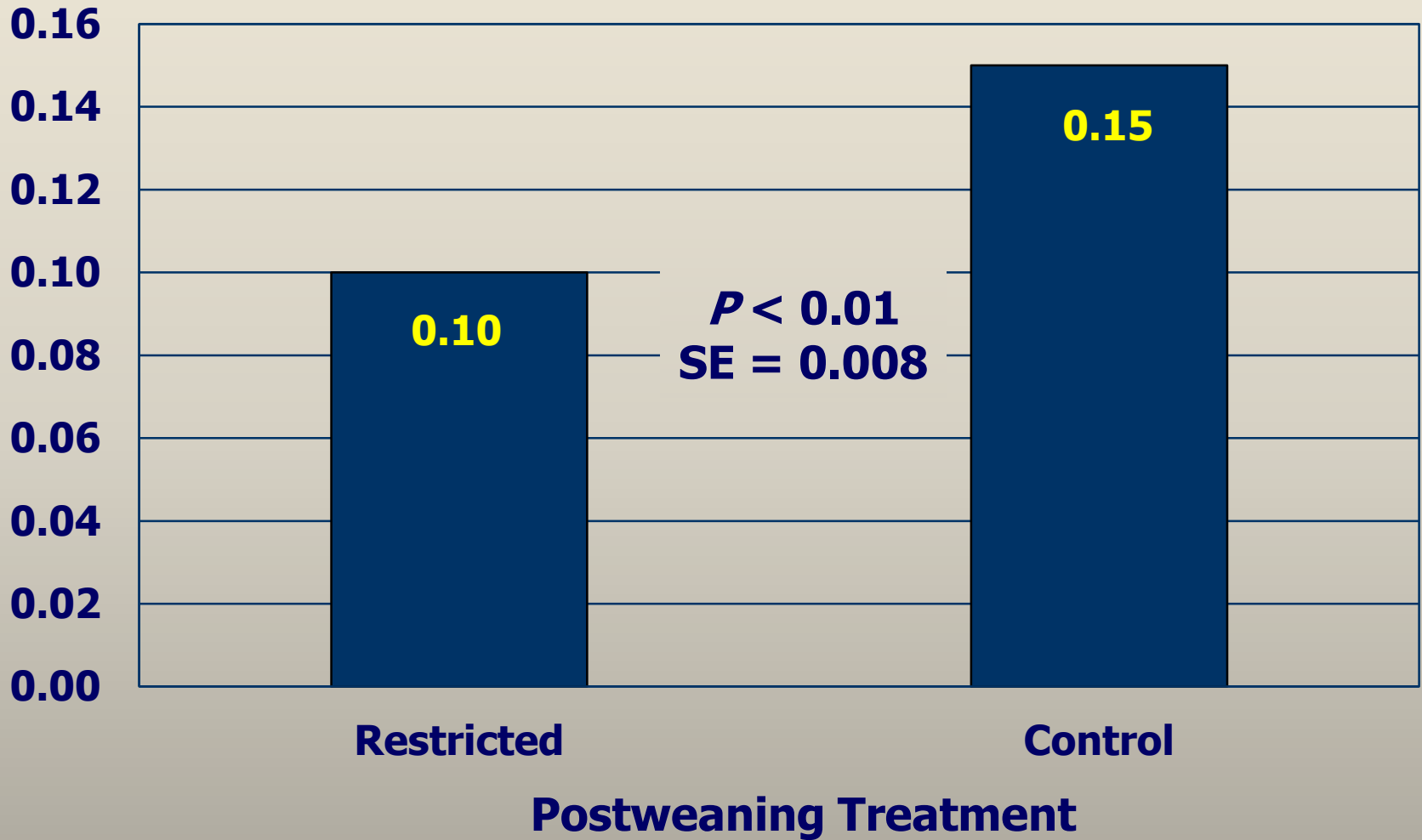
Control

Postweaning Treatment

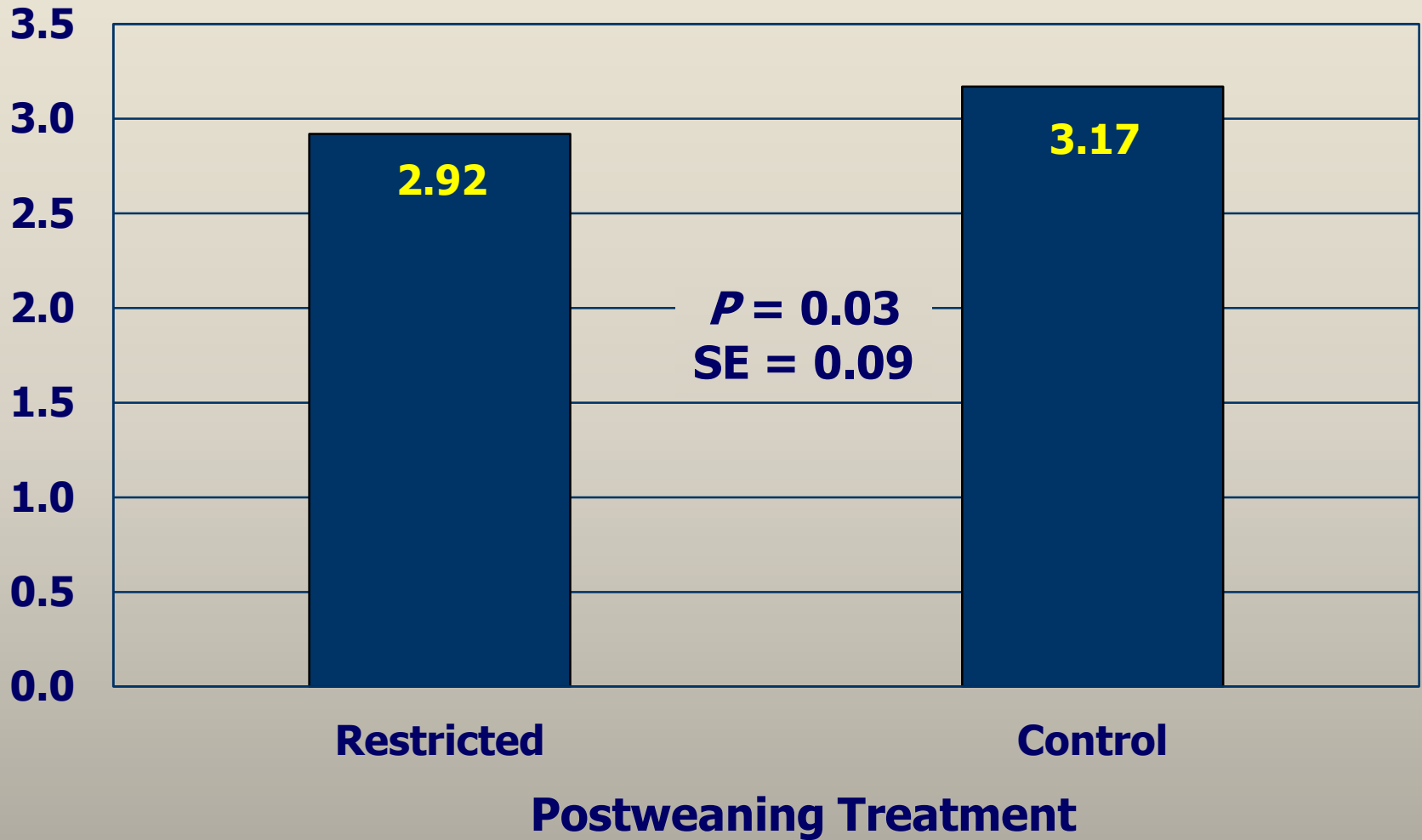
Postweaning Final Body Weight (lb)



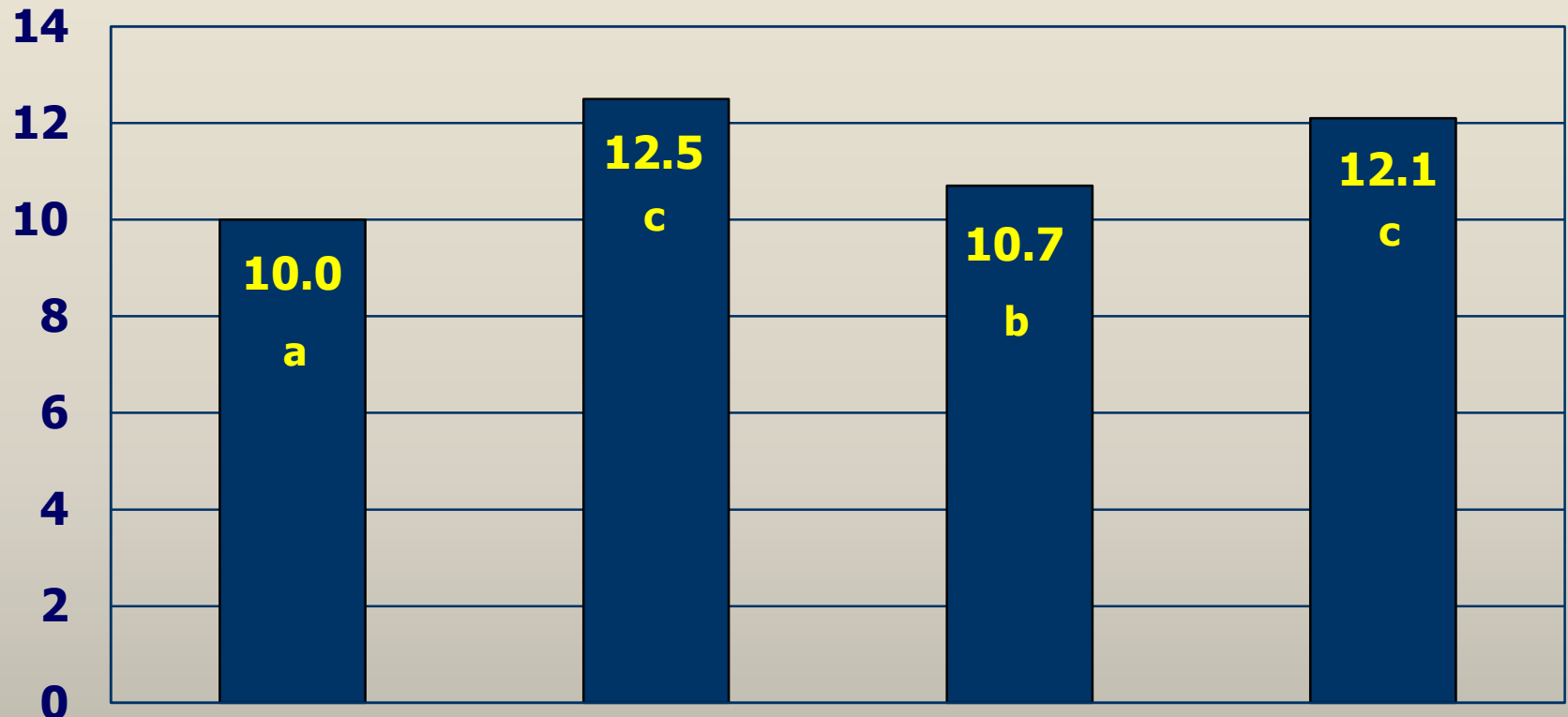
Postweaning Fat Thickness (in)



Postweaning IMF Percentage



Dam x Postweaning Interaction: REA (in²)



**MARG-
Restricted**

MARG-Control

**ADEQ-
Restricted**

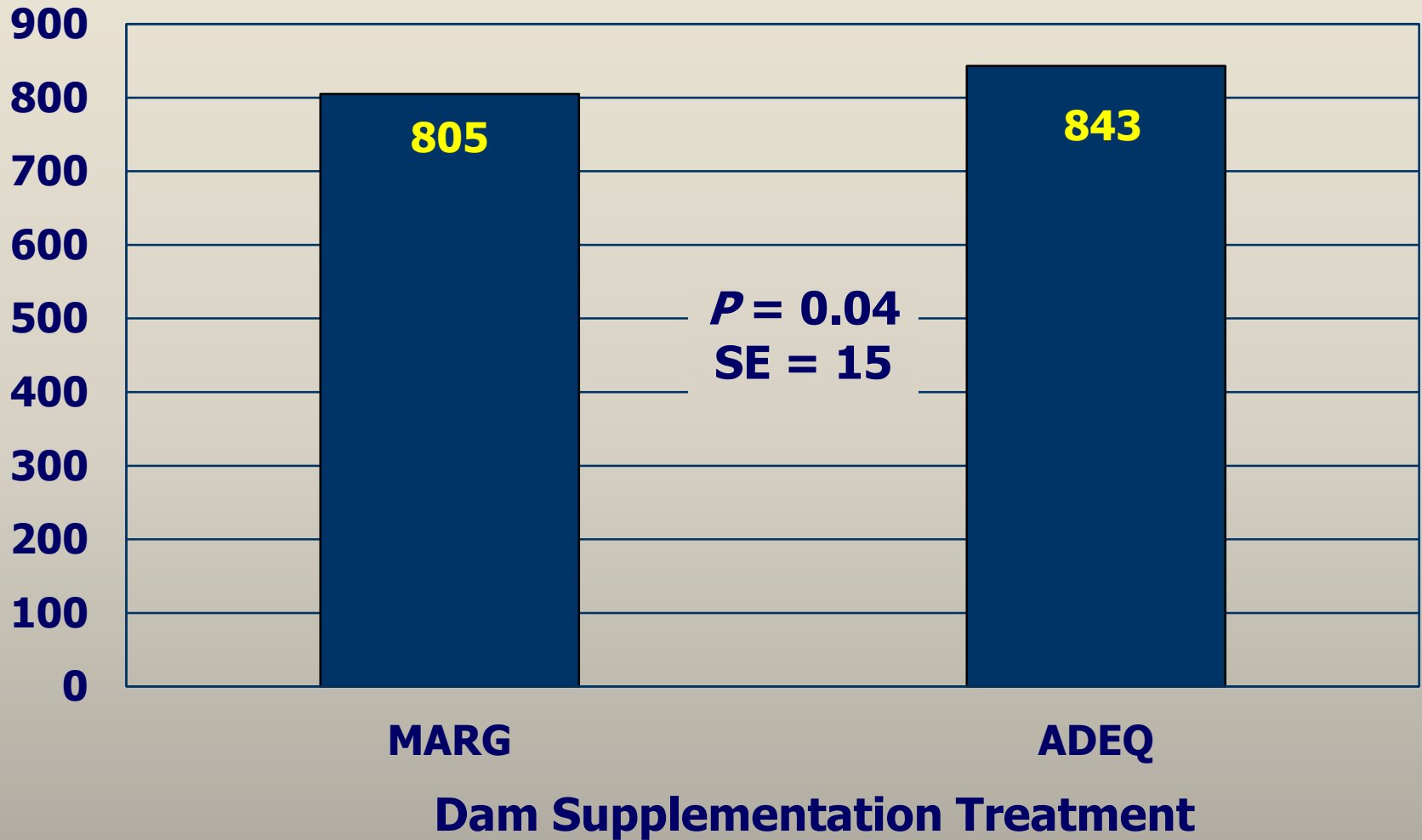
ADEQ-Control

Dam x Postweaning Treatment

***P* = 0.03**

SE = 0.30

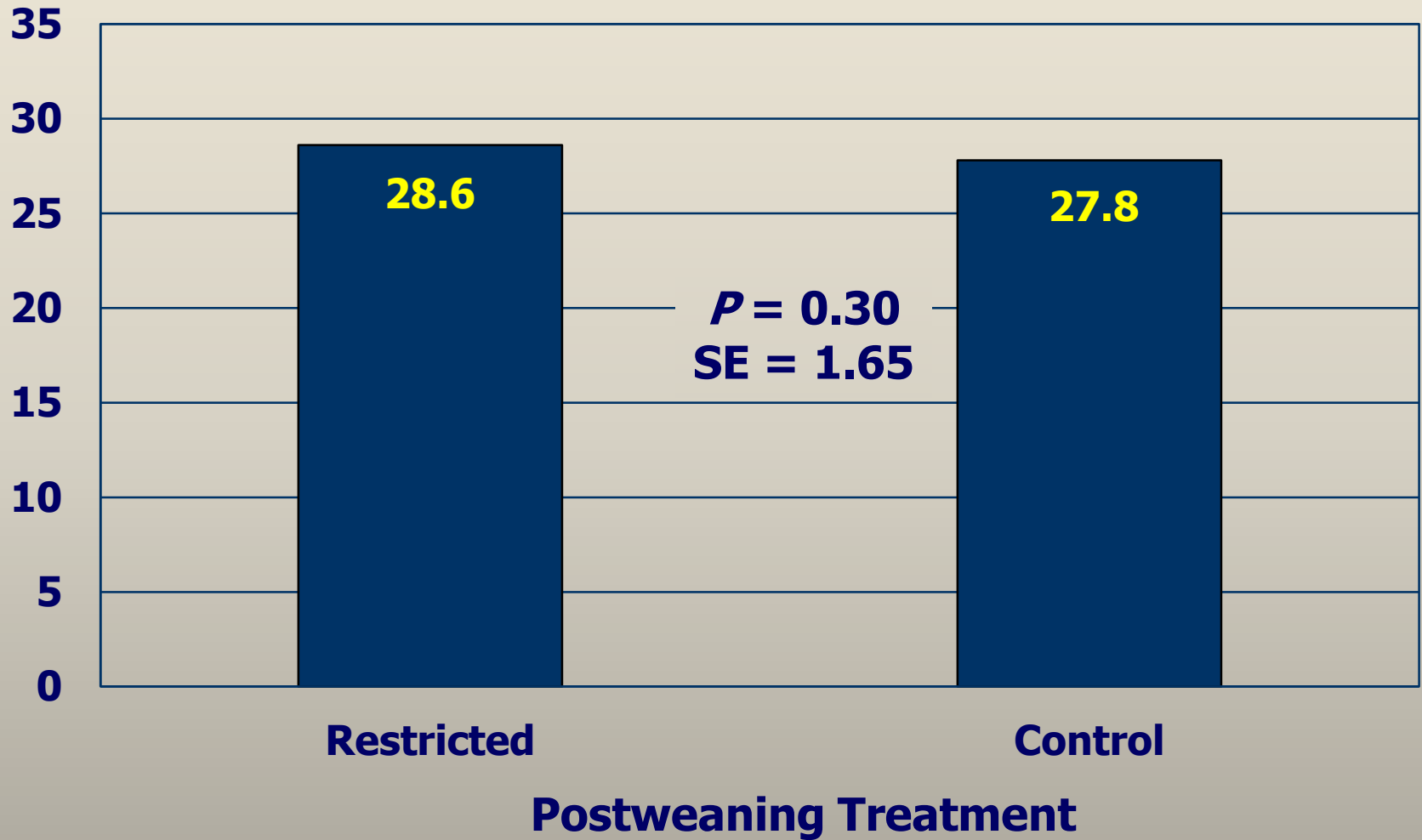
Dam Treatment Influenced Postweaning Final BW



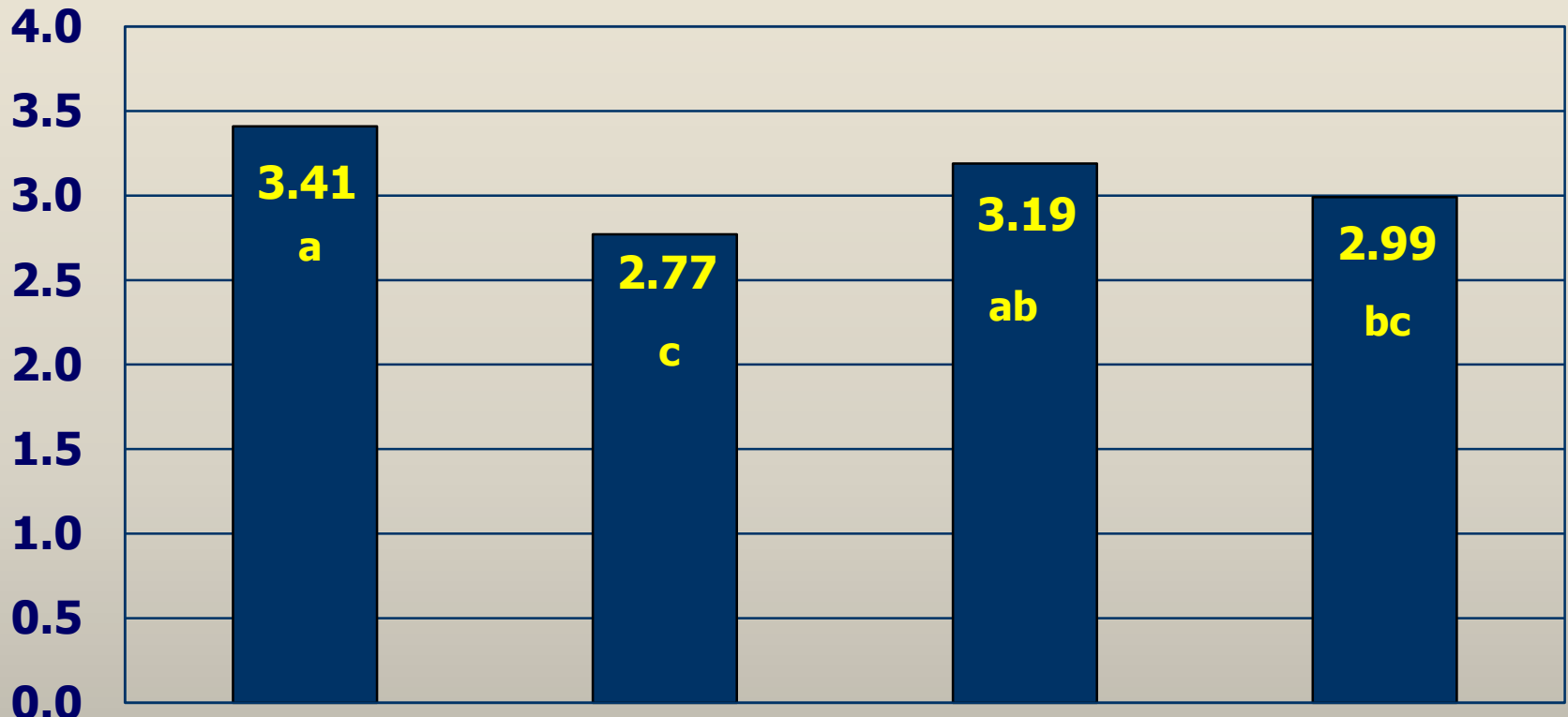
Results – Finishing Phase and Carcass Data



Finishing Phase Feed Intake (lb/d)



Dam x Postweaning Interaction: Finishing Phase ADG



**MARG-
Restricted**

MARG-Control

**ADEQ-
Restricted**

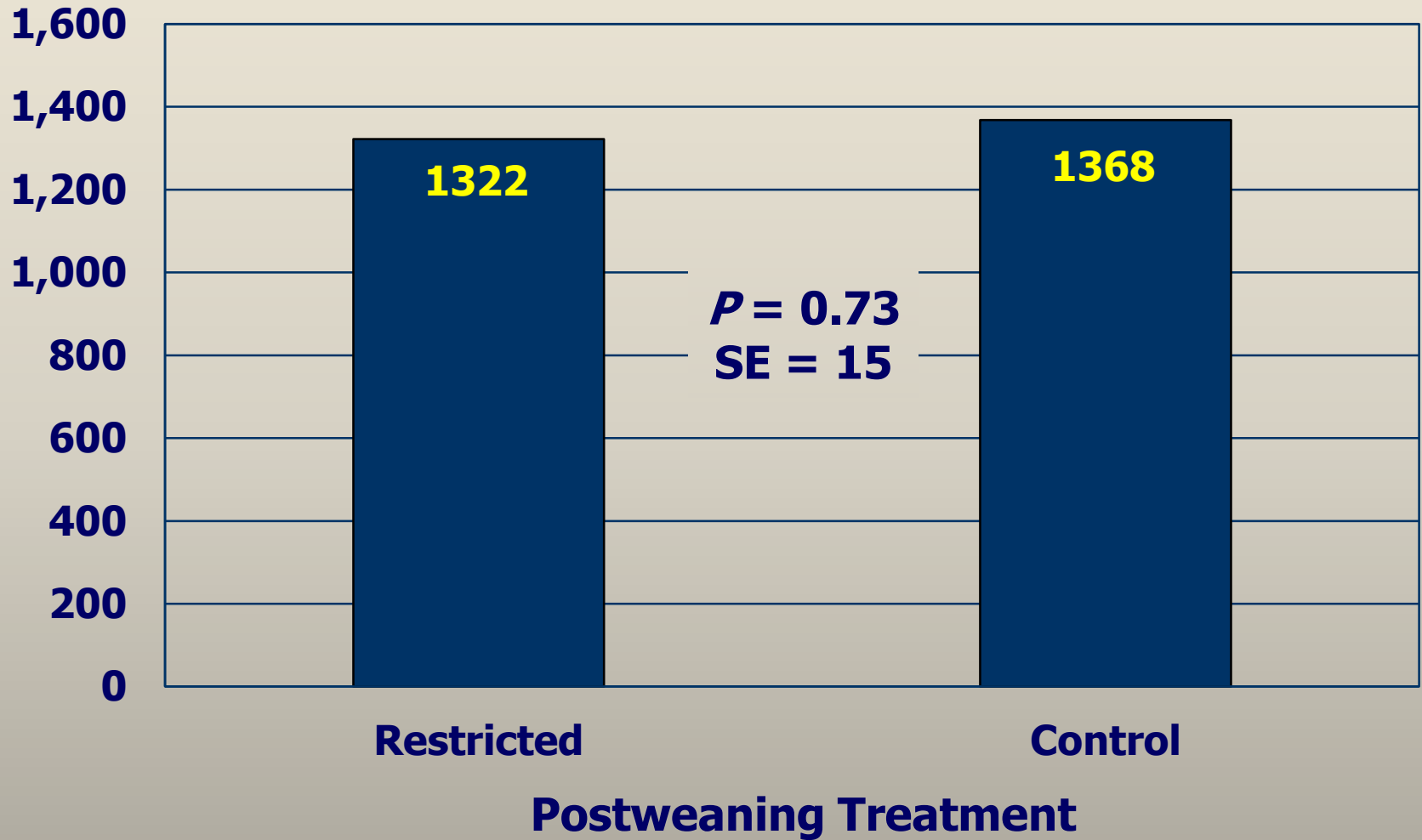
ADEQ-Control

Dam x Postweaning Treatment

***P* = 0.03**

SE = 0.11

Finishing Phase Final Body Weight (lb)



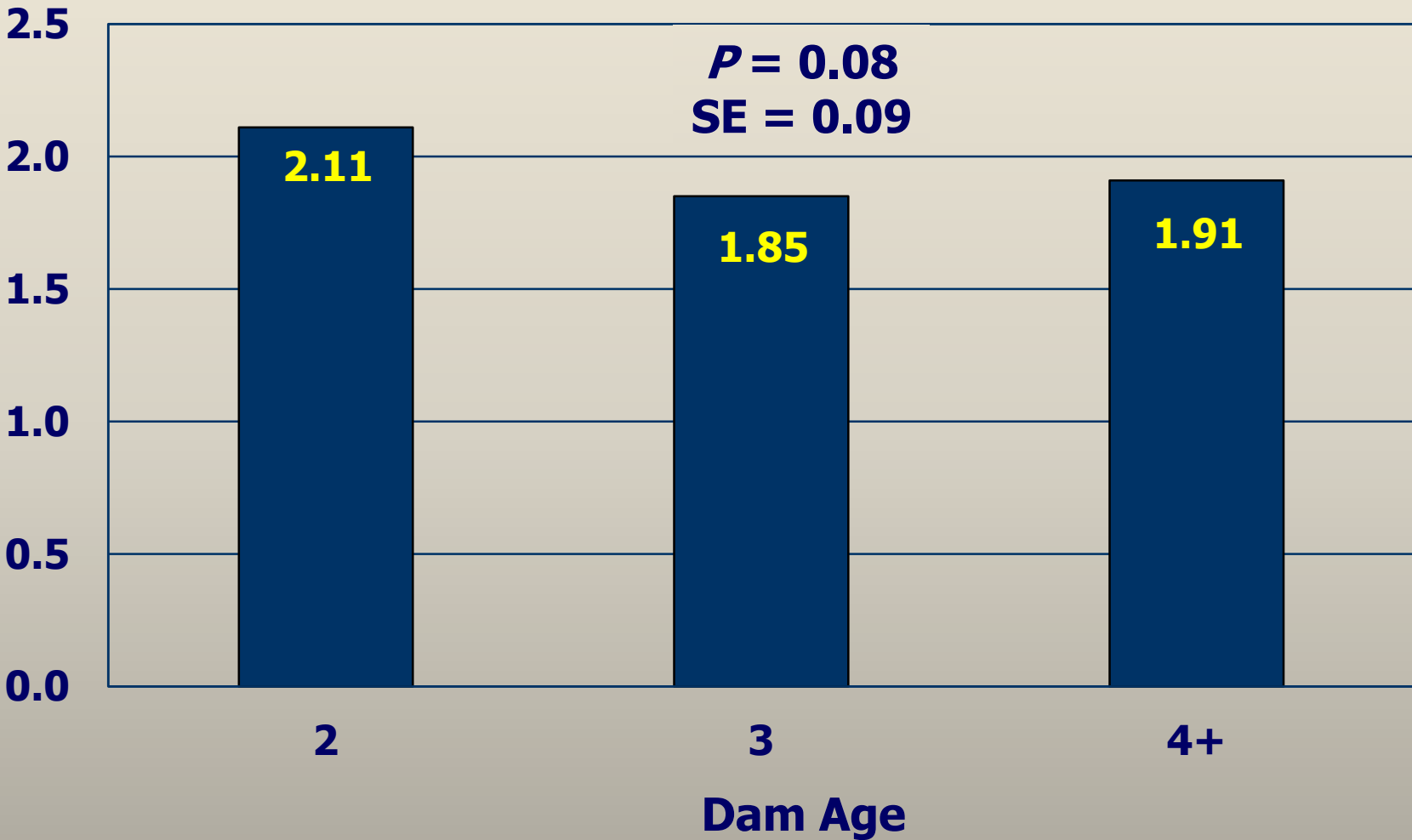
Postweaning Treatment Impacts on Carcass Characteristics

Item	Restricted	Control	SE	P-value
Hot carcass wt, lb	785	823	11	0.67
Back fat thickness, in	0.44	0.47	0.02	0.93
LM area, in ²	13.4	13.7	0.21	0.93
IMF percentage	5.86	5.69	0.21	0.63
Yield grade	2.69	2.81	0.08	0.70

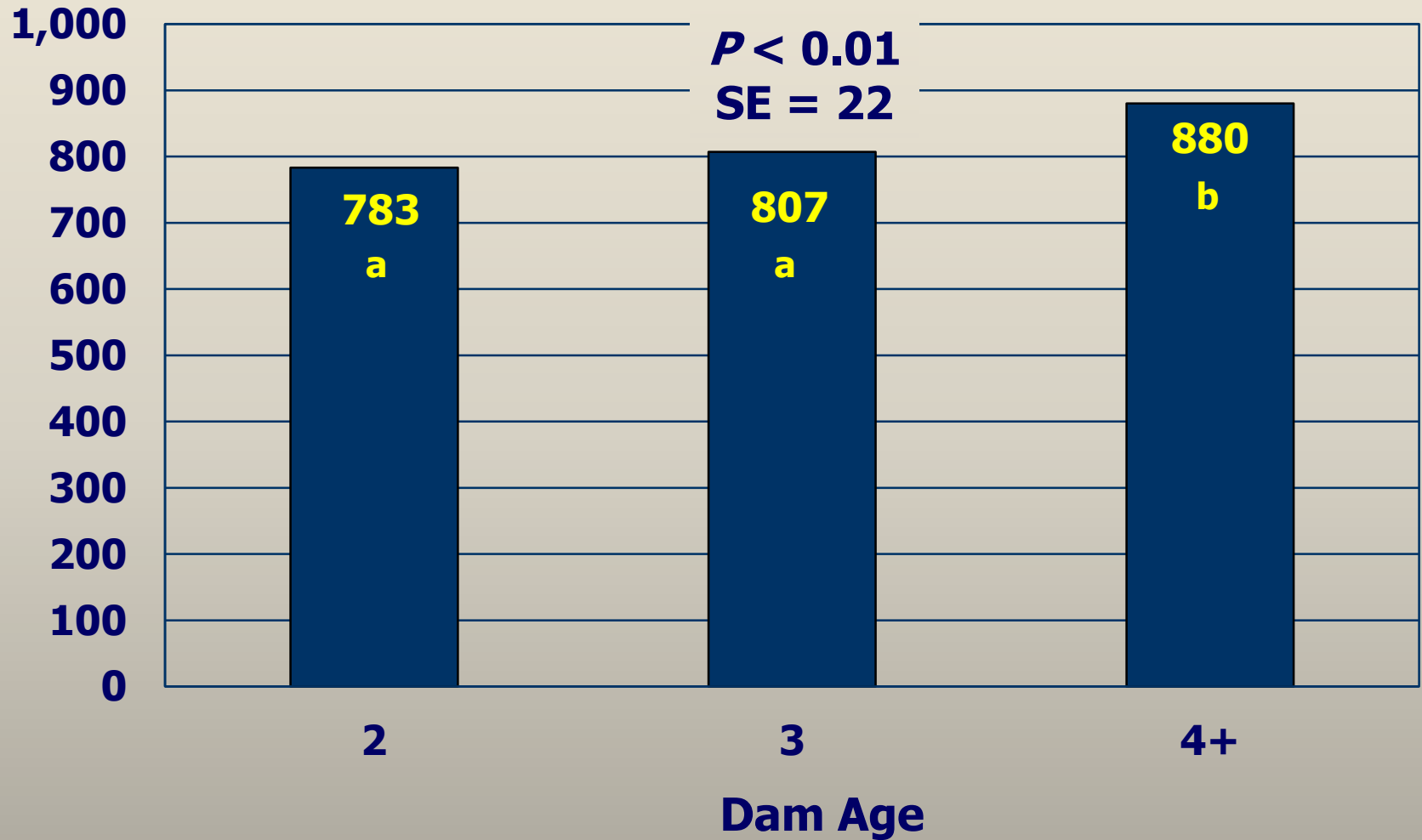
Dam Age Effects



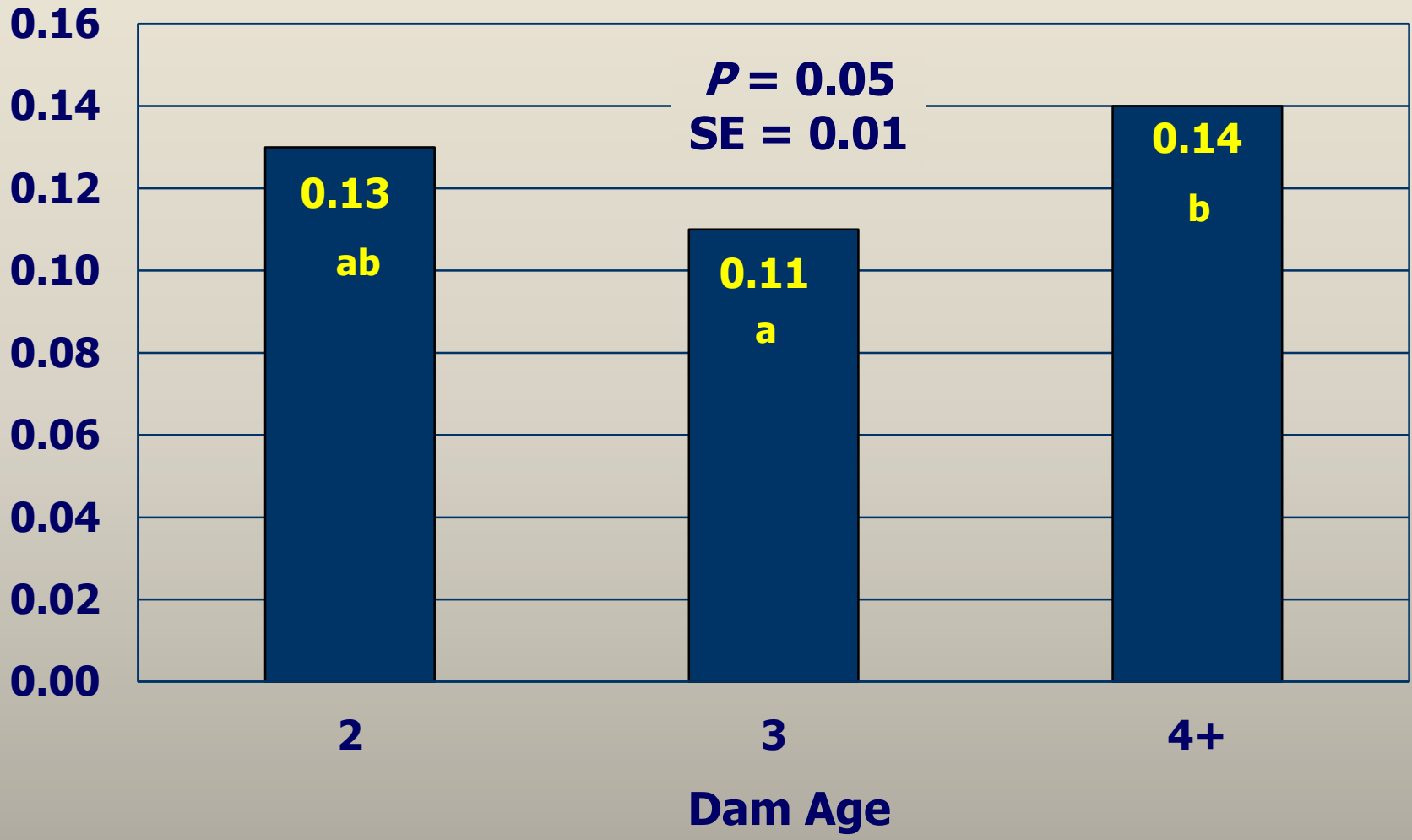
Dam Age: Postweaning ADG (lb/d)



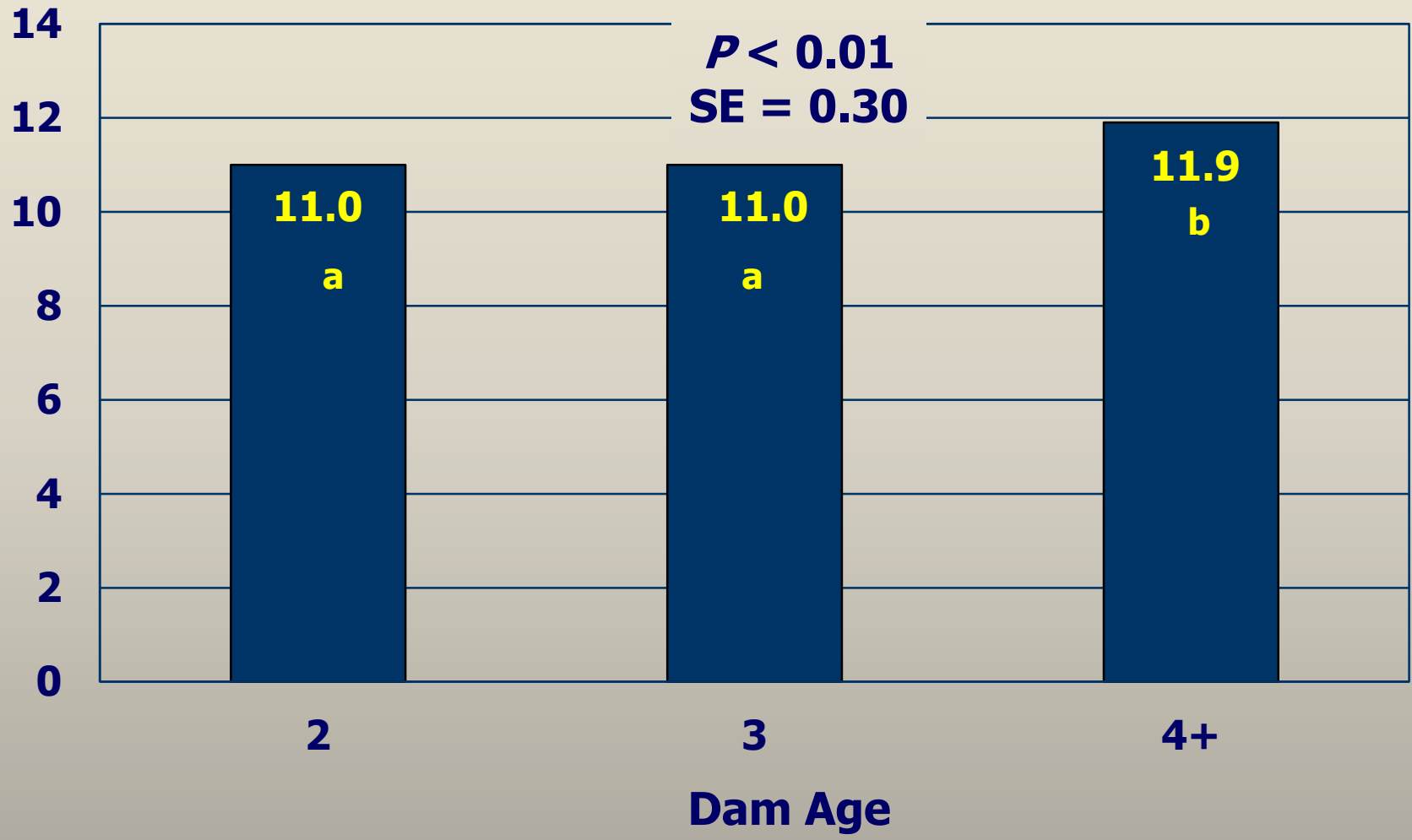
Dam Age: Postweaning Final Body Weight



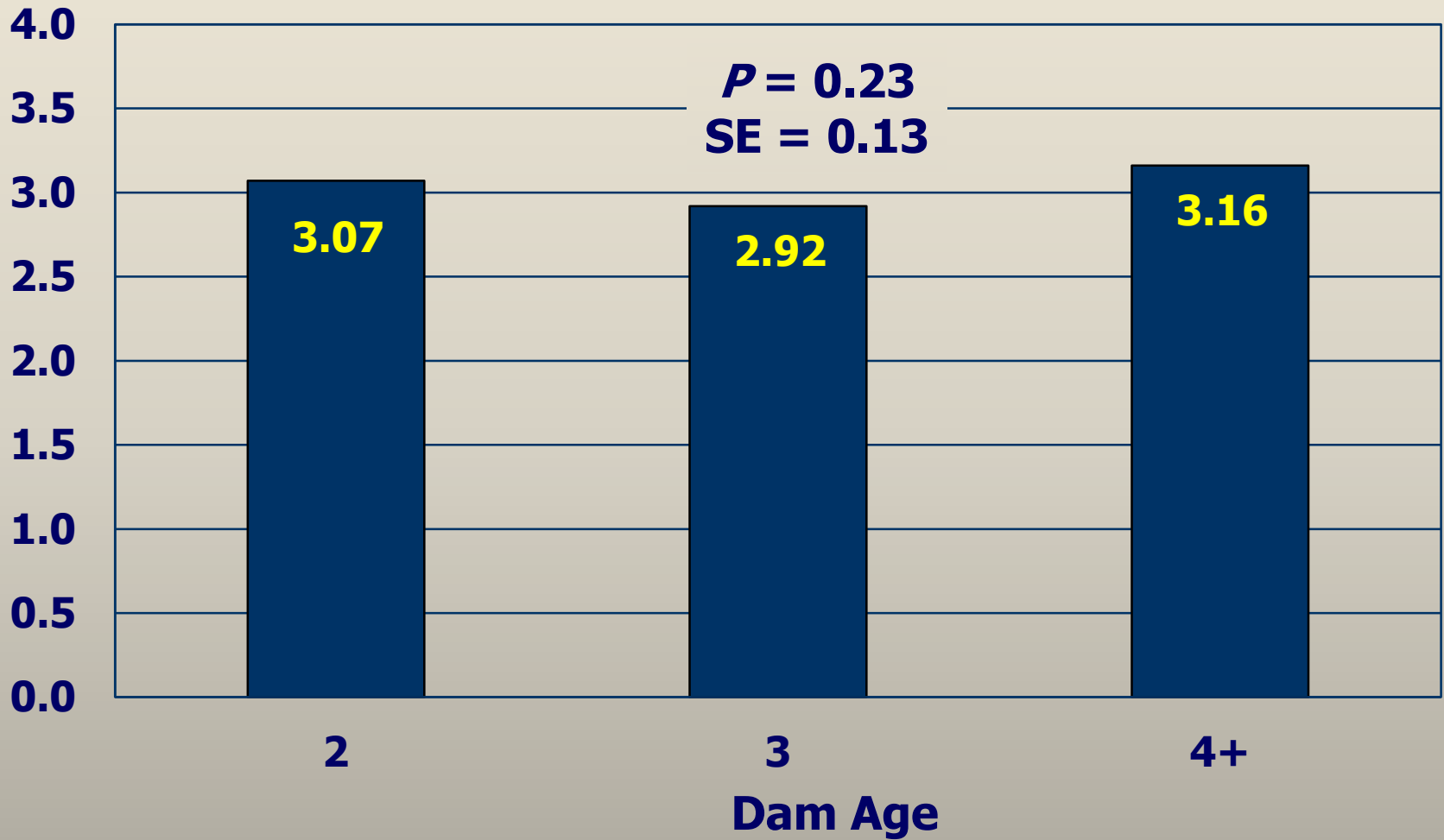
Dam Age: Postweaning Fat Thickness (in)



Dam Age: Postweaning REA (in²)



Dam Age: Postweaning IMF Percentage



Dam Age Impacts on Finishing Phase Measurements

Item	2	3	4+	SE	P-value
Feed intake, lb/d	27.1	28.4	29.0	1.03	0.23
Finishing ADG, lb/d	3.12	3.10	3.06	0.11	0.81
Final BW, lb	1344	1329	1362	20	0.38

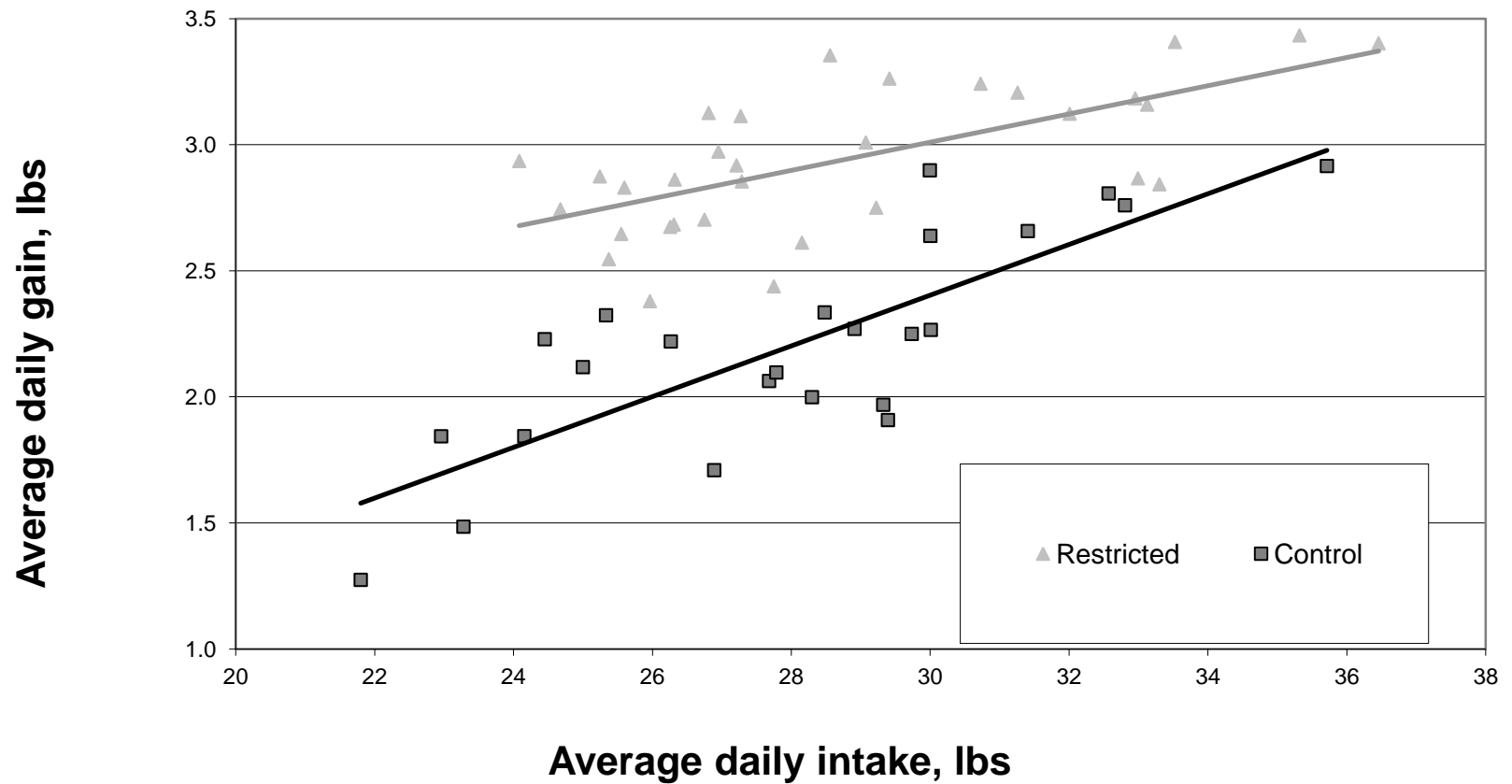
Dam Age Impacts on Carcass Characteristics

Item	2	3	4+	SE	P-value
Hot carcass wt, lb	803	790	818	13	0.18
Back fat thickness, cm	0.45 ^{ab}	0.41 ^a	0.50 ^b	0.02	< 0.01
LM area, cm ²	13.5	13.5	13.7	0.29	0.71
IMF percentage	6.14	5.46	5.72	0.28	0.16
Yield grade	2.76	2.61	2.88	0.12	0.15

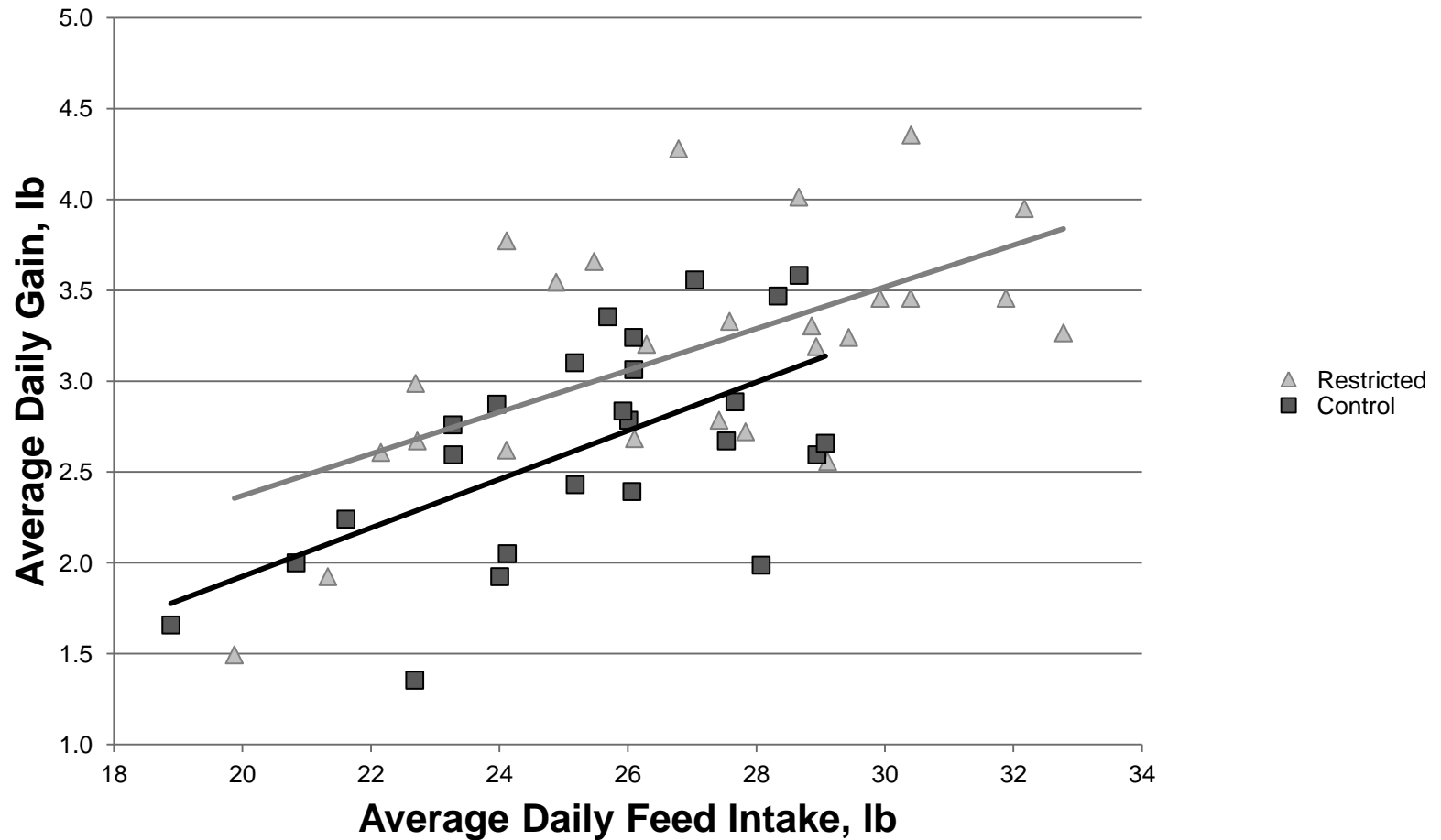
Summary

- Calves restricted during postweaning development gained more efficiently and had similar carcass characteristics to their ad-libitum fed counterparts

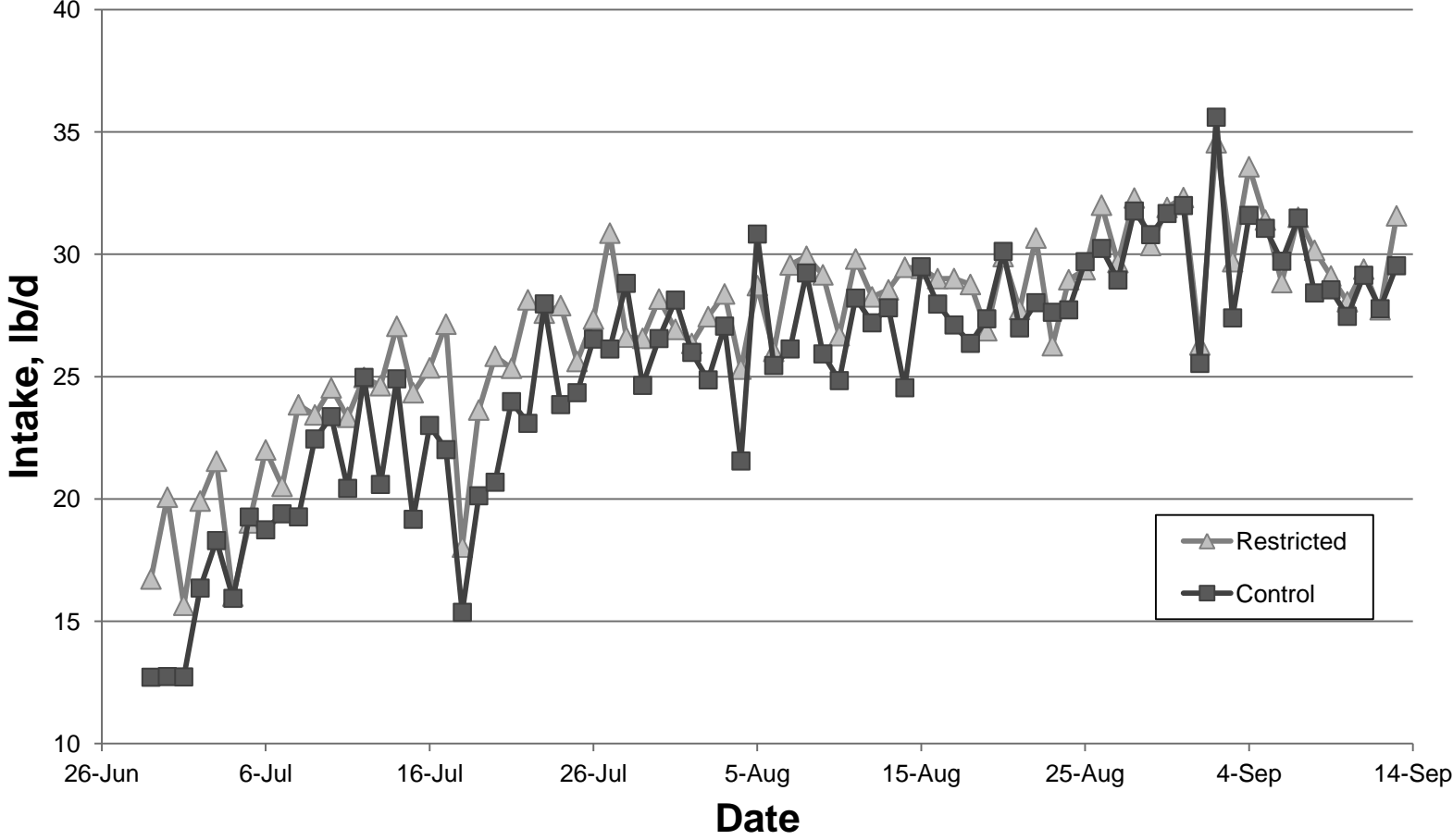
2010 Gain versus Intake



2011 Gain versus Intake



2011 Intakes Over Time



Questions

