KSU Applied Swine Nutrition Team

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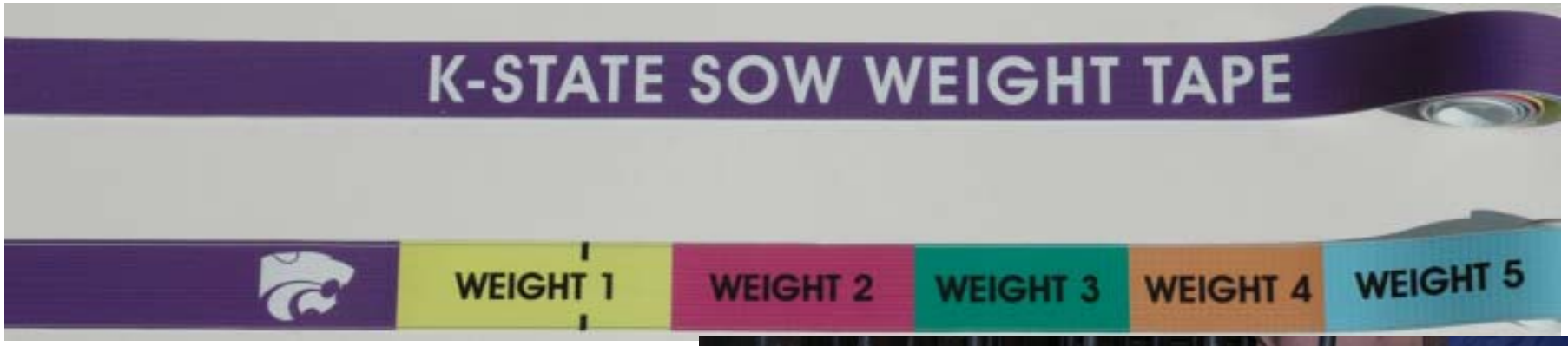
Flank measurement to set feeding levels



$BW^{0.333}$ in kg =

0.0511 x Flank-to-flank, cm + 0.5687

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Using the weight tape

K-STATE

Feeding level from d 0 to 101, lb/day

Flank to flank, inches	Estimated weight, lb	Backfat at breeding, mm			
		9 to 11	12 to 14	15 to 17	> 18
< 35.5	250 to 325	5.0	4.4	3.9	3.4
35.6 to 38.3	325 to 400	5.5	5.0	4.4	3.9
38.4 to 41.1	400 to 475	5.9	5.4	4.9	4.3
41.2 to 43.9	475 to 550	6.4	5.9	5.4	4.8
> 44.0	550 to 650	6.9	6.4	5.8	5.3

- Assumes diet with 1.5 Mcal ME/lb
- All sows fed additional 2 lb/d from d 102 to 115
- Sows maintained at or above 68°F

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				>80%	
				3.9	
				4.4	
				4.9	
				5.4	
				5.8	

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- All sows fed additional 2 lb/d from d 102 to 115
- Sows maintained at or above 68°F

Gestation Feeding

- Using the weight tape with out the back fat measurements may be a less labor intensive method for feeding sows.
- No data on long term effects on sow weight and back fat gain.

K-STATE


7

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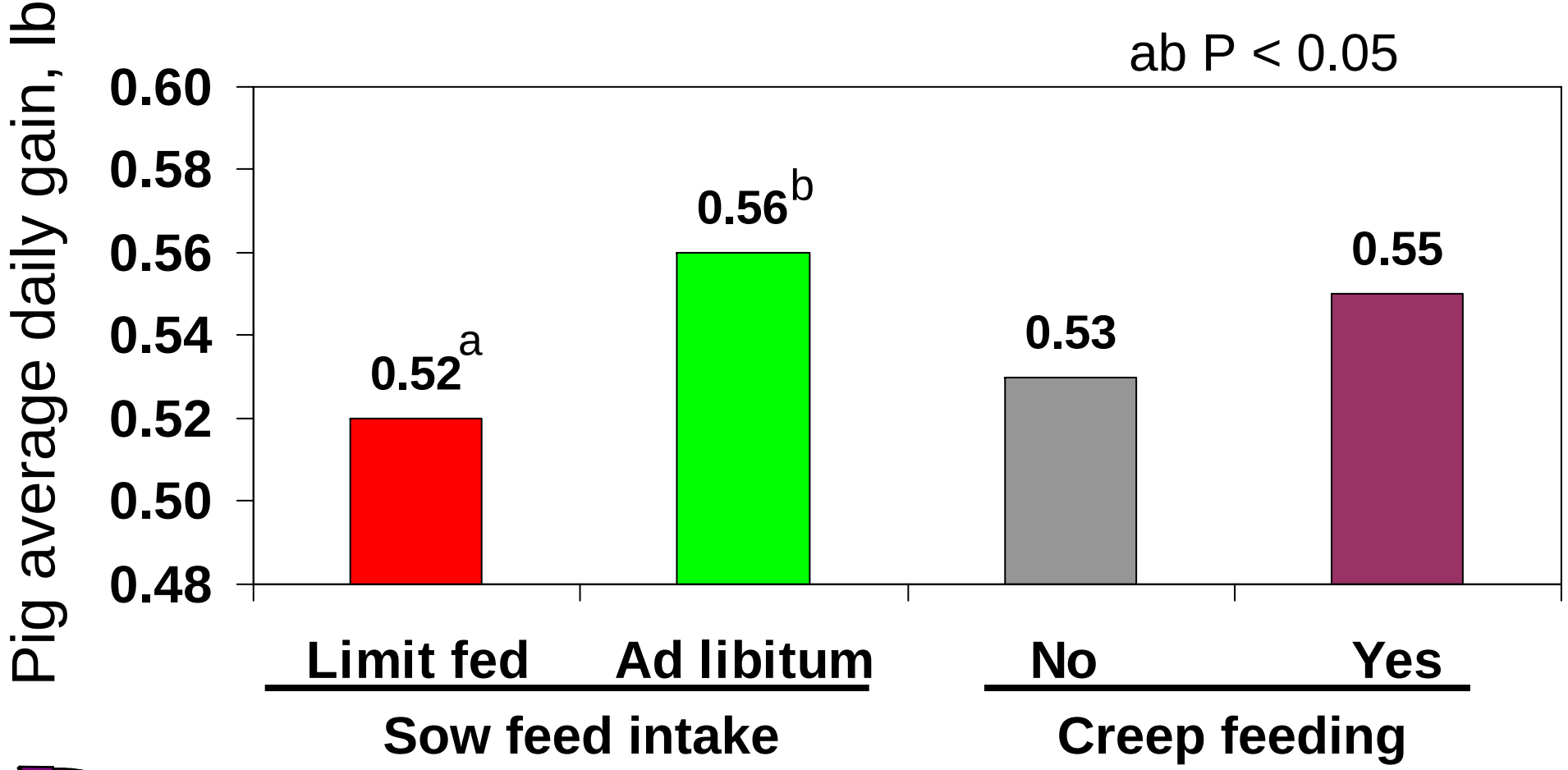
Effects of Lactation Feeding Level and Creep Feeding on Pig ADG

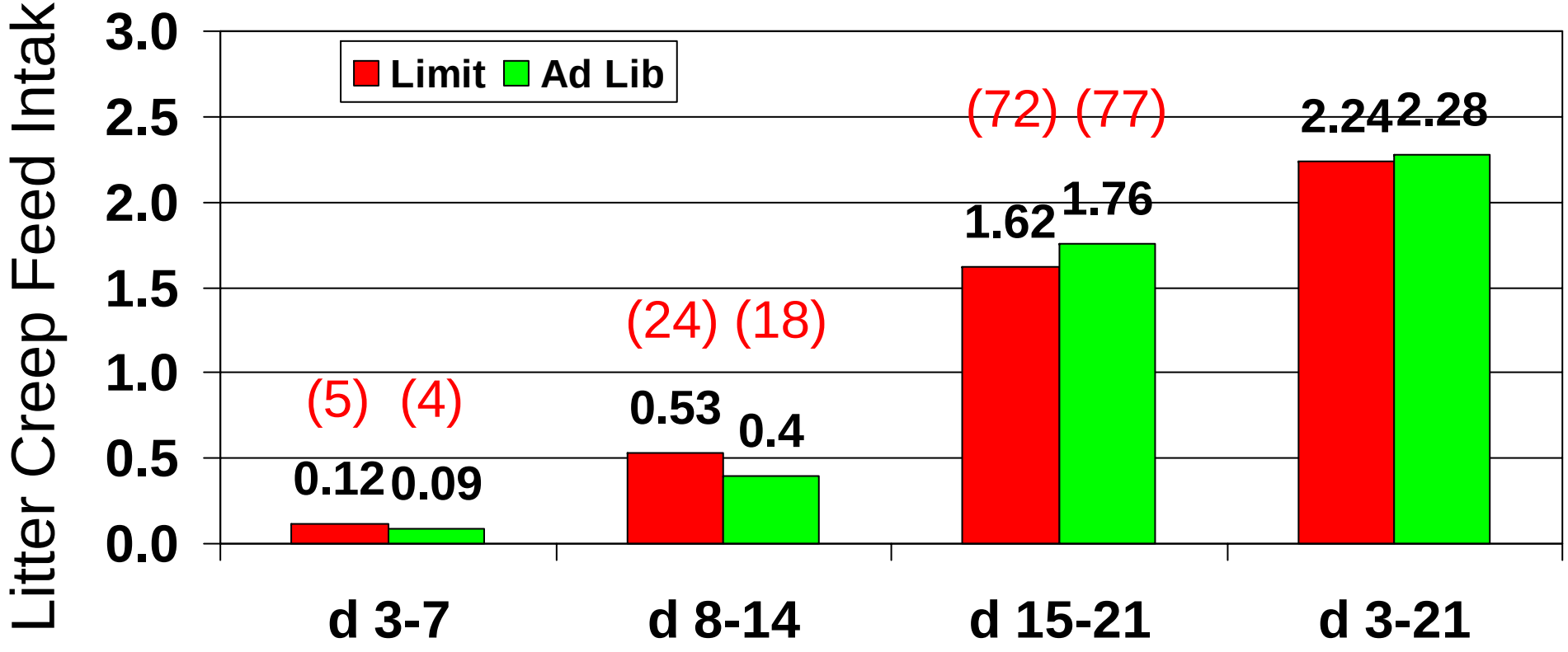


K-STATE

Sulabo et al., 2007

Effects of Lactation Feeding Level on Litter Creep Feed Intake

(% of total litter creep intake in parentheses)

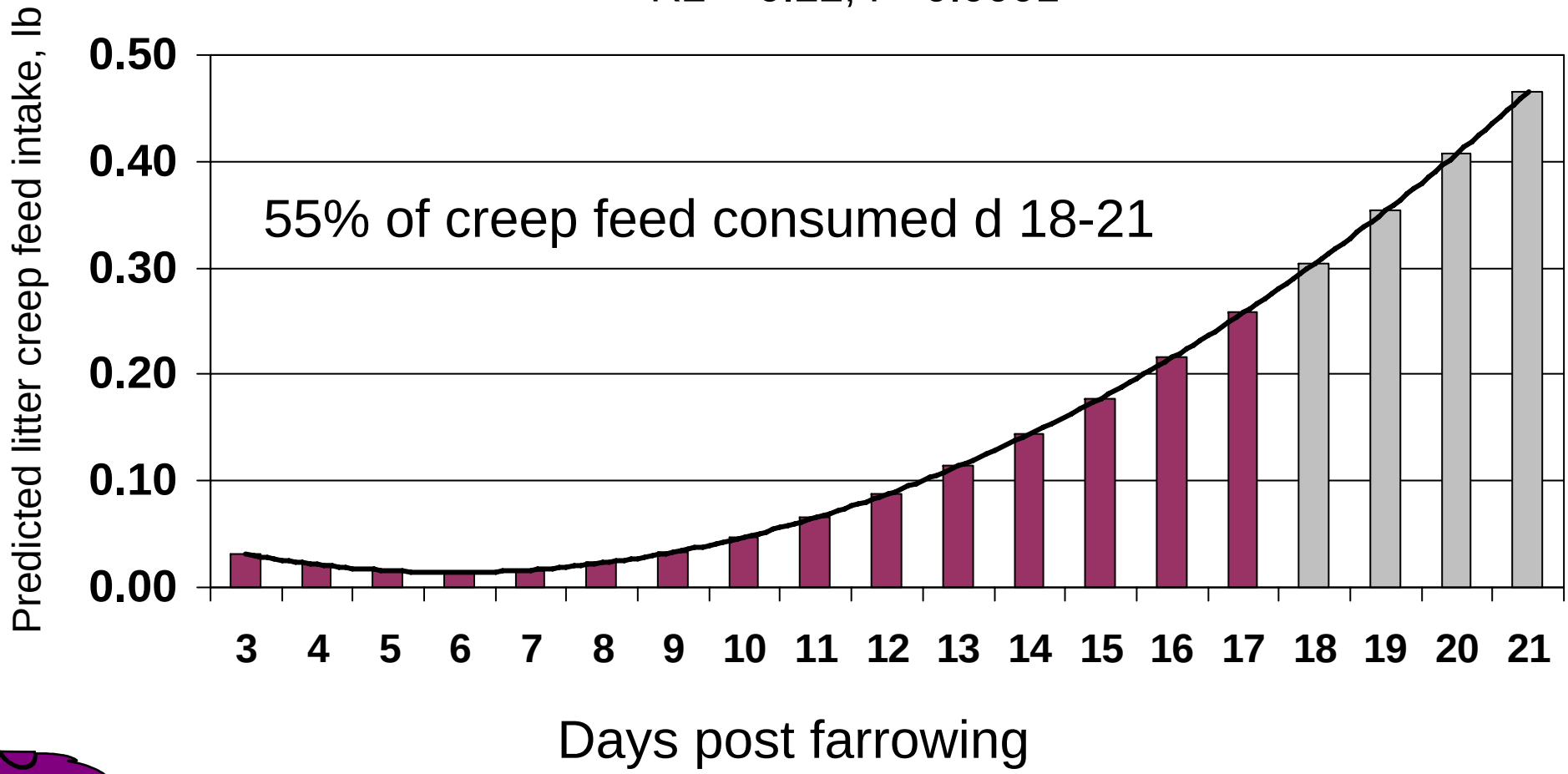


K-STATE

Sulabo et al., 2007

Predicted Daily Litter Creep Feed Intake

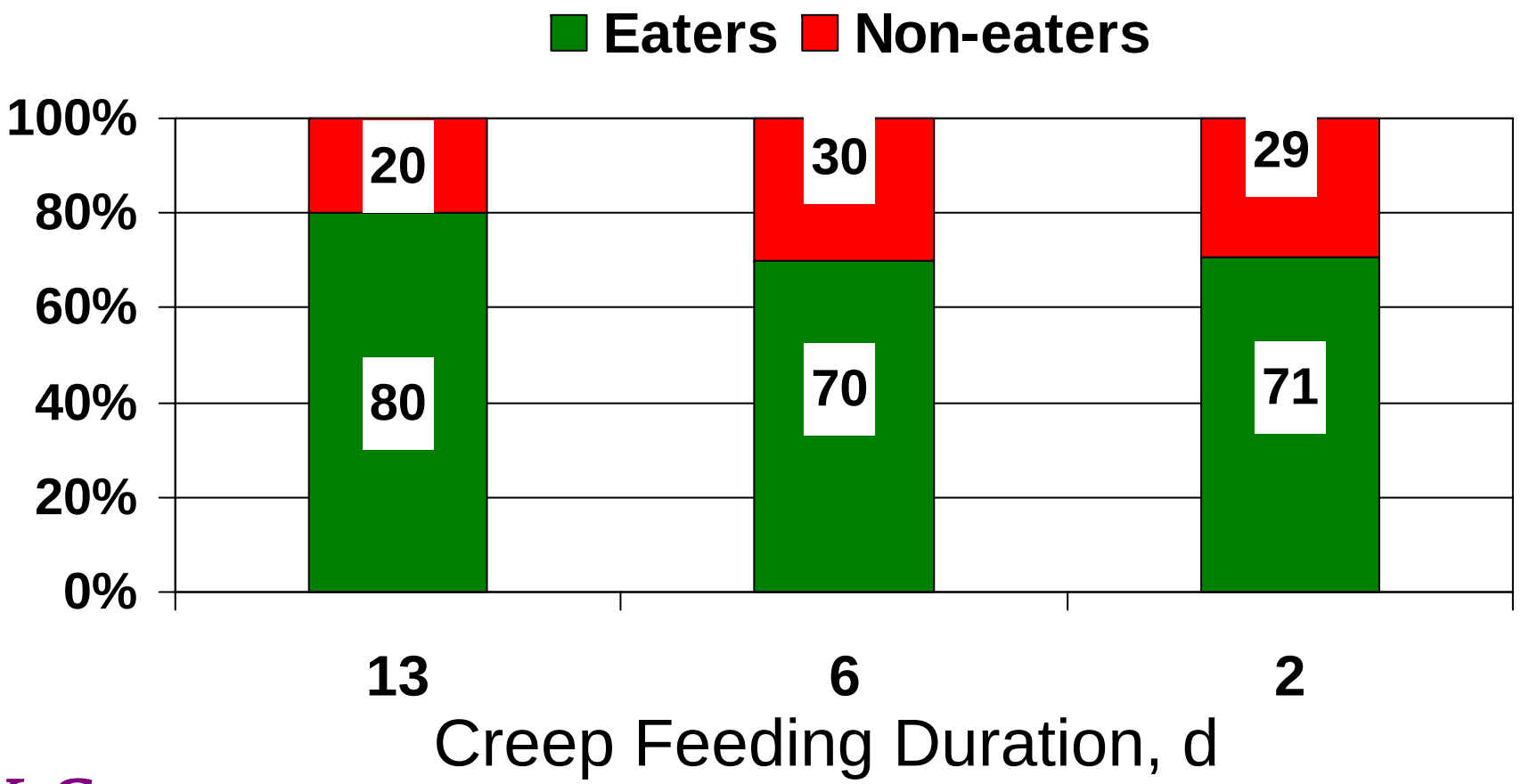
Litter creep intake (lb/d) = 0.00198 x Age, d^2 - 0.0155 x Age, d + 0.0442
R2 = 0.22, P<0.0001



K-STATE

Sulabo et al., 2007

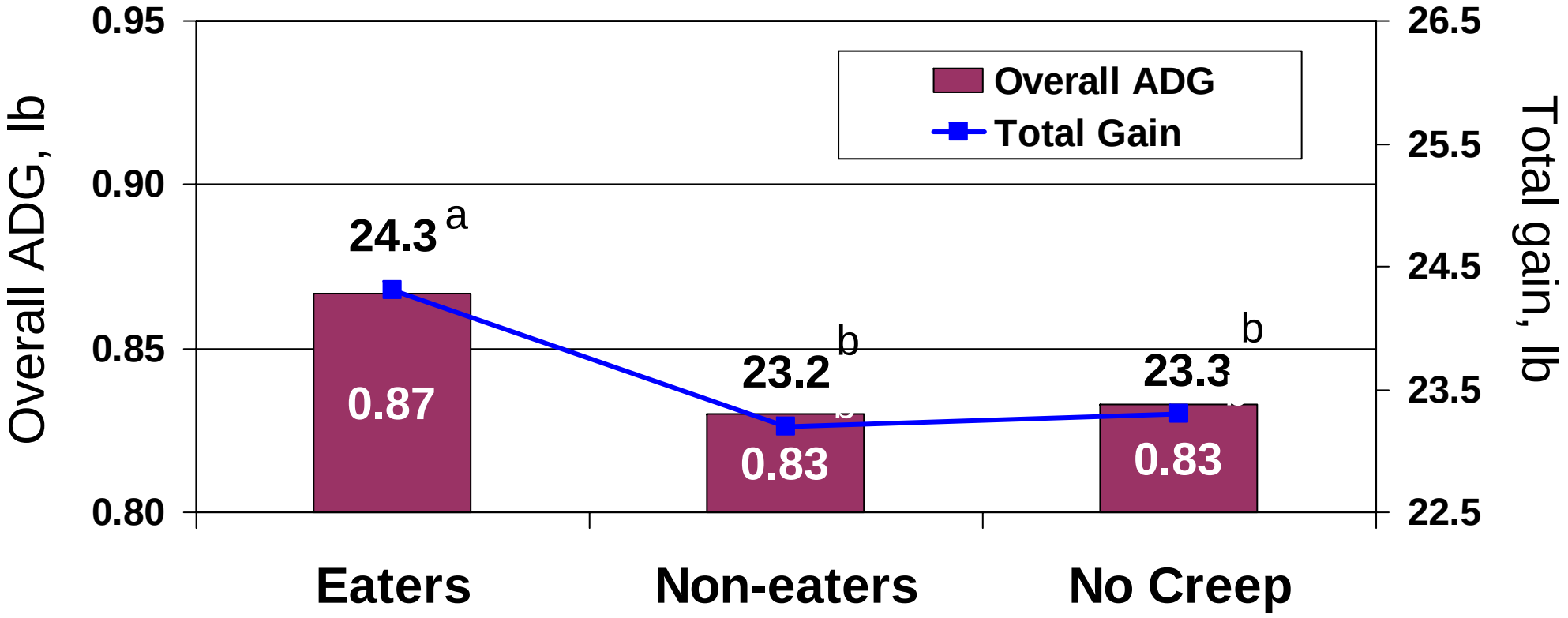
Effect of Varying Creep Feeding Durations on Percentage of Eaters



K-STATE

Sulabo et al., 2007

Influence of creep feed on post-weaning ADG and Total Gain (d 0 to 28)



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Sulabo et al., 2007

Creep Feeder Design

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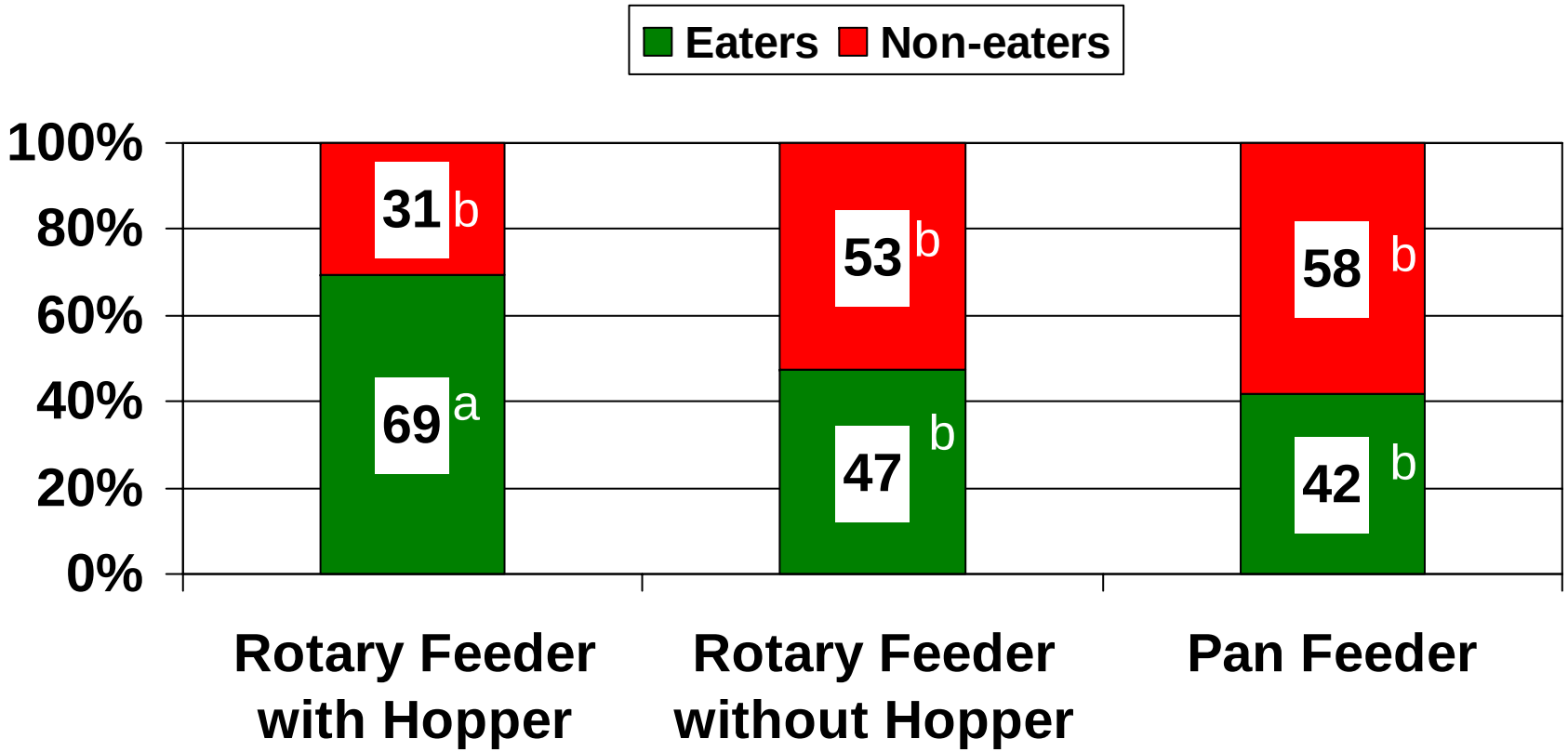
Sulabo et al., 2007

Effect of Creep Feeder Design on Percentage of Eaters



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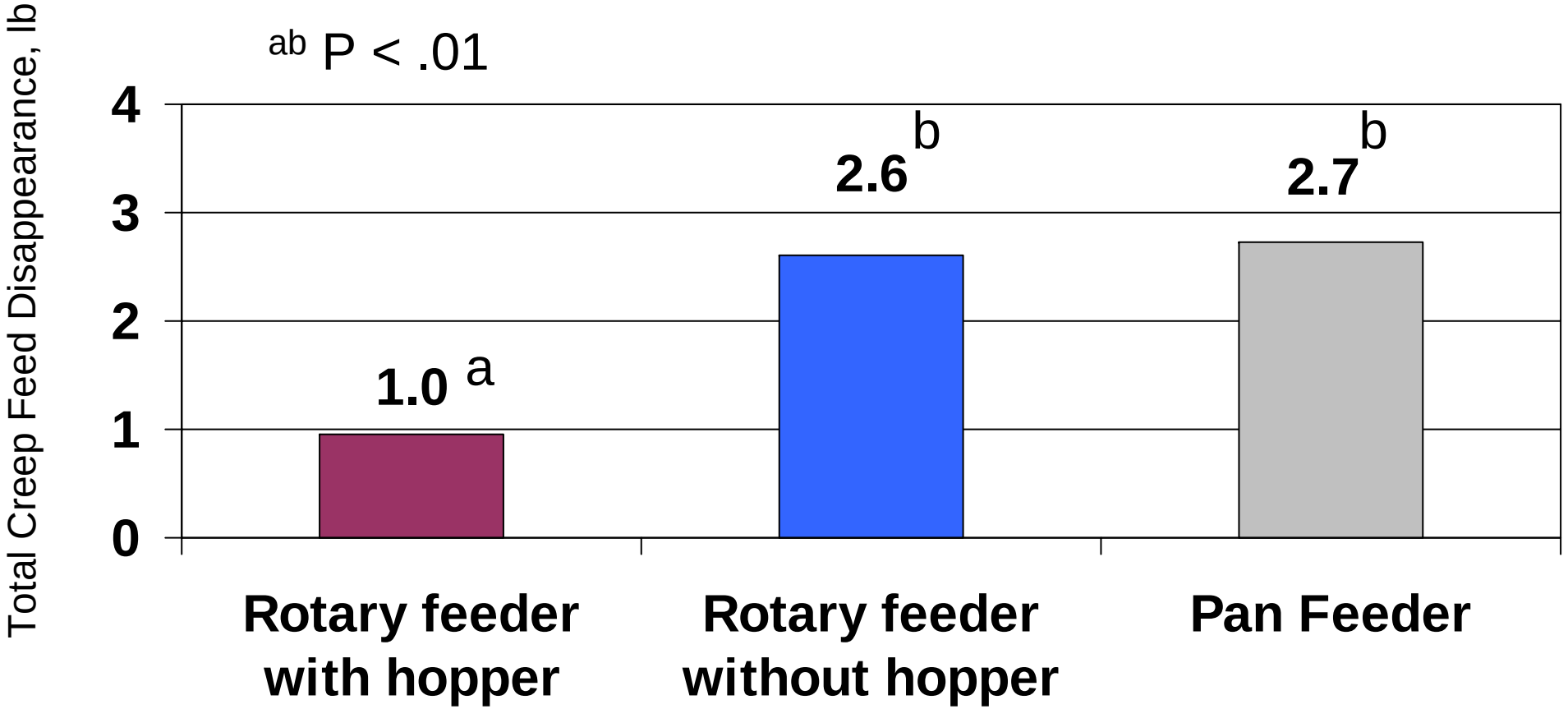
Total Creep Feed Disappearance Between Different Creep Feeder Designs



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Sulabo et al., 2007

Nursery pig update

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What to do with High Grain Prices?

- Other ingredients, DDGS and Glycerol
- Added Fat – right now, too expensive
- Dried whey and Corn, volatile
  - Work with what you have: Improve F/G
    - Particle size & thorough mixing
    - Feed budgets
    - Feeder management
    - Genetics
    - Watch market weights

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Nursery feed budgets

	Weaning weight, lb						
	10	11	12	13	14	15	16
SEW	2	1	1	.5	.5	.5	.5
Transition	5	4	3	2	1	--	--
Phase 2	- - - - - - - - - - 12 to 15 lb - - - - - - - - - -						
Phase 3	- - - - - - - - - - 45 to 50 lb - - - - - - - - - -						

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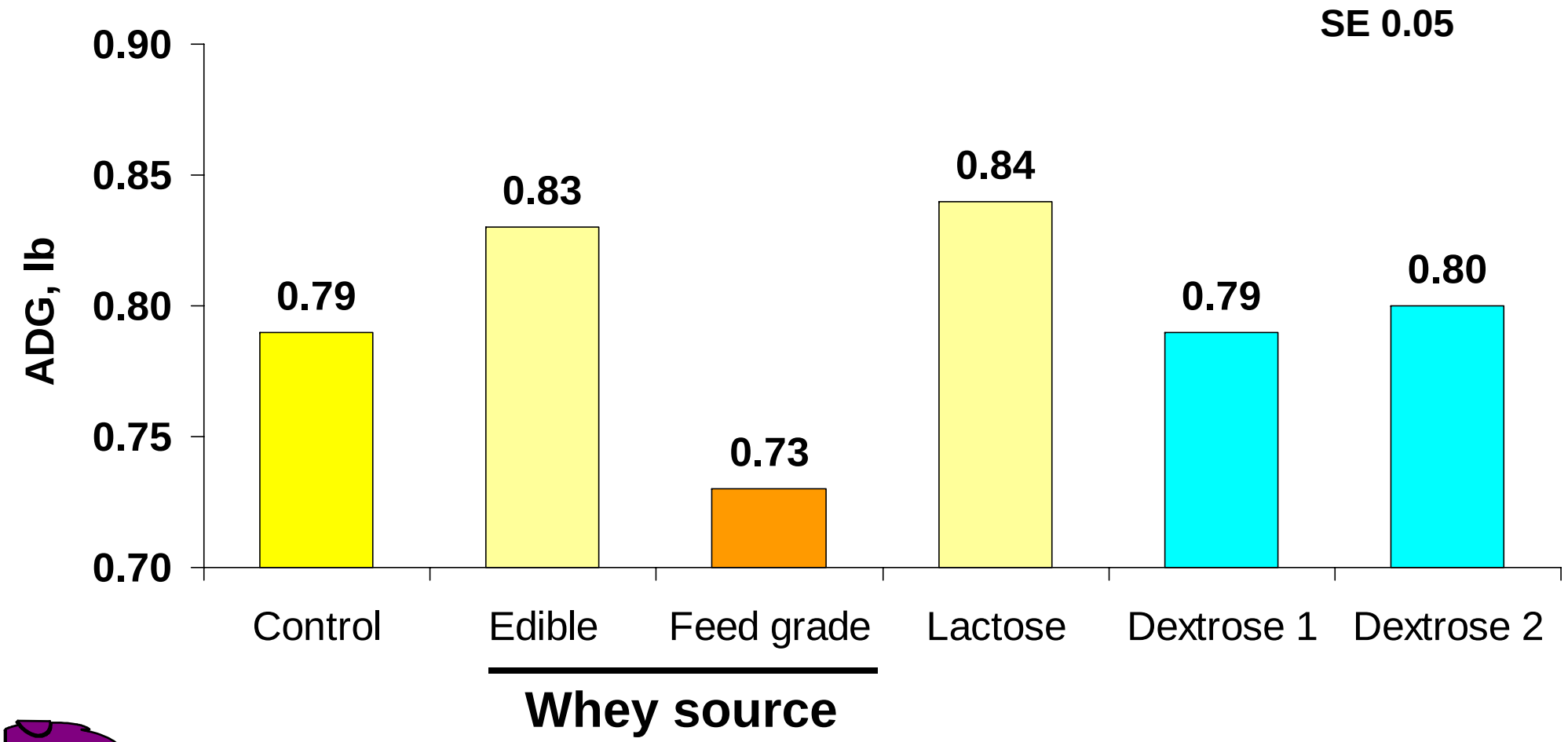
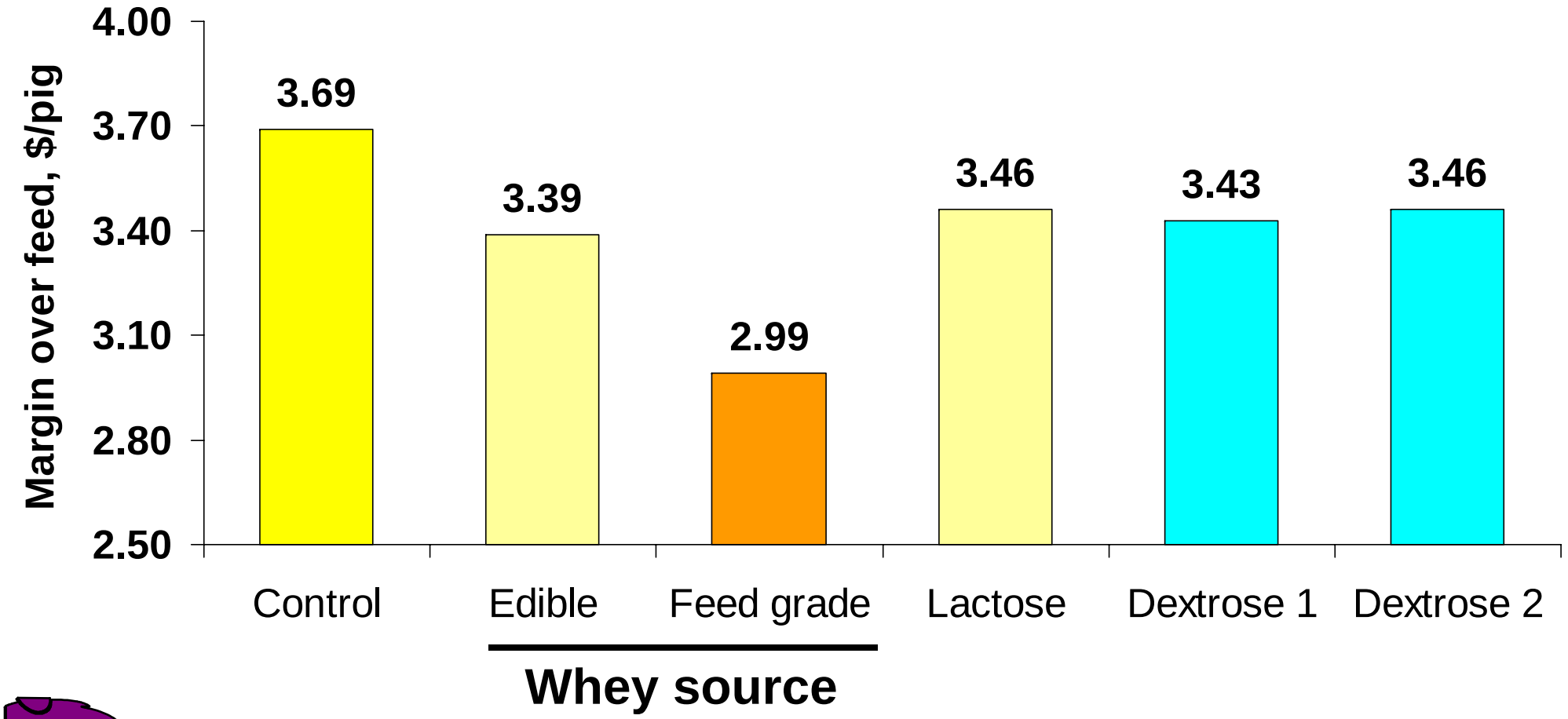
Influence of lactose source on nursery performance (Day 7 to 21 after weaning)



K-STATE

Bergstrom et al., 2007

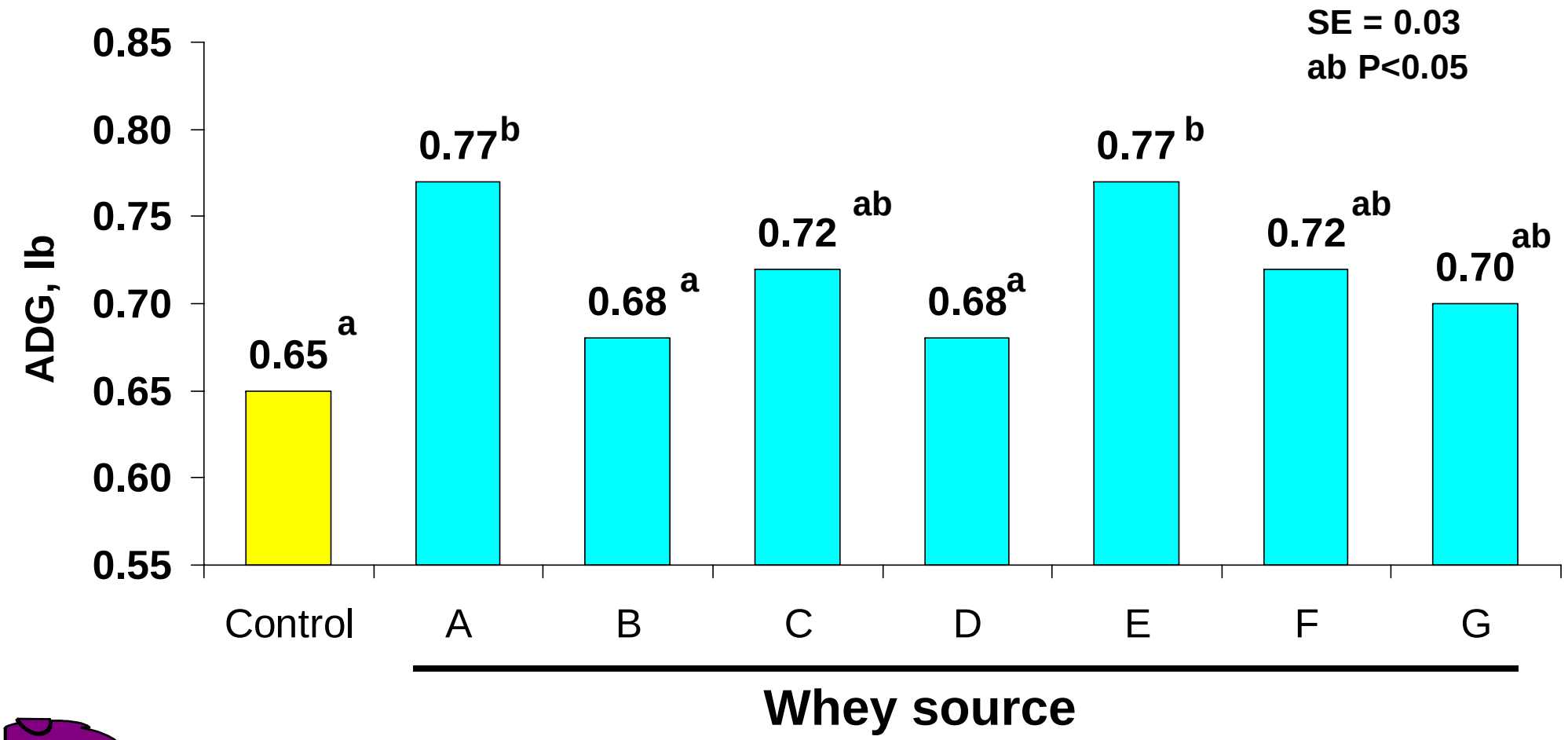
Influence of lactose source on nursery performance (Day 7 to 21 after weaning)



K-STATE

Bergstrom et al., 2007

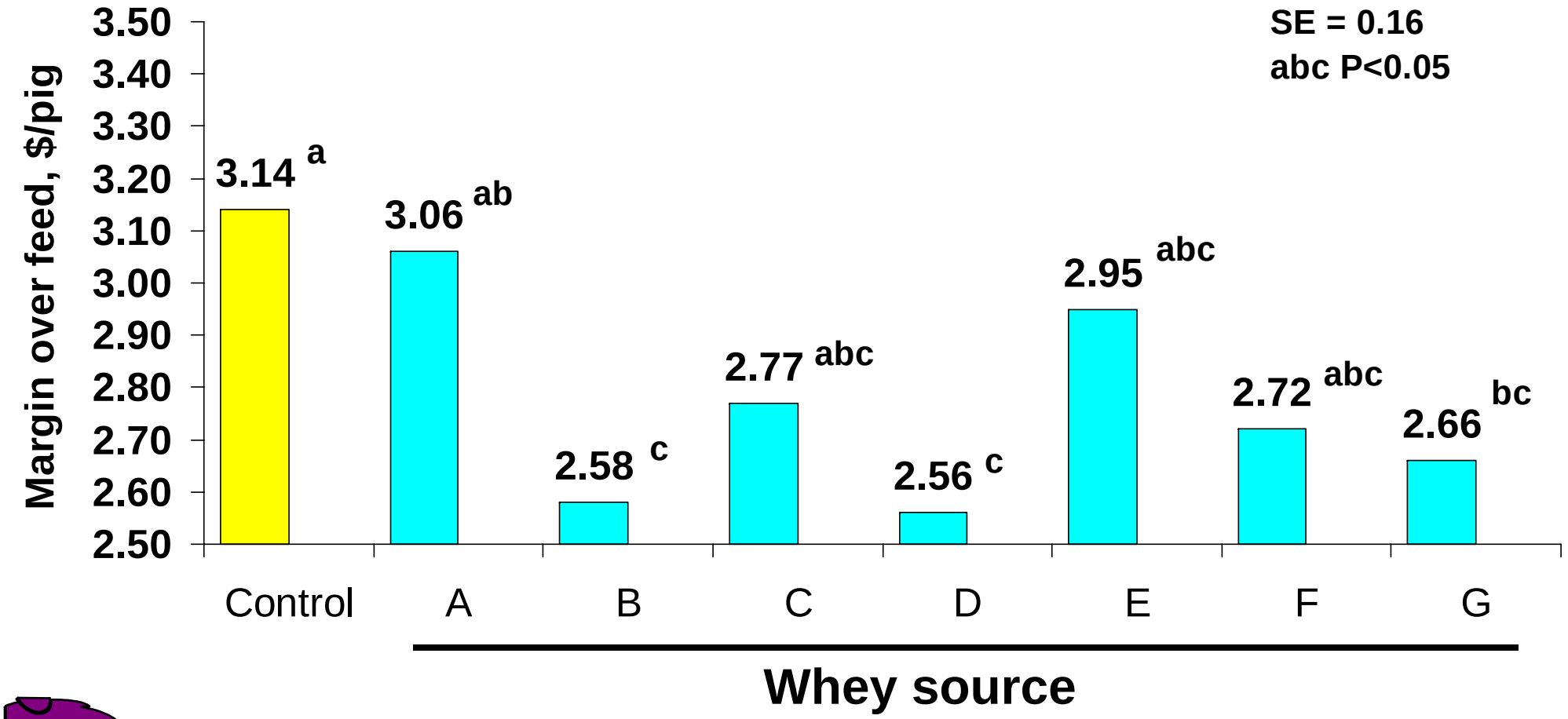
Influence of whey source on nursery performance (Day 5 to 19 after weaning)



K-STATE

Bergstrom et al., 2007

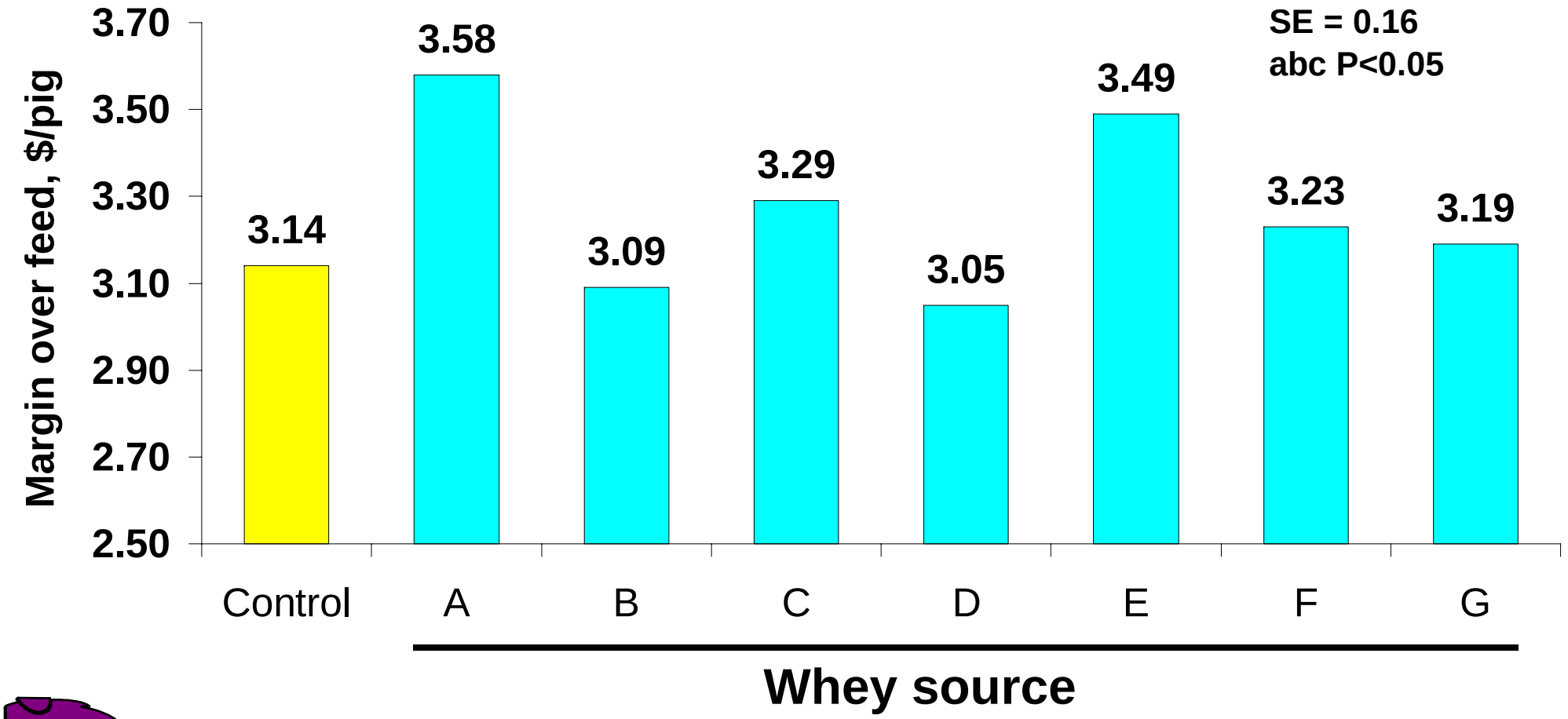
Influence of whey source on nursery performance ($ 0.70 whey)



K-STATE

Bergstrom et al., 2007

Influence of whey source on nursery performance ($0.35 whey)



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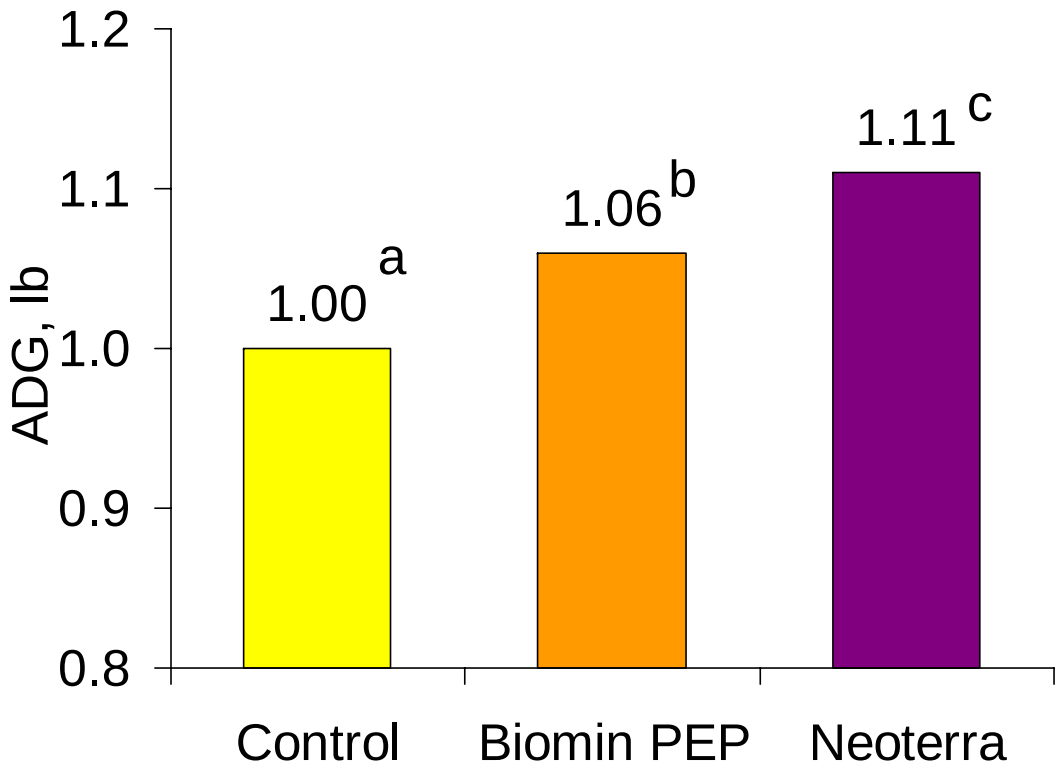
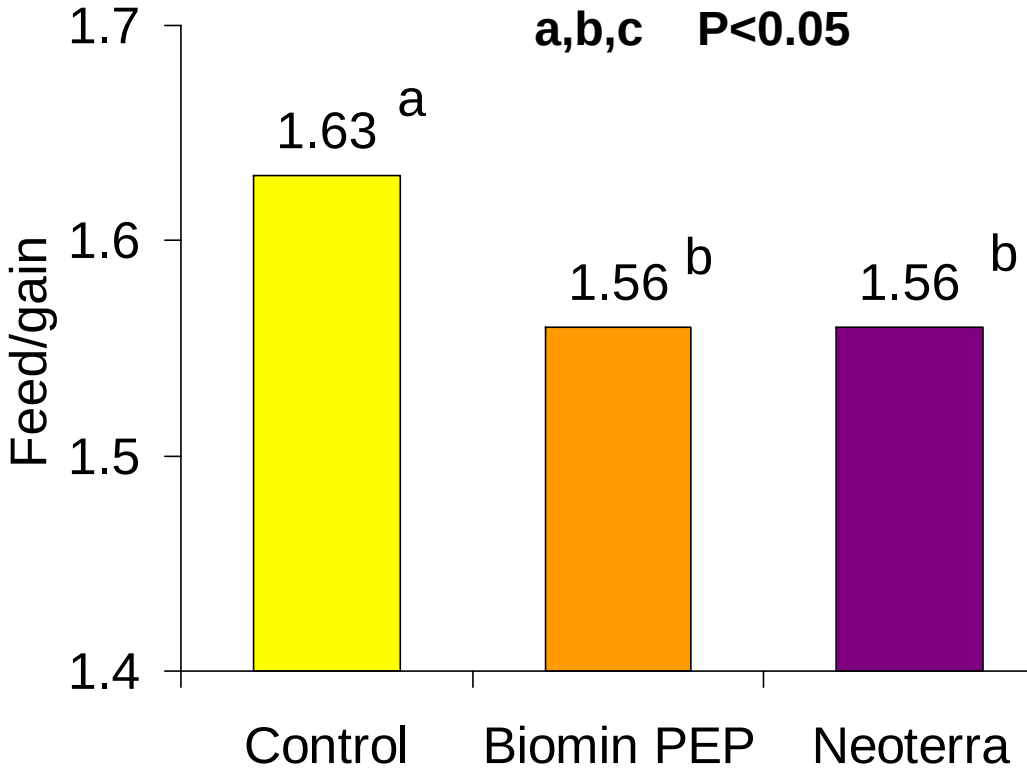
Bergstrom et al., 2007

Effects of Biomin P.E.P. and Neoterra on growth performance of nursery pigs

(d 0 to 42 d after weaning)





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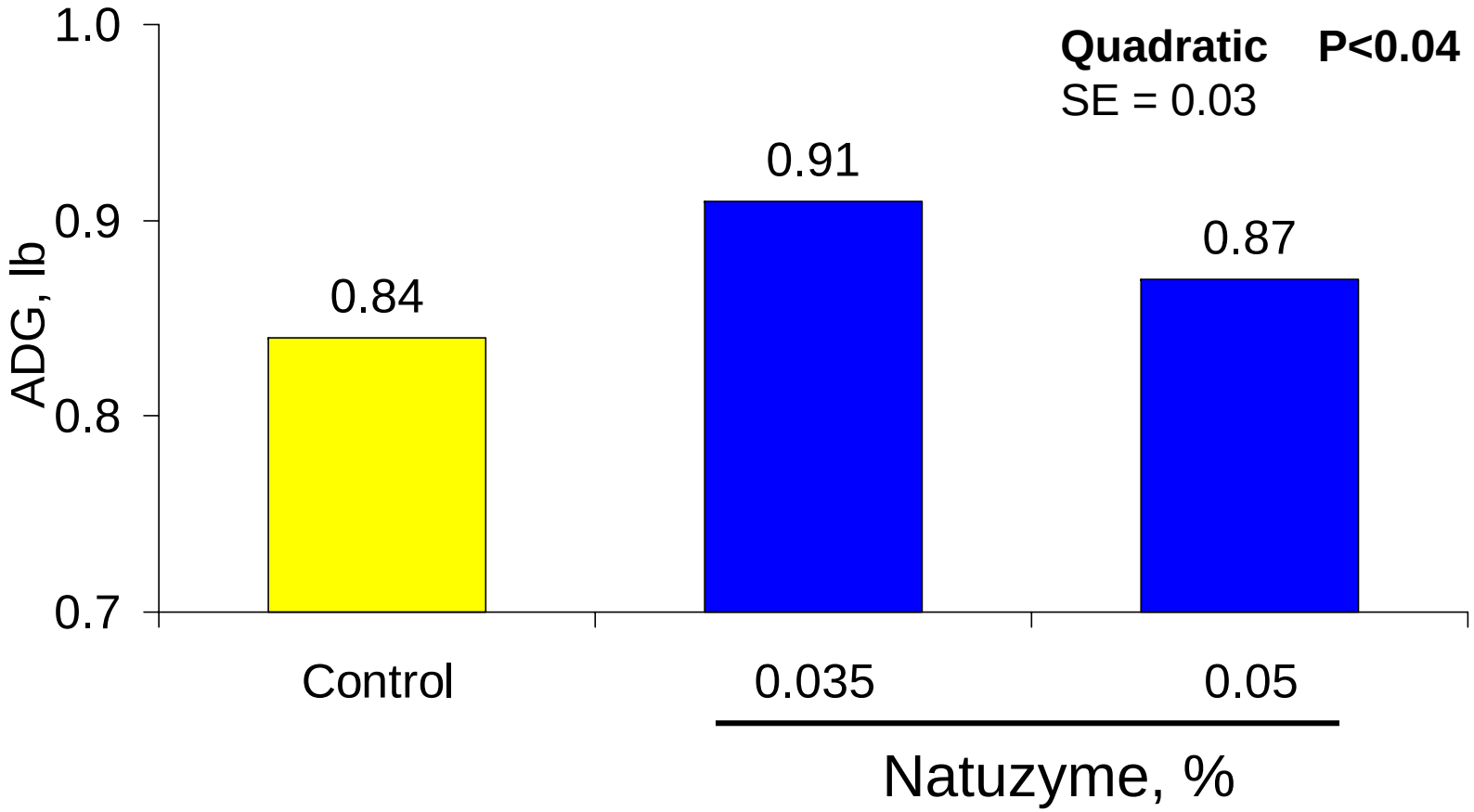
Sulabo et al., 2007

Effects of Natuzyme on growth performance of nursery pigs (all diets contained antibiotic)

(d 0 to 35 d after weaning)



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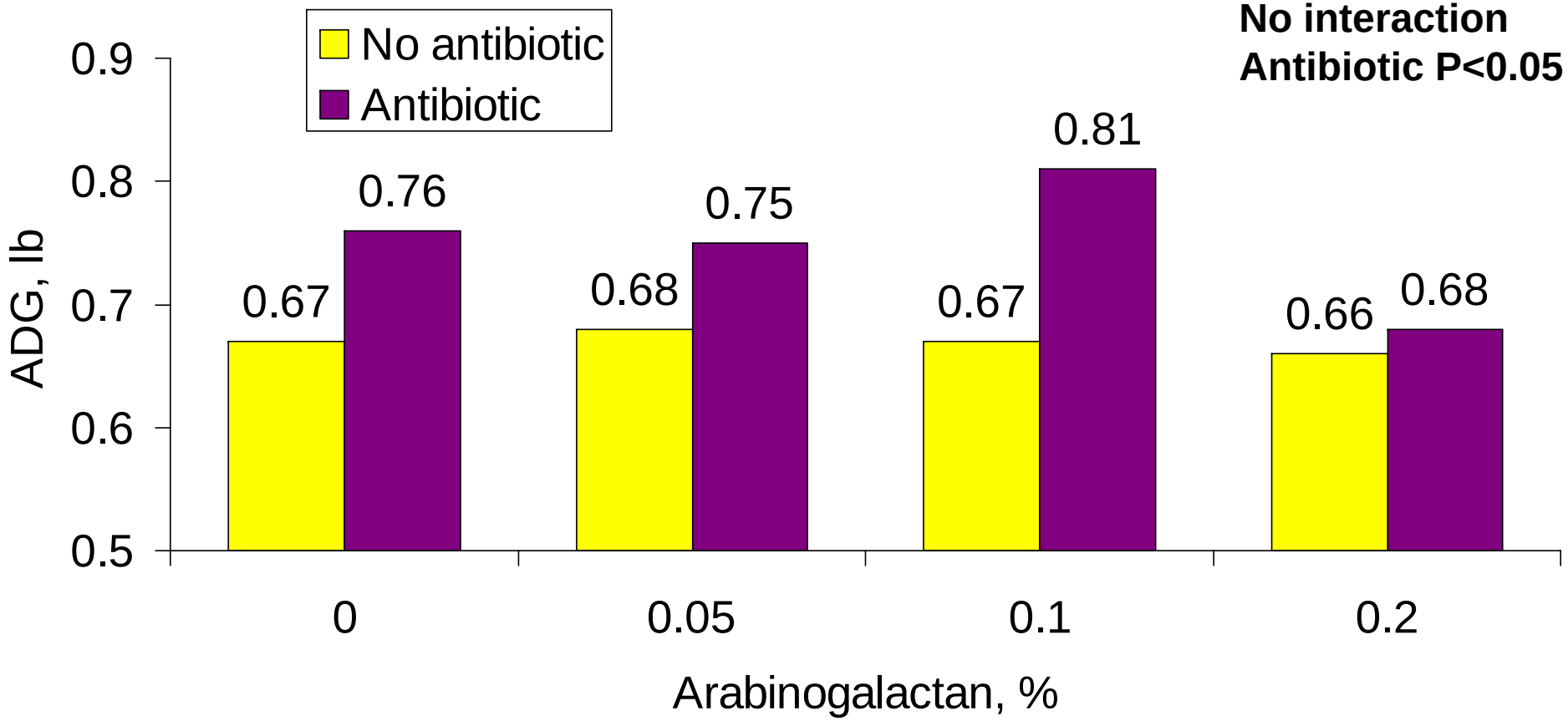
Bergstrom et al., 200

Effects of arabinogalactan and antibiotics on growth performance of nursery pigs

(d 0 to 28 d after weaning)

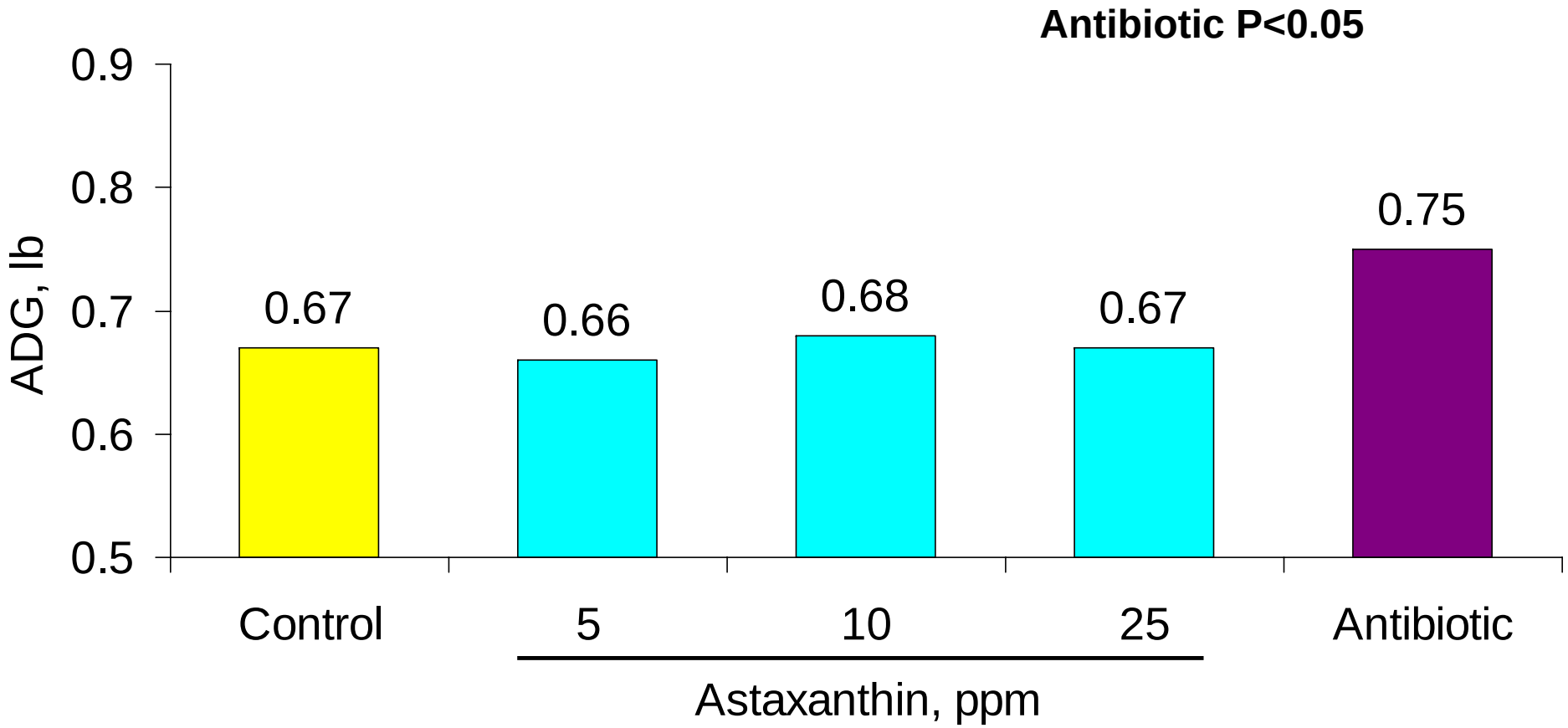


K-STATE

Bergstrom et al., 2007

Effects of astaxanthin and antibiotics on growth performance of nursery pigs

(d 0 to 28 d after weaning)

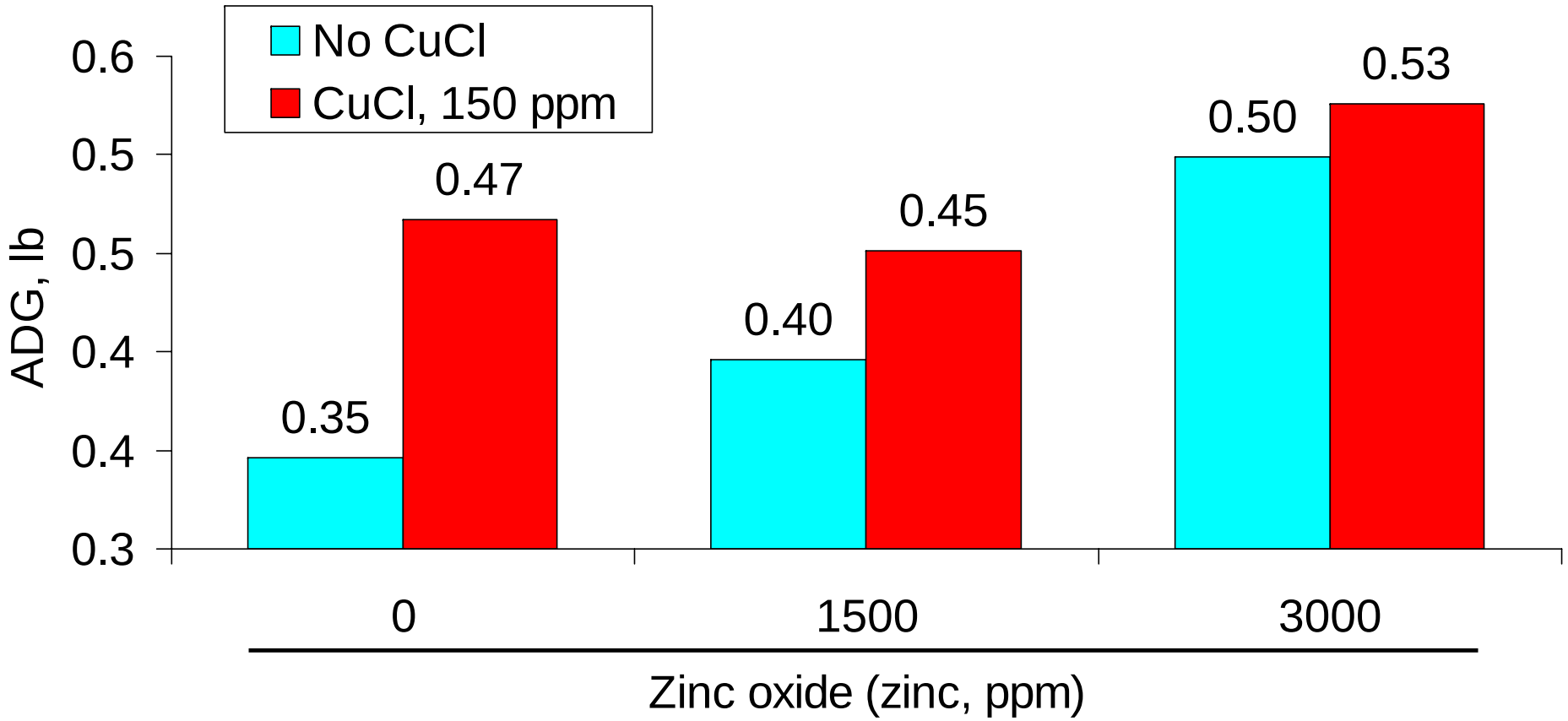


K-STATE

Bergstrom et al., 2007

Effects of copper chloride and zinc oxide on growth performance of nursery pigs

(d 0 to 14 after weaning)



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Shelton et al., 2008

Growing pig update

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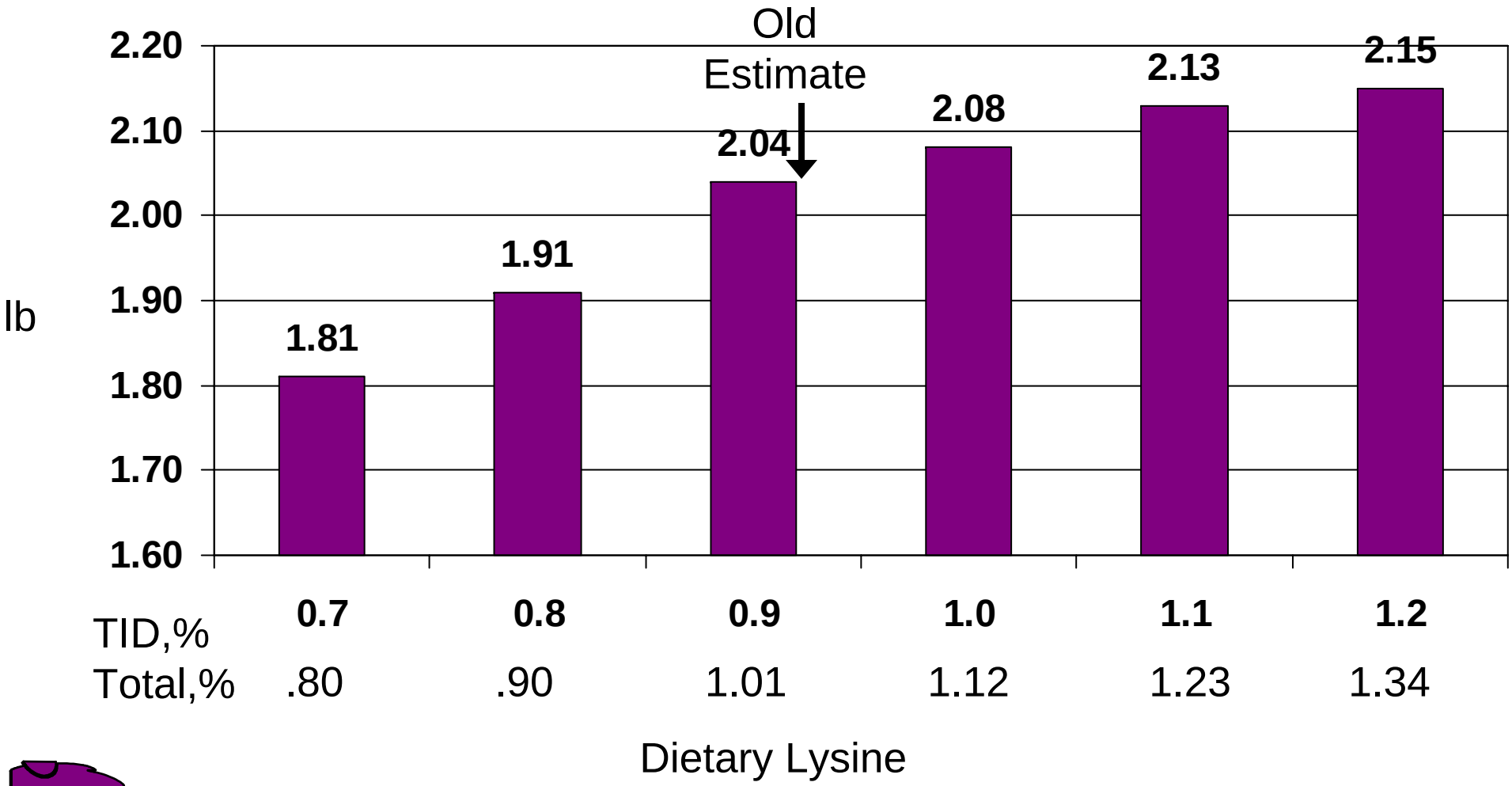
Effects of Increasing Dietary Lysine on ADG – 85 to 145 lb



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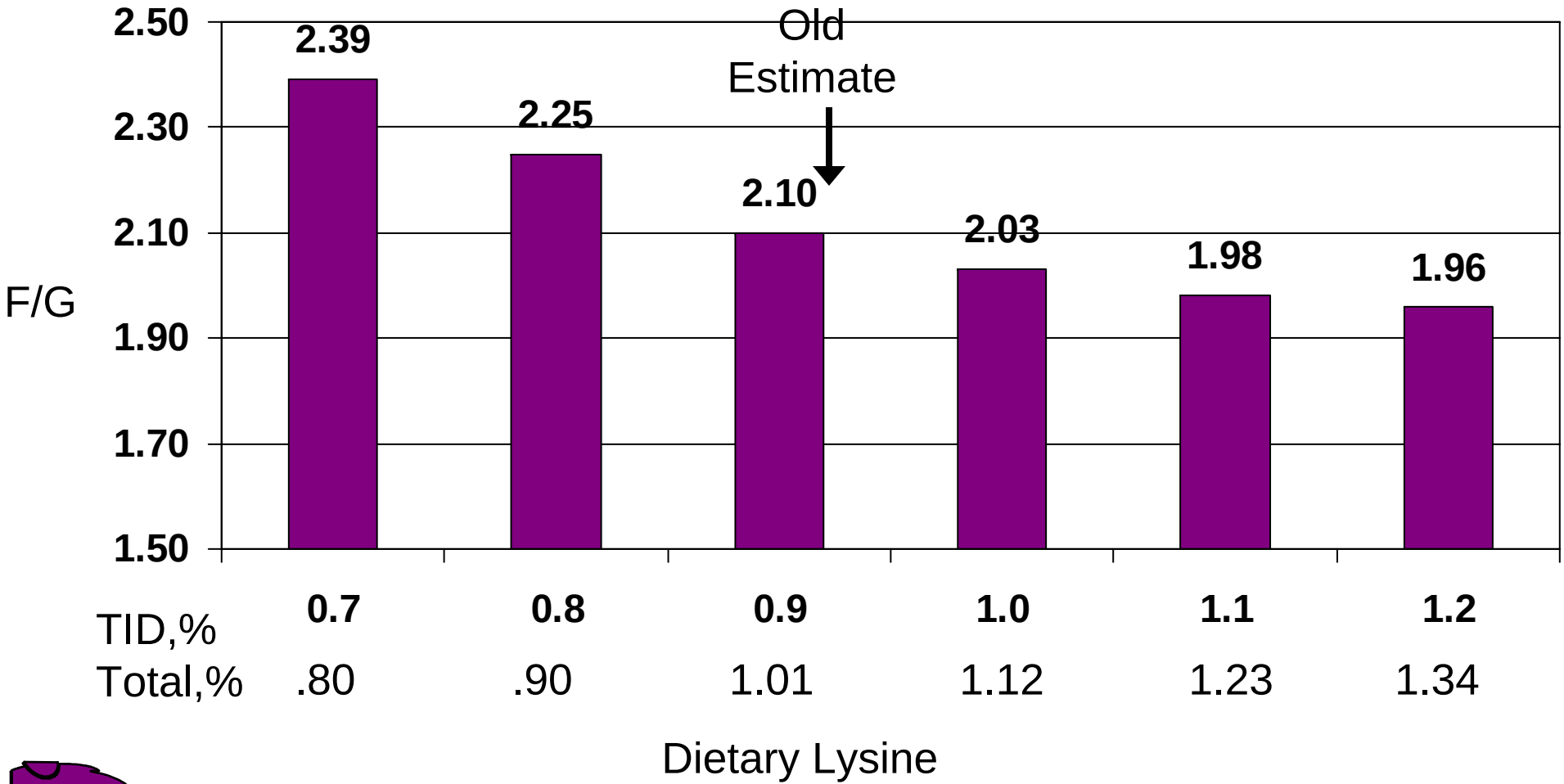
Shelton et al., 2008

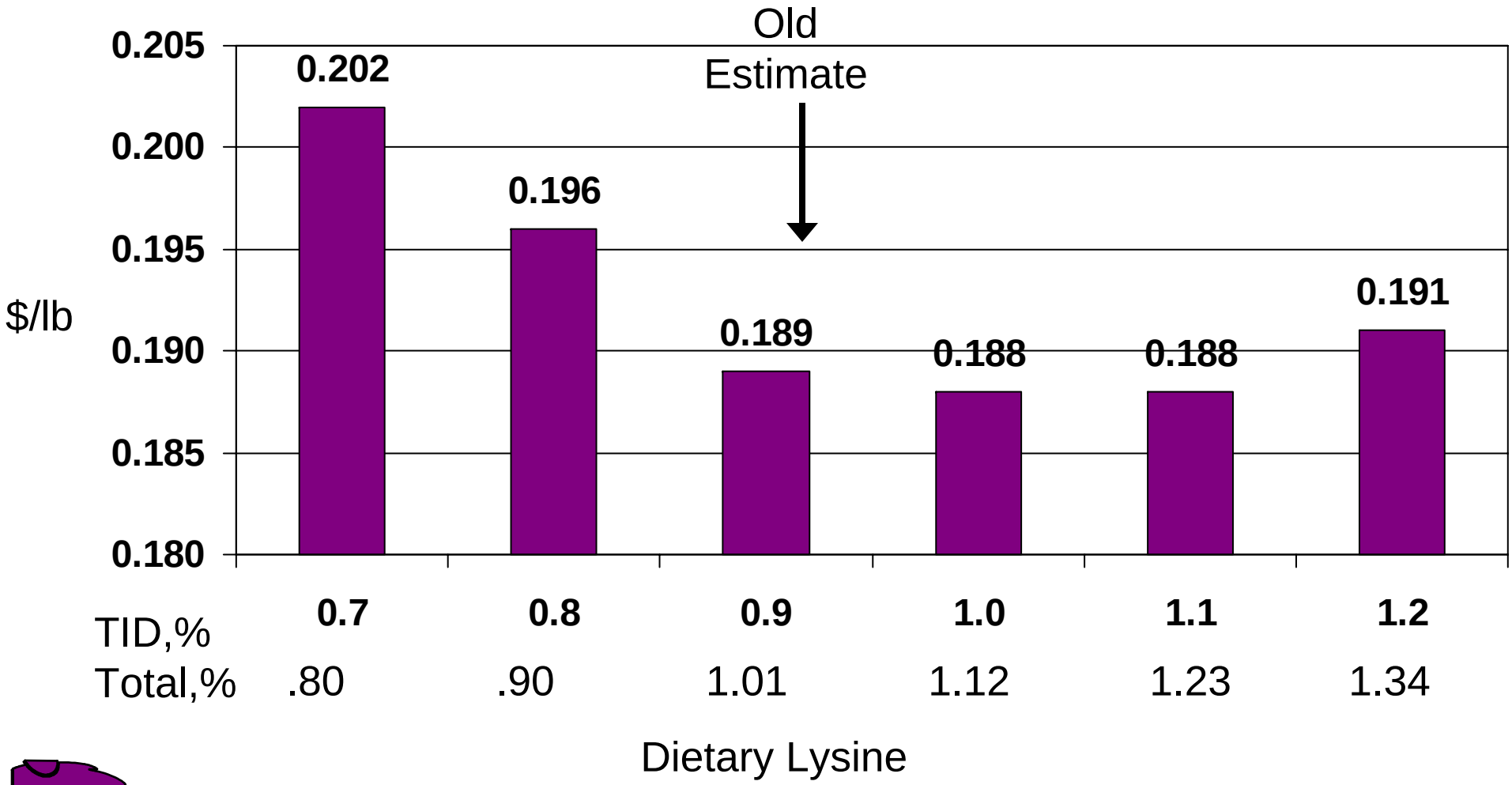
Effects of Increasing Dietary Lysine on F/G – 85 to 145 lb



K-STATE

Shelton et al., 2008

Effects of Increasing Dietary Lysine on $/lb Gain – 85 to 145 lb



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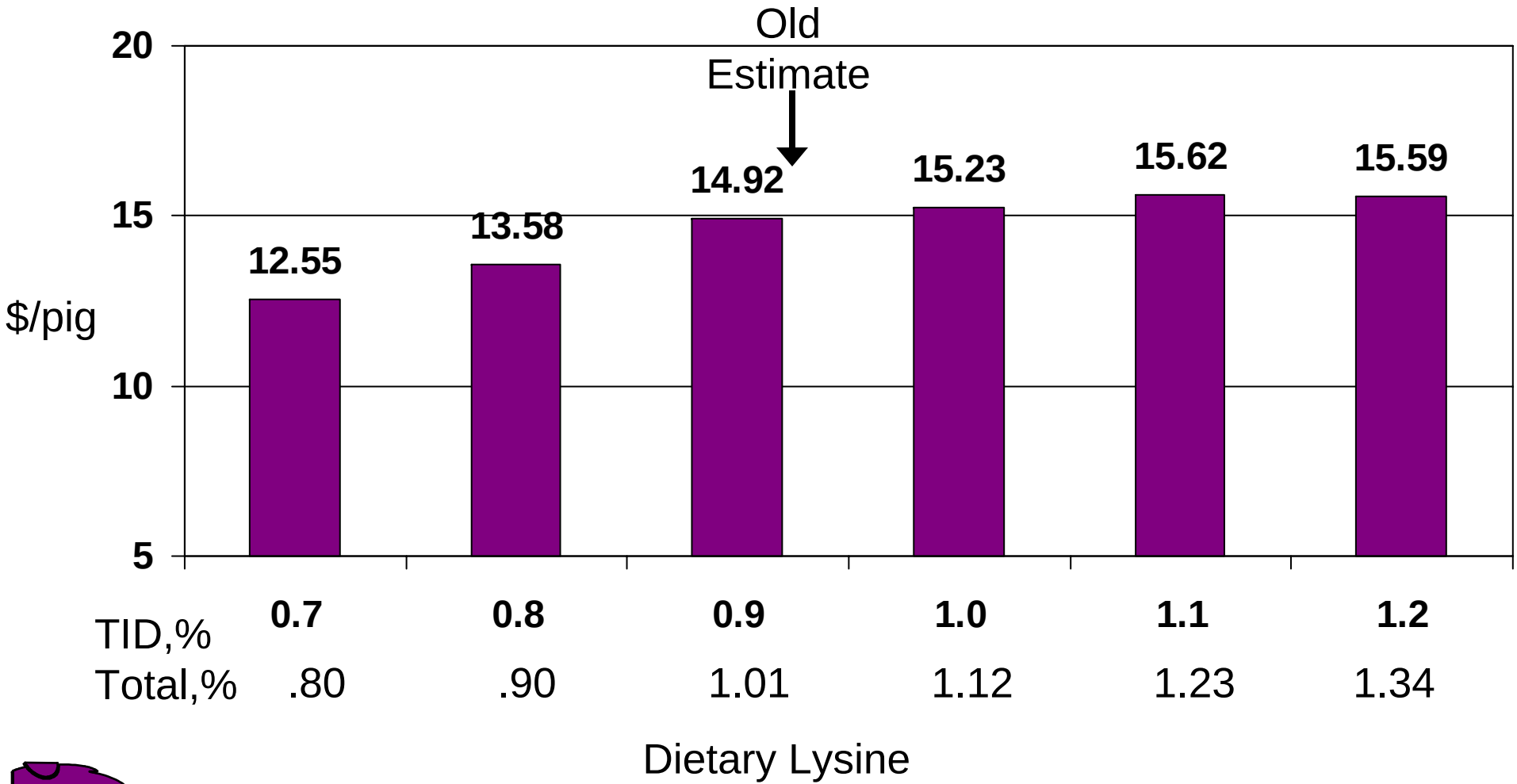
Shelton et al., 2008

Effects of Increasing Dietary Lysine on MOF – 85 to 145 lb



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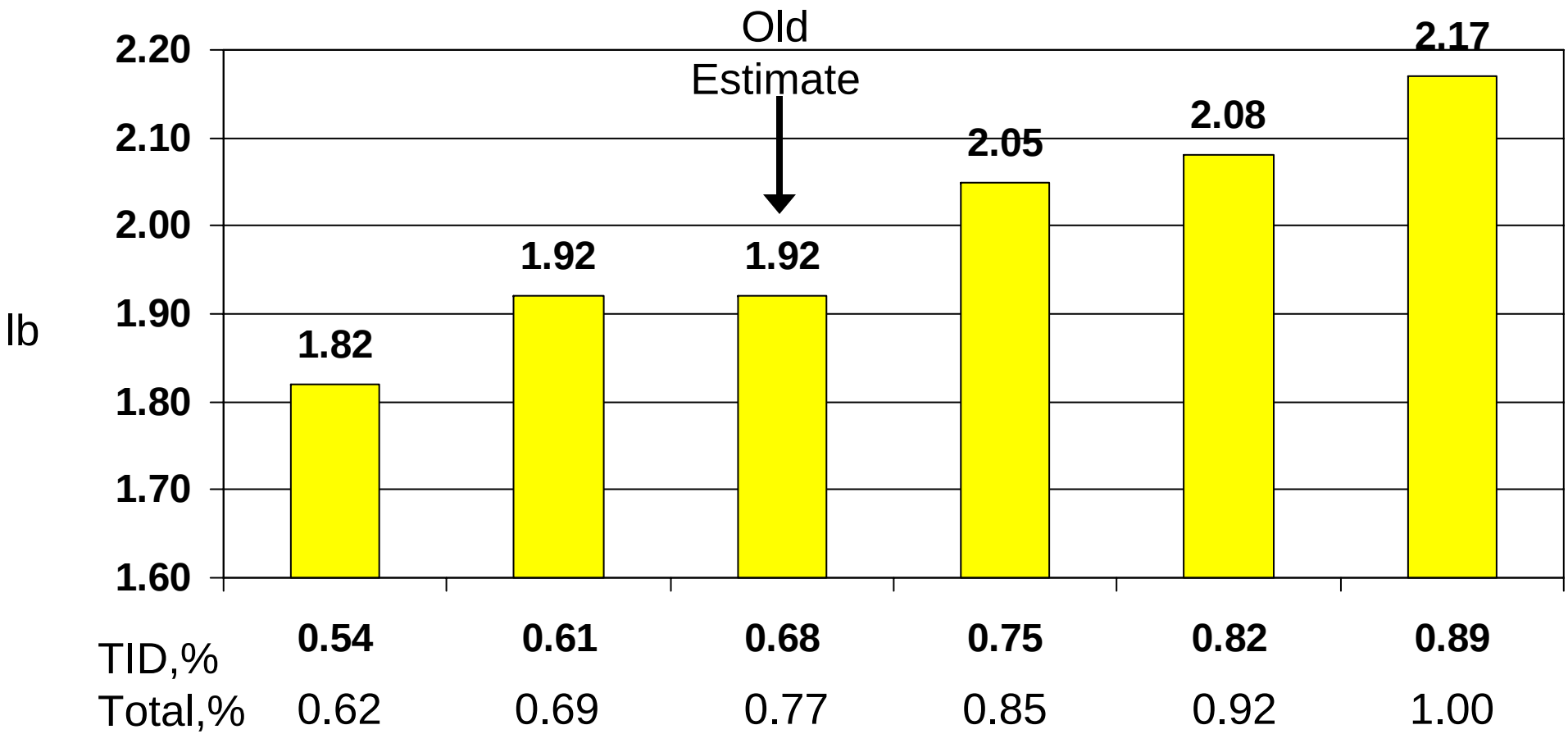
Shelton et al., 2008

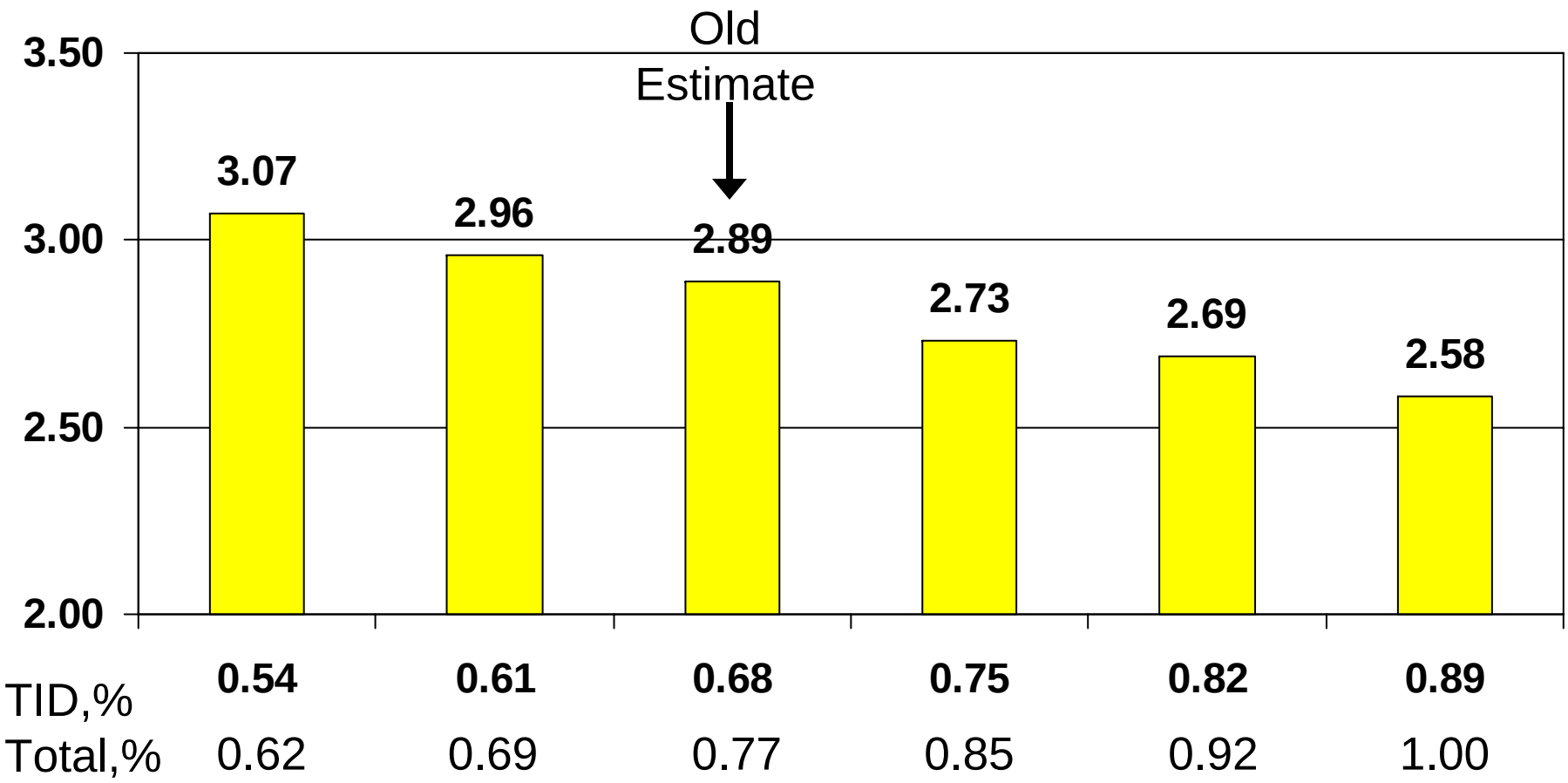
Effects of Increasing Dietary Lysine on ADG – 185 to 245 lb



K-STATE

Shelton et al., 2008

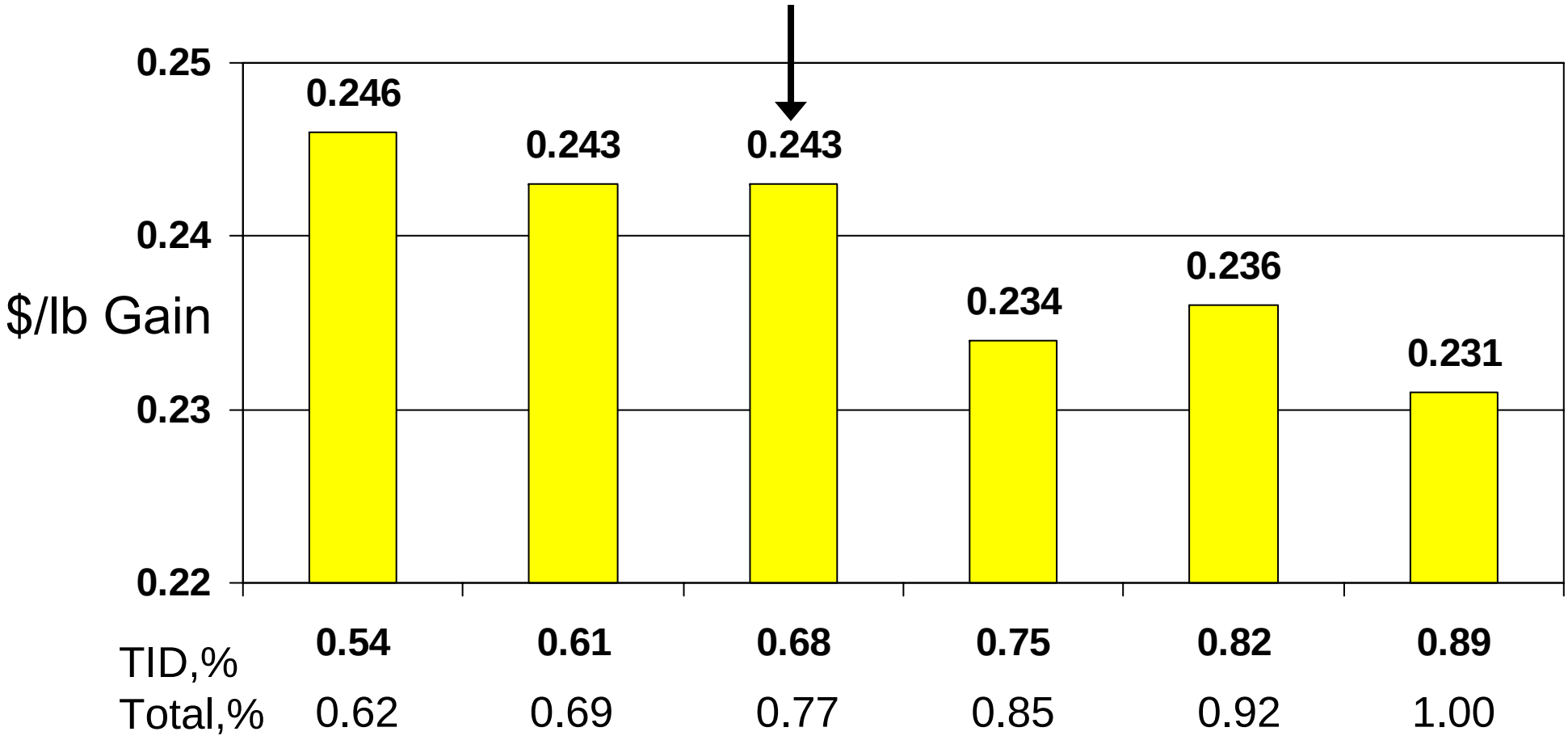
Effects of Increasing Dietary Lysine on FG – 185 to 245 lb



K-STATE

Shelton et al., 2008

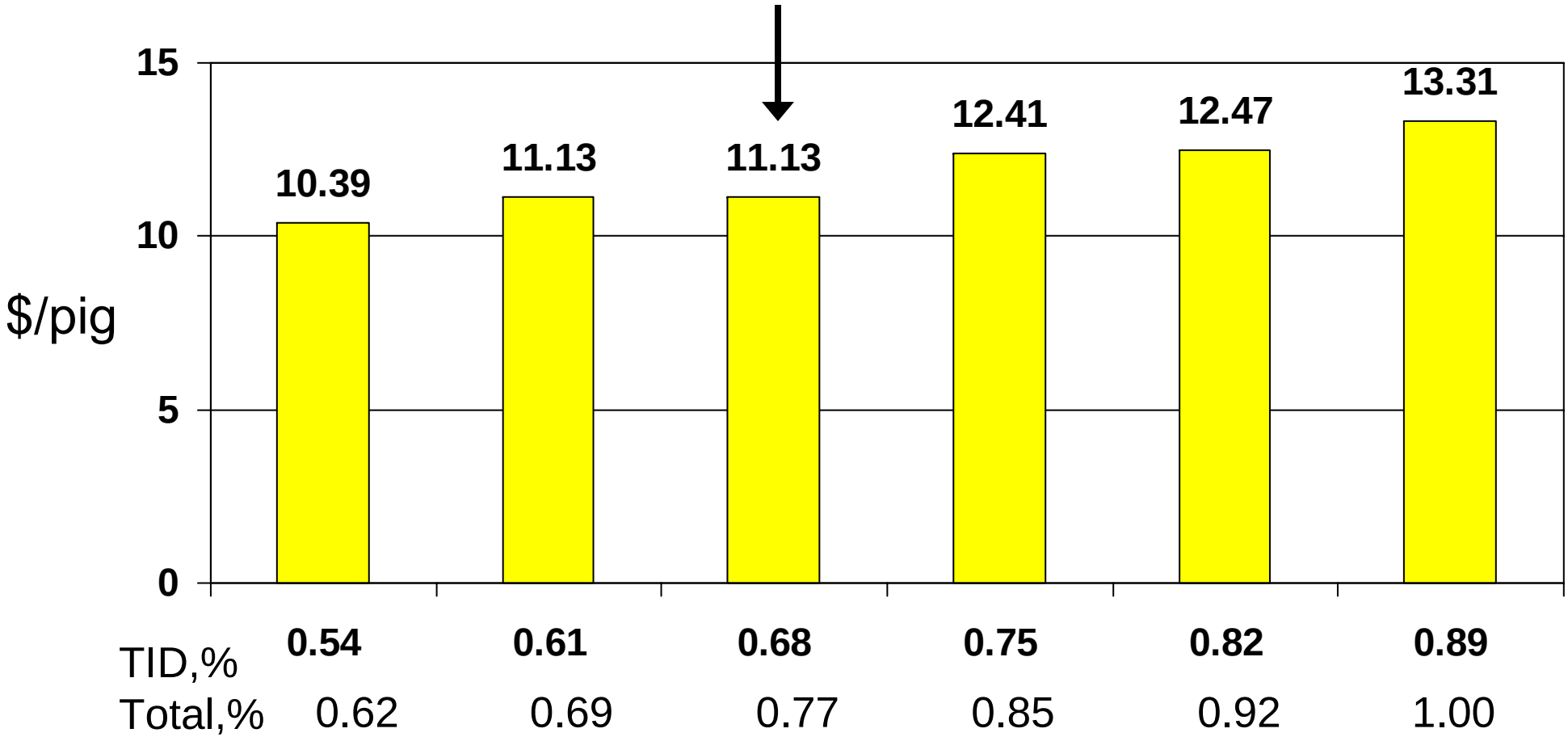
Effects of Increasing Dietary Lysine on $/lb gain – 185 to 245 lb



K-STATE

Shelton et al., 2008

Effects of Increasing Dietary Lysine on MOF – 185 to 245 lb



K-STATE

Shelton et al., 2008

Do we still recommend split sex feeding?

- Can you fill a room/barn (feed line) with less than 7 days of age spread of one sex?
  - If answer is no, you should minimize age spread rather than housing by sex.
- If split sex feeding, same diets can be used for both sexes with different feed budgets to account for higher F/G of barrows

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With current SBM prices, low protein amino acid fortified diets are beginning to price in for some

Low Protein Amino Acid Price Calculator		
	Price, $	
Corn	3.20	$/bu
Soybean meal	280	$/ton
L-Lysine	0.97	$/lb
DL-Methionine	1.35	$/lb
L-Threonine	1.15	$/lb
Savings per pig with AA fortified diet, $	$ 0.46	

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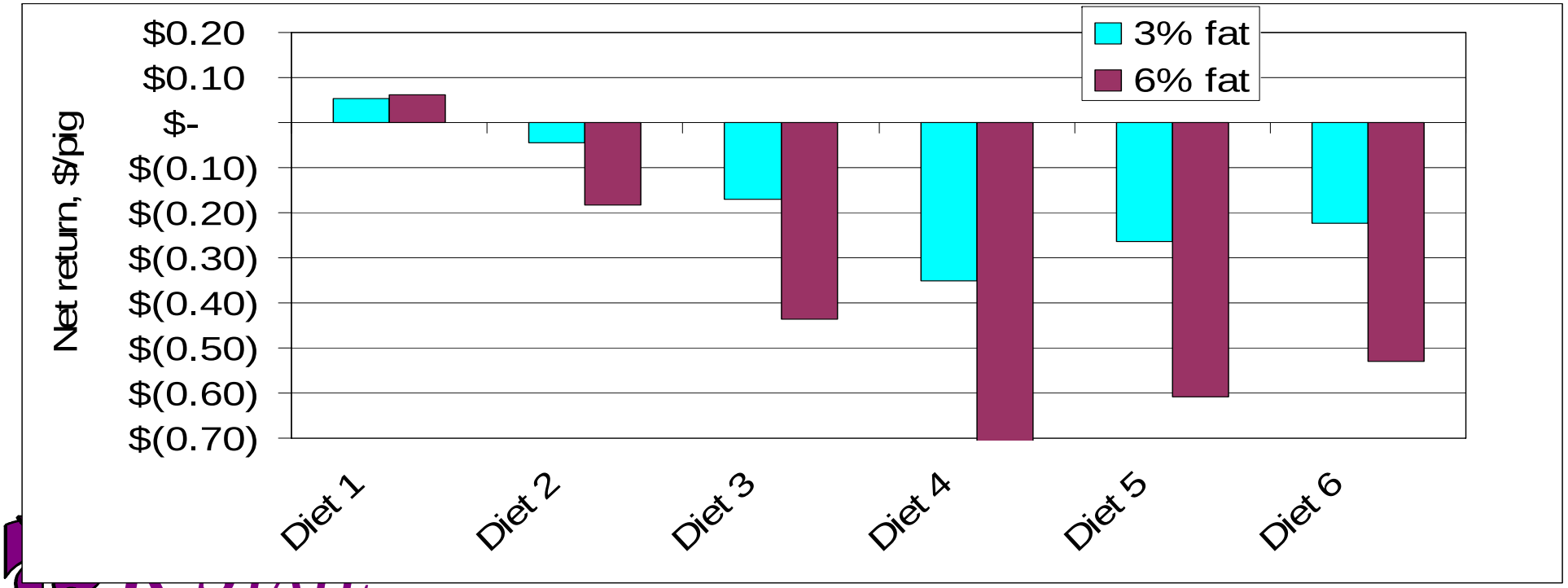
Calculator by BOB!

Prices

Corn, $/bu	$	3.20
SBM, $/ton	$	280.00
Fat, $/cwt	$	26.00
Grind/mix/deliv, $/ton	$	12.00

Prices

Carcass price	$	51.00
Est. live price		39.86

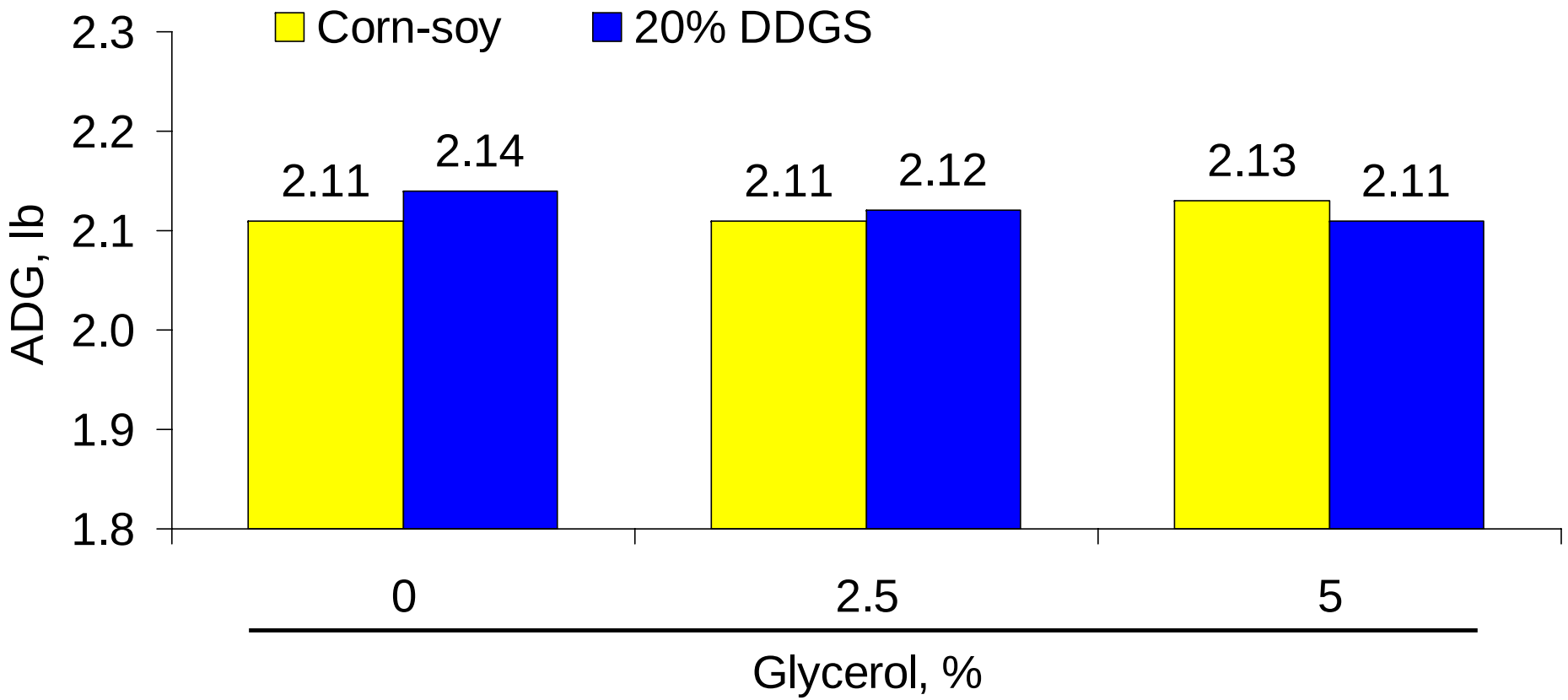


Biofuel Co-product Update

K-STATE

Effects of glycerol and DDGS on growth performance of finishing pigs

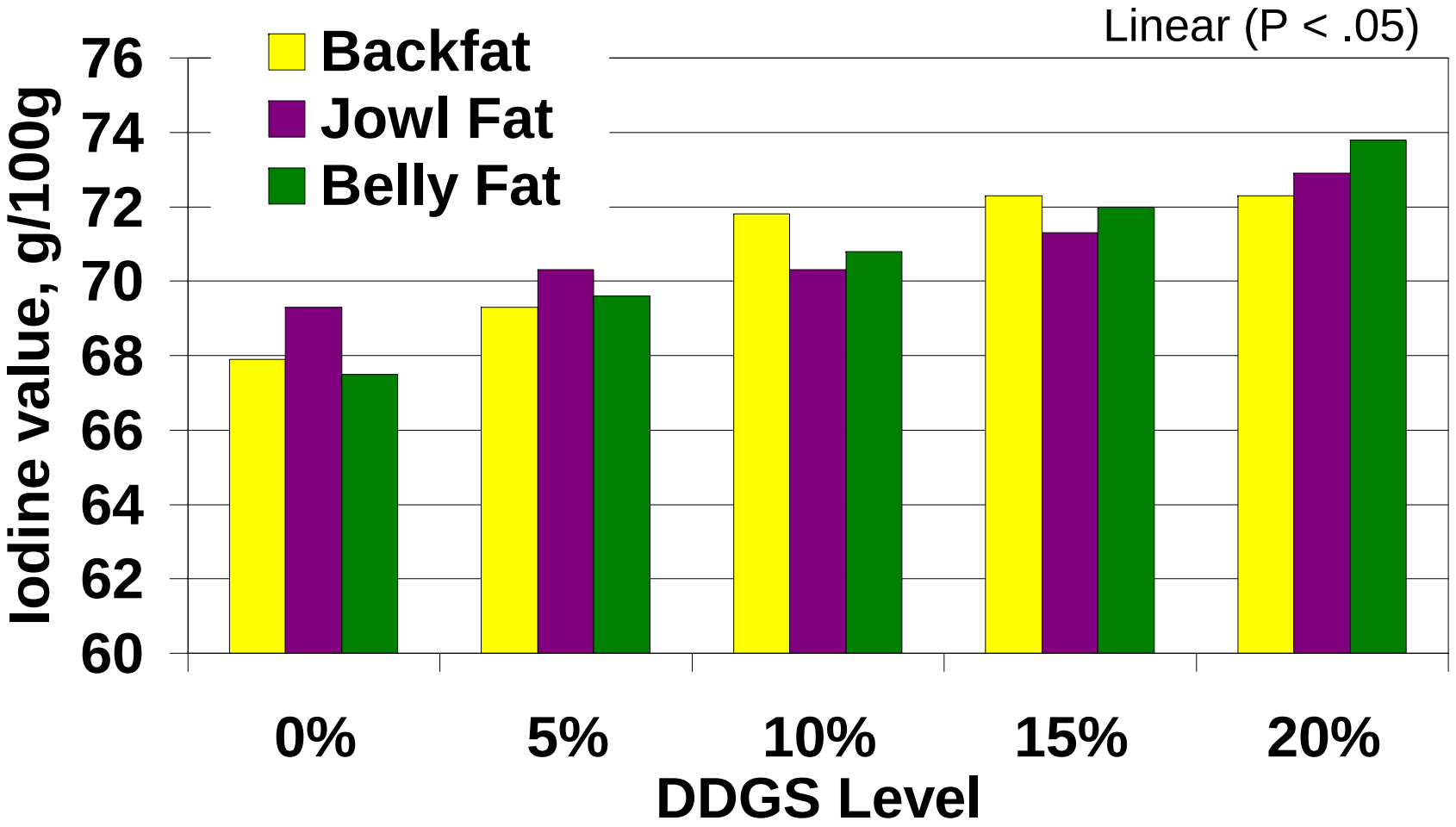
(70 to 217 lb)



K-STATE

Duttlinger et al., 2008

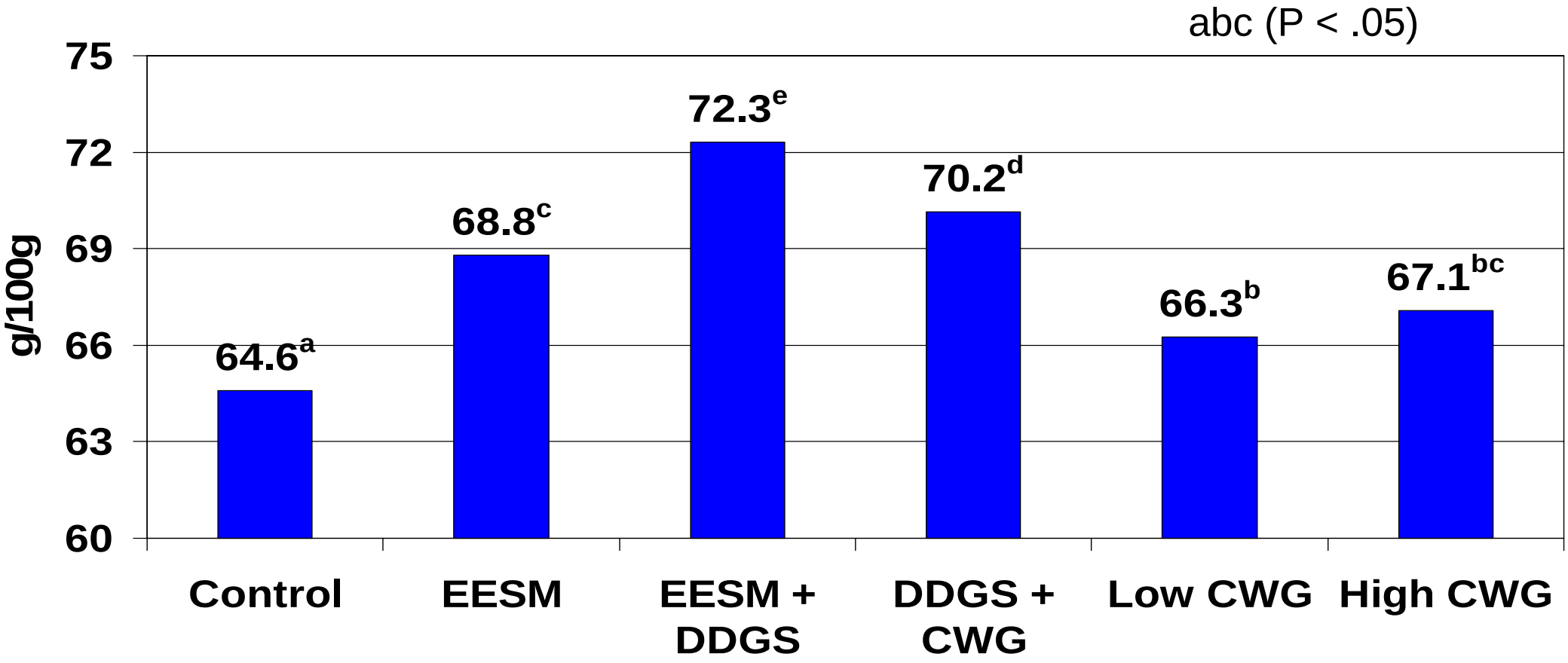
Influence of DDGS level on iodine value



K-STATE

Benz et al. 2007

Effect of DDGS and EESM on Jowl Fat Iodine Value



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Benz et al. 2007

Impact of DDGS on iodine value

- Increase in IV for each 10% DDGS
  - Backfat 2.4 g/100 g
  - Jowl fat 1.6 g/100 g
  - Belly fat 3.0 g/100 g

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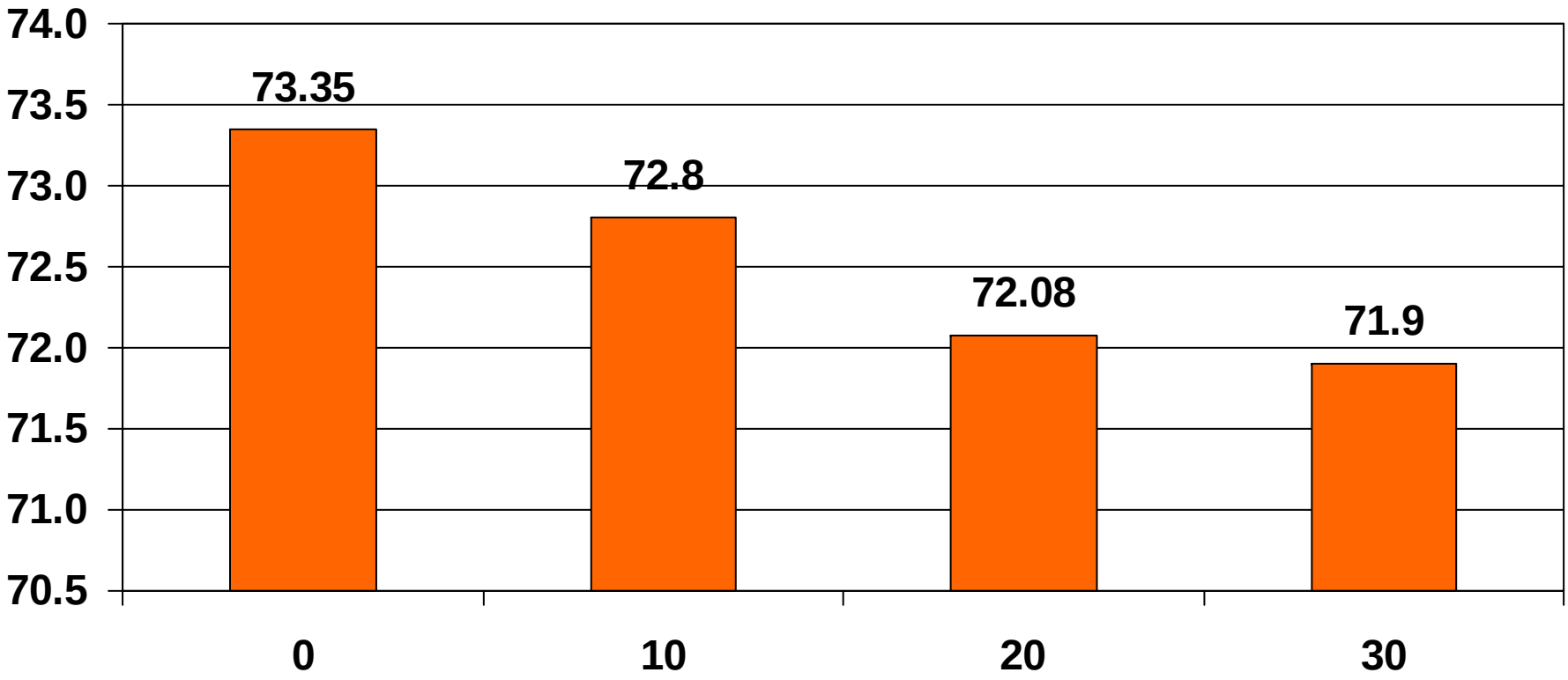
Benz et al. 2007

Effects of DDGS on Percent Yield



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Whitney et al., Univ. MN

Calculator for determining the value of DDGS in your diets

www.KsuSwine.org

DDGS Value Calculator with no performance change

Corn, $/bu	$ 3.45
SBM, $/ton	$ 280.00
Monocal, $/ton	$ 400.00
Limestone, $/ton	$ 40.00
Lysine HCl, $/lb	$ 1.00
DDGS, $/ton	$ 140.00

	DDGS, %		
	10%	**20%**	**30%**
Change in diet cost, $/ton	**-$3.65**	**-$5.88**	**-$7.08**
Approximate savings, $/pig	**$1.09**	**$1.76**	**$2.12**
Breakeven price, $/ton	**$176.47**	**$169.41**	**$163.60**

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Calculator for determining the value of DDGS in your diets

www.KsuSwine.org

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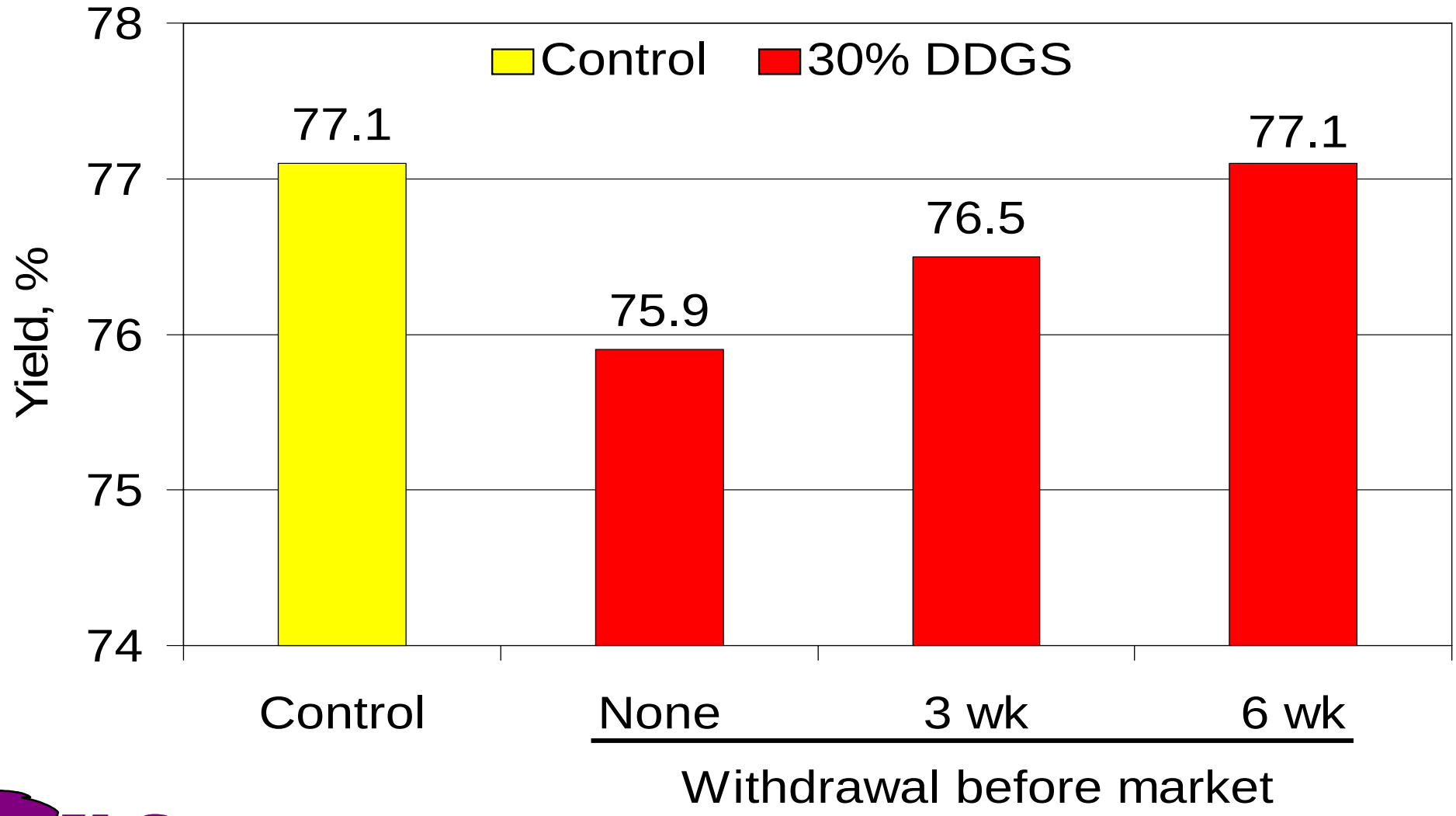
DDGS Value Calculator with Carcass Yield Impact

Pig Carcass weight, lb	200.0
Carcass price, $/cwt	$ 54.00
Yield reduction for each 10% DDGS	0.5%

	DDGS, %		
	10%	**20%**	**30%**
Yield cost per pig	**$0.54**	**$1.08**	**$1.62**
Approximate savings, $/pig	**$0.55**	**$0.68**	**$0.50**
Breakeven price, $/ton	**$158.47**	**$151.41**	**$145.60**

Effect of DDGS withdrawal time on dressing percent



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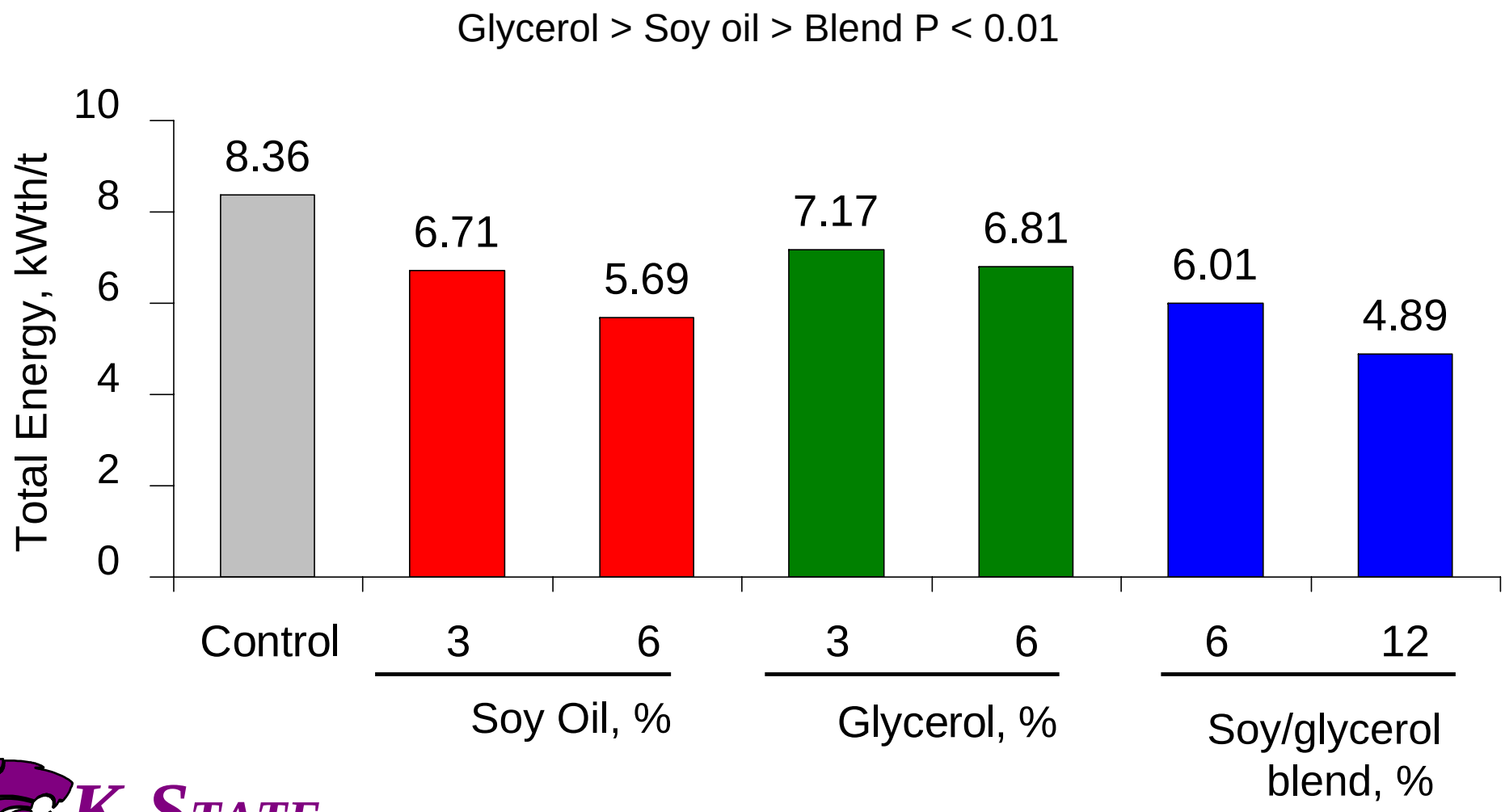
JBS United, 2007

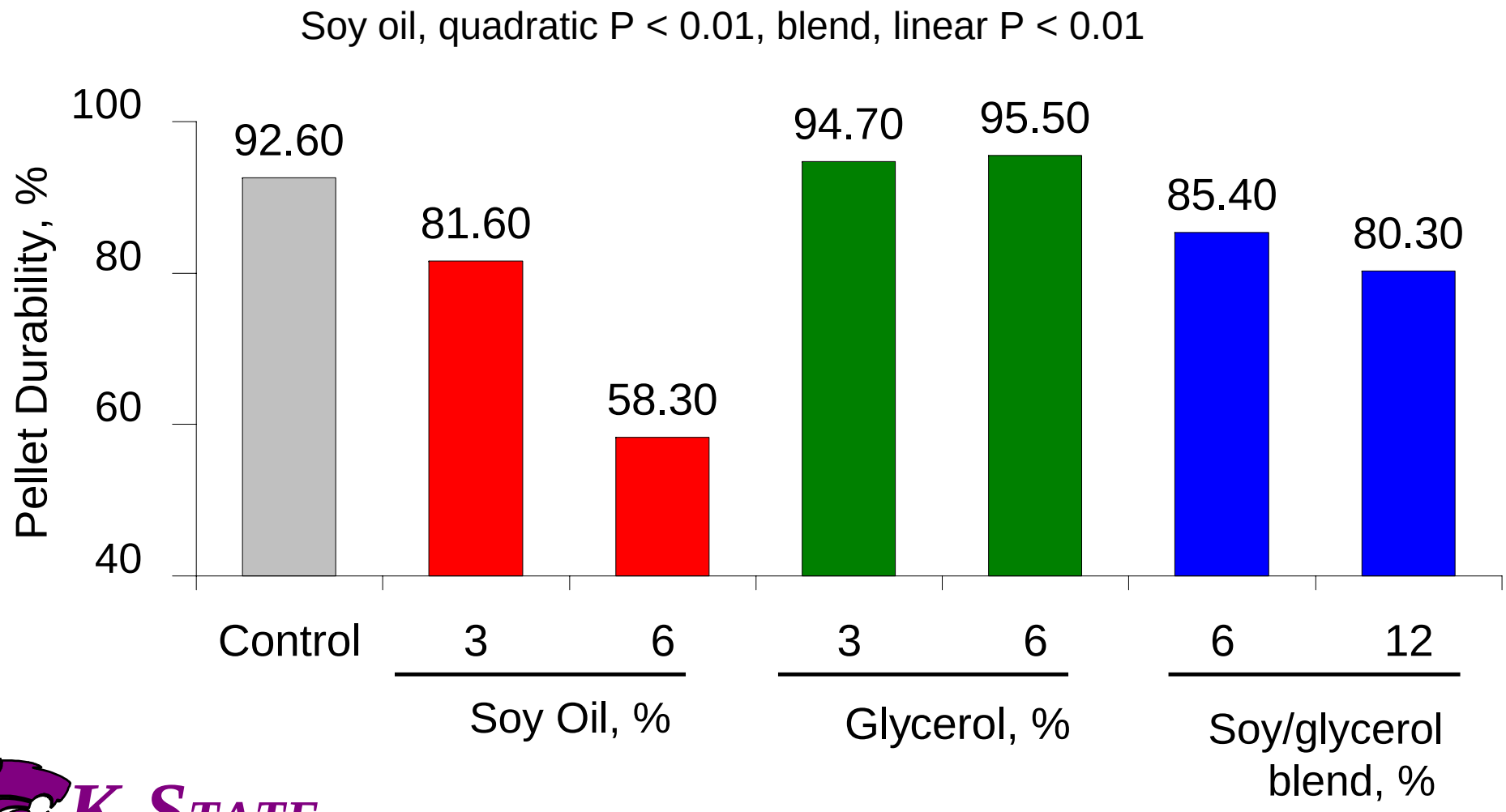
Effects of glycerol and soy oil on pelleting energy use



K-STATE

Groesbeck et al., 2008

Effects of glycerol and soy oil on pellet durability



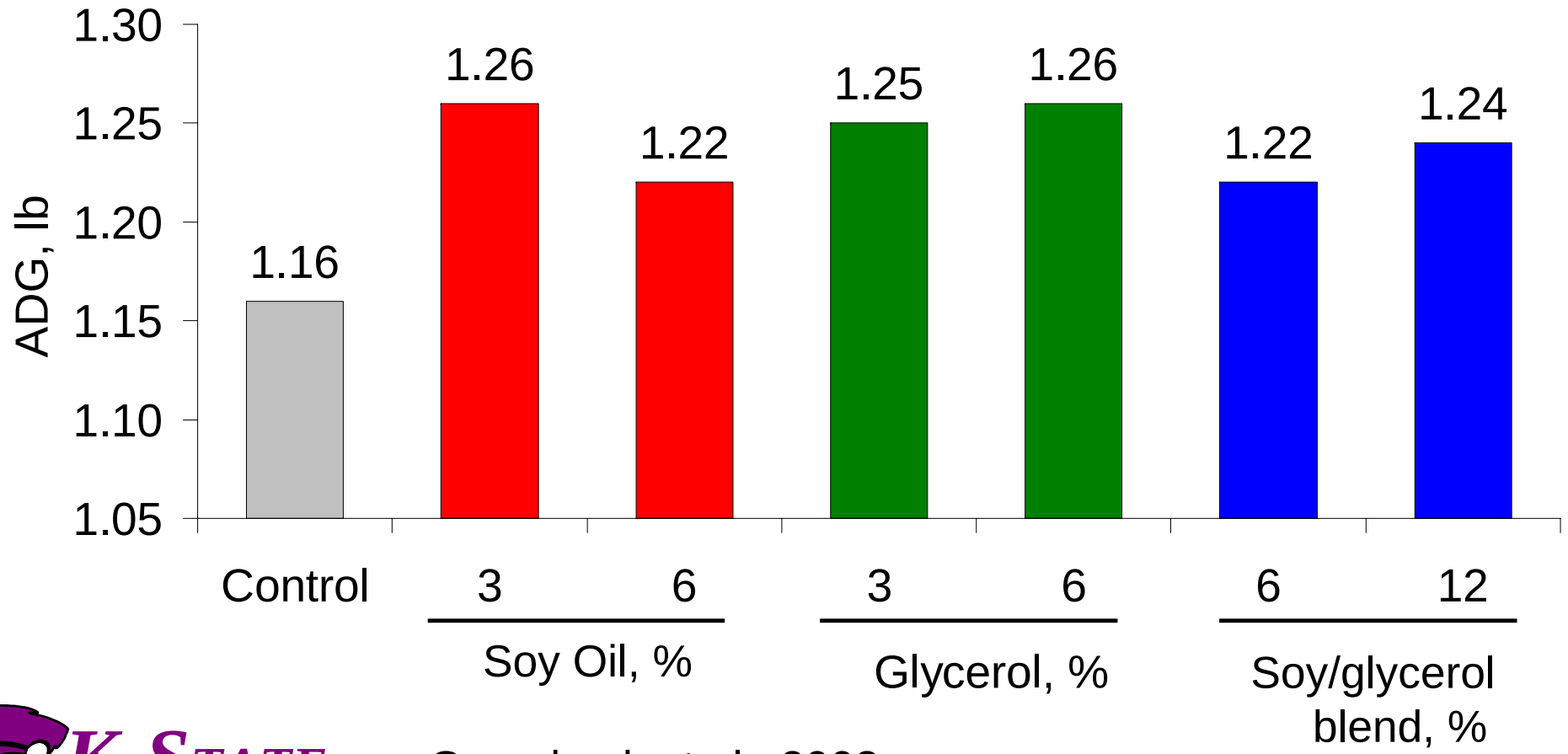
K-STATE

Groesbeck et al., 2008

Effects of glycerol and soy oil on growth performance of growing pigs

(25 to 55 lb)

Soy oil, quadratic P < 0.07, glycerol and blend linear P < 0.06



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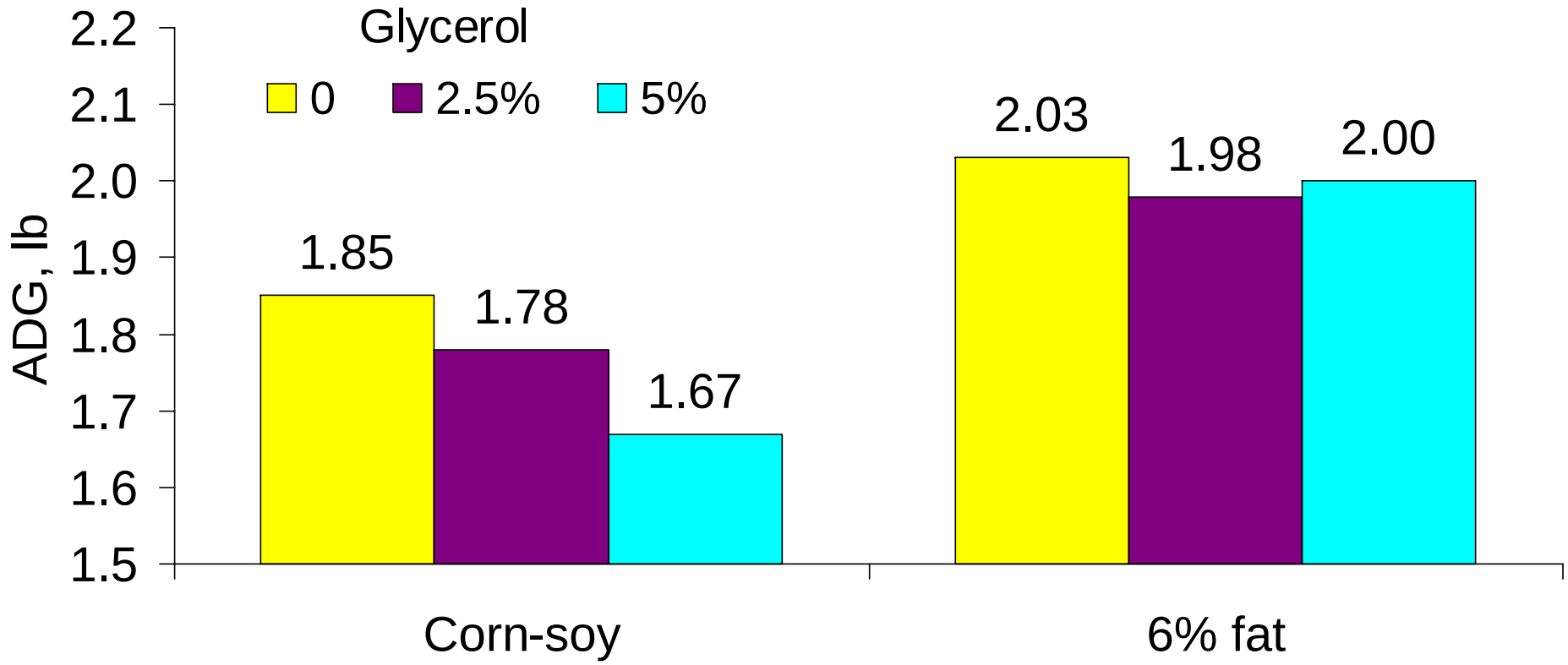
Groesbeck et al., 2008

Effects of glycerol and fat on growth performance of finishing pigs

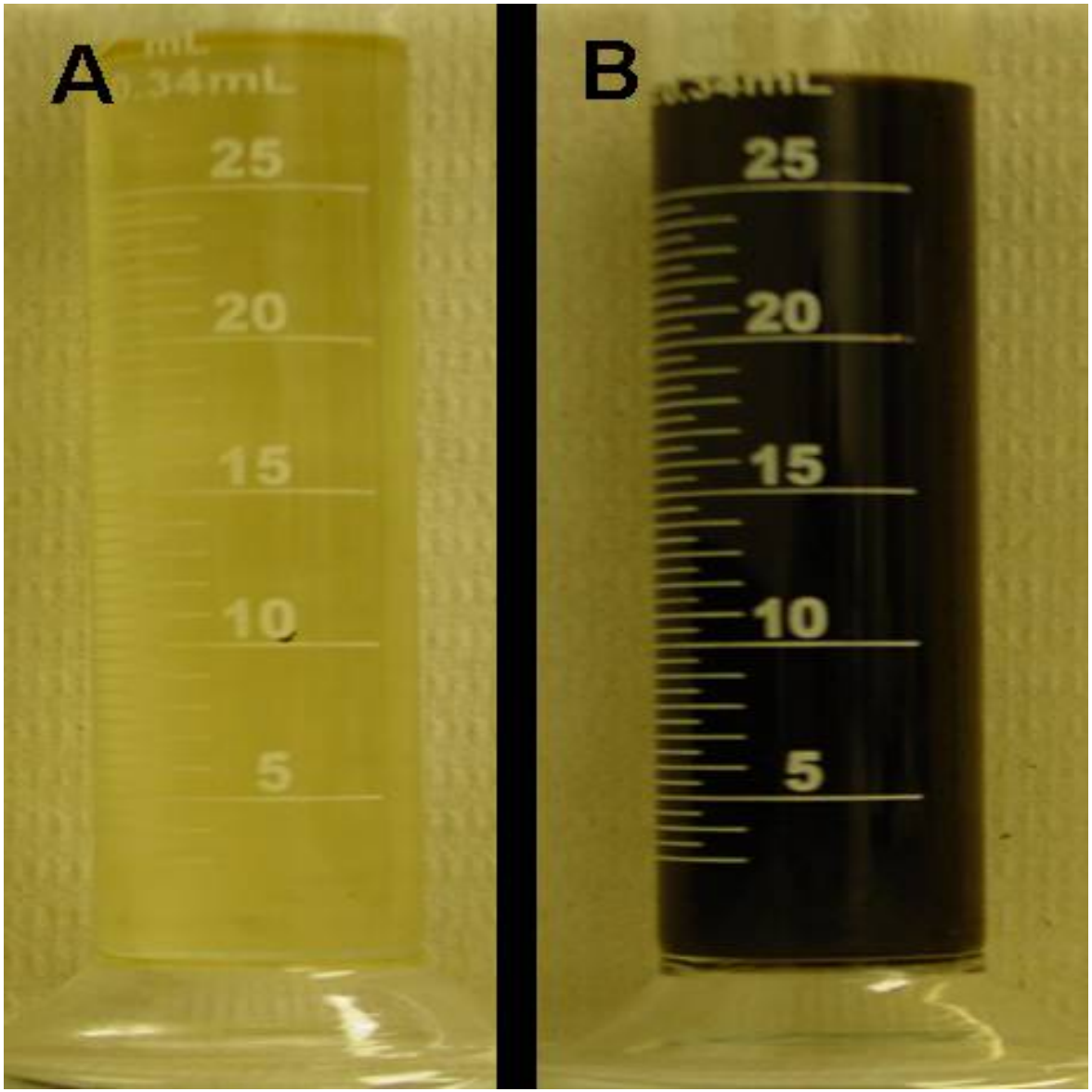
(170 to 220 lb)



K-STATE

Duttlinger et al., 2008

Fresh Glycerol on arrival



Glycerol after 3 months in refrigerator

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Marketing

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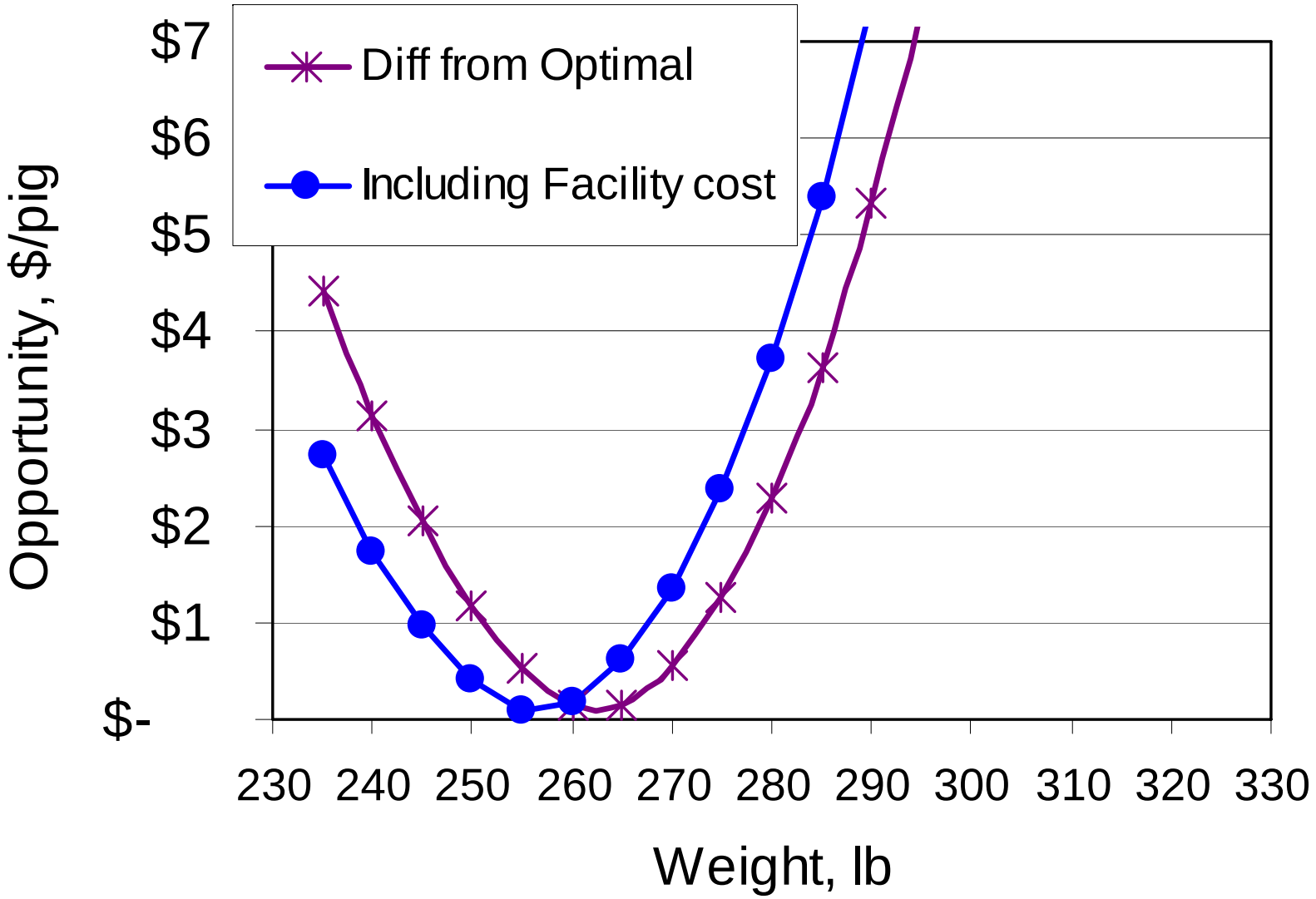
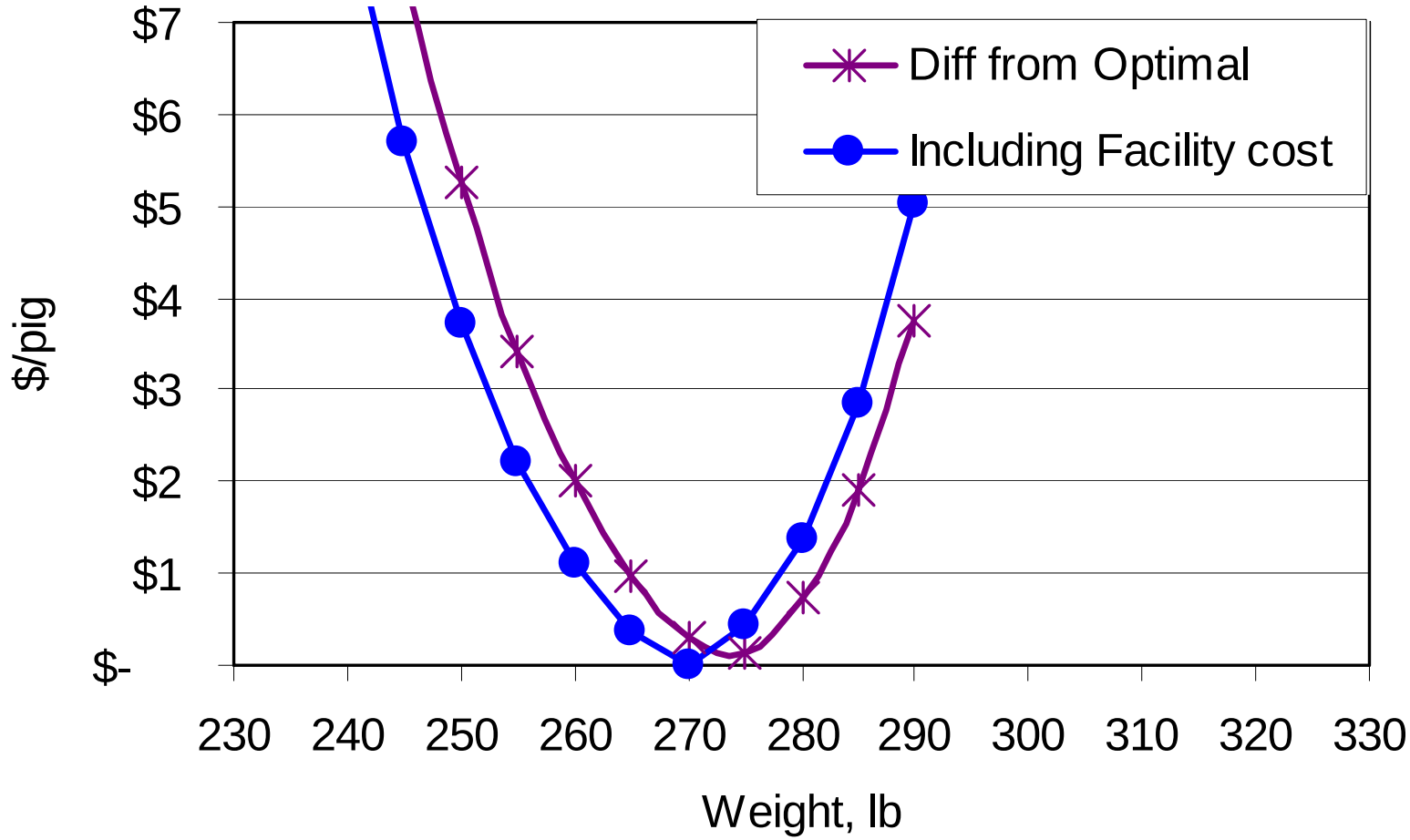
Watch Marketing Weights: Hormel $40/cwt



Watch Marketing Weights: Farmland $40/cwt



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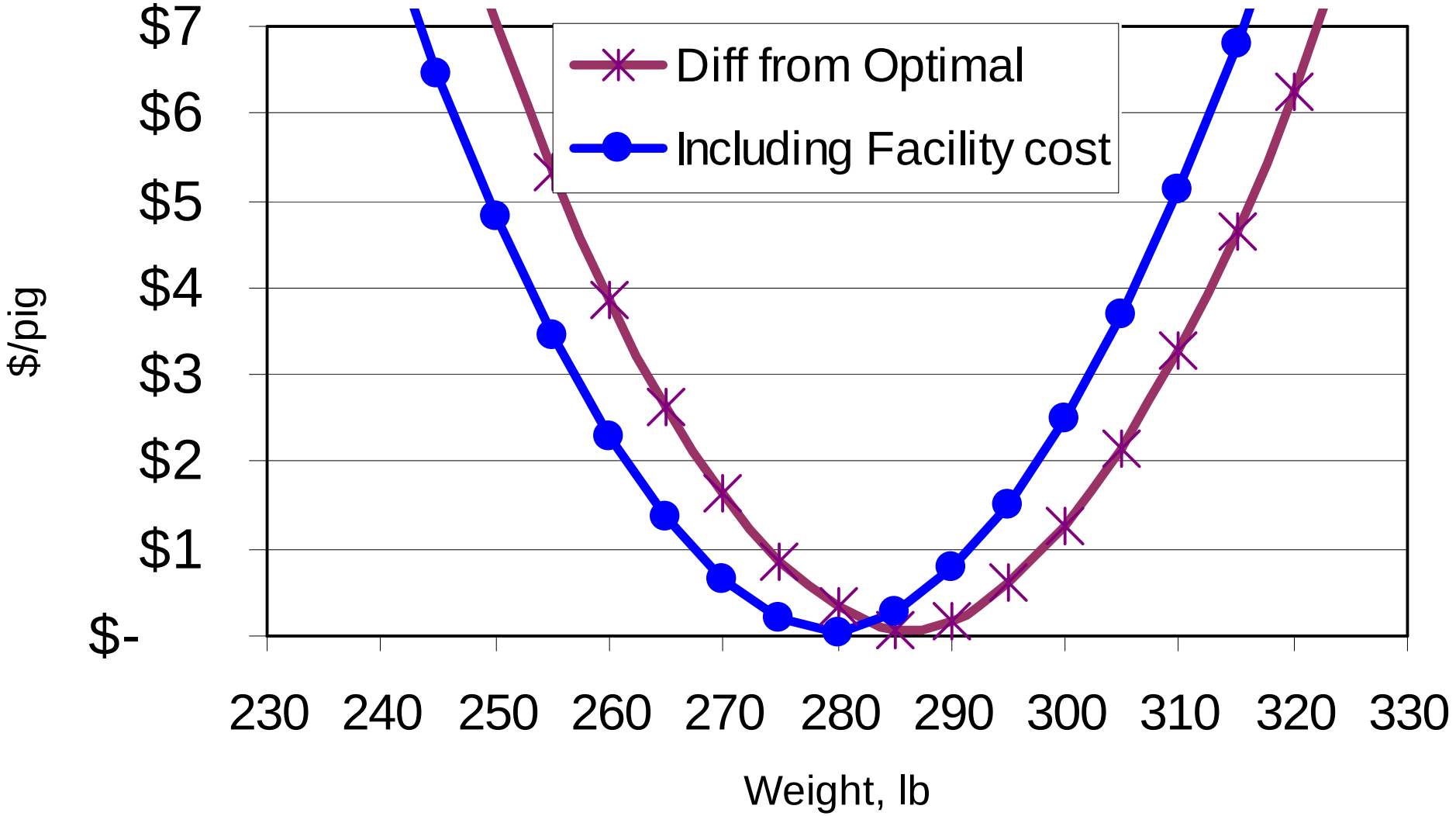
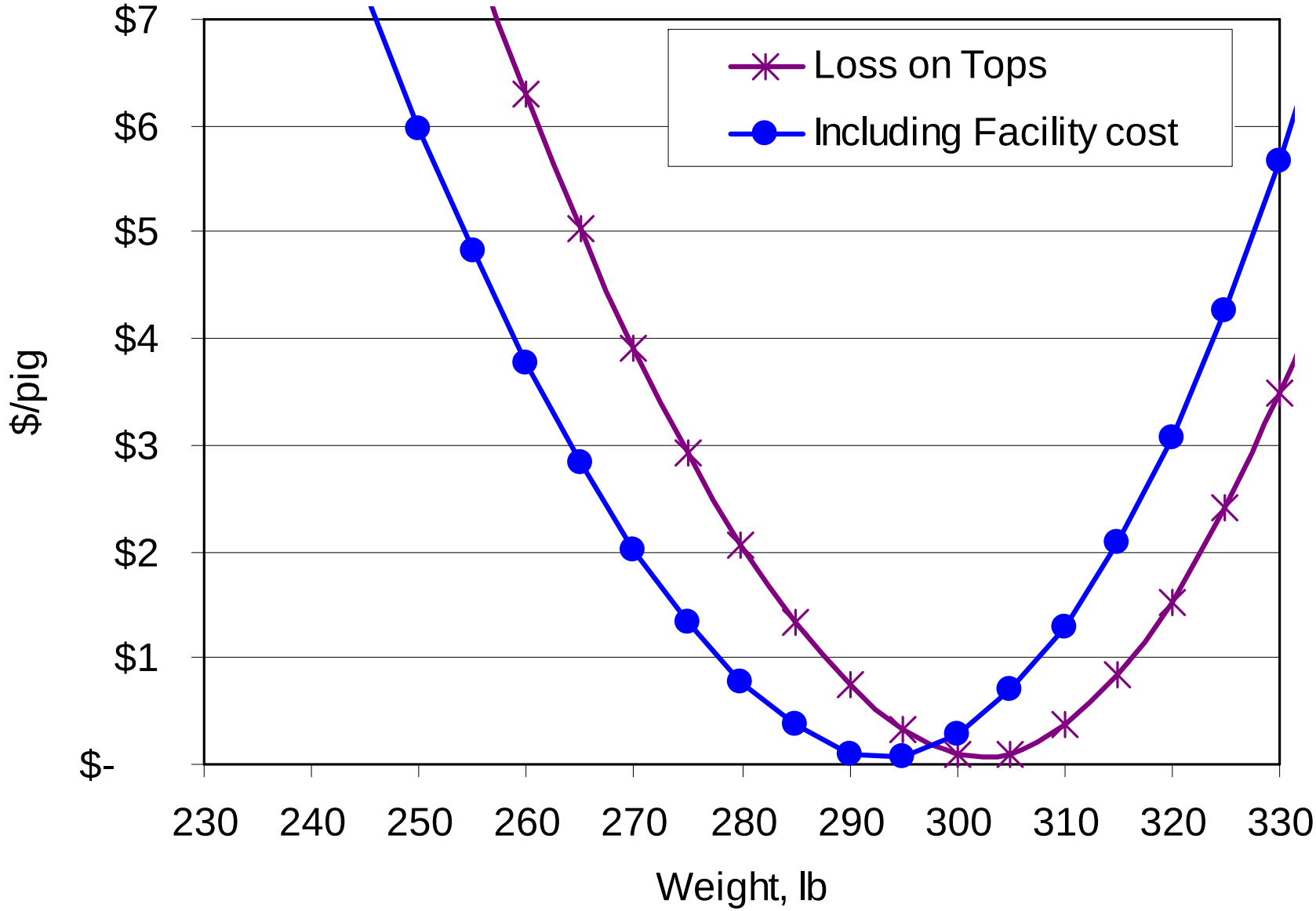
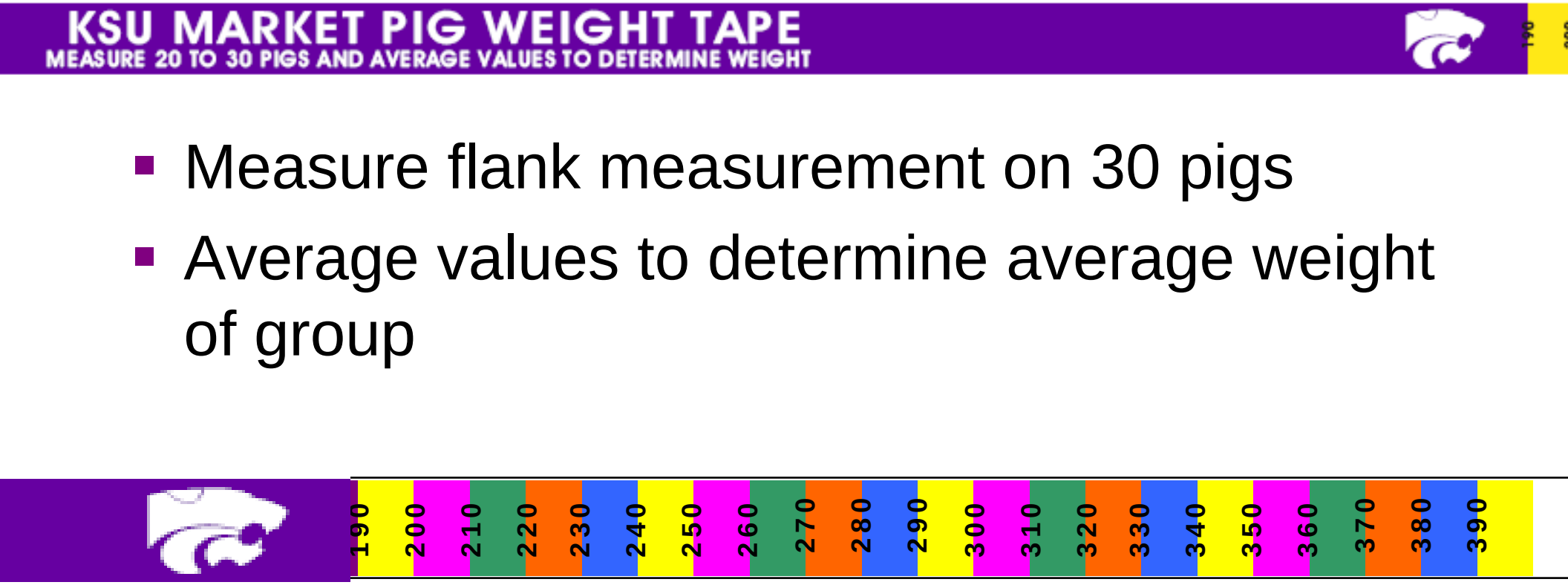
Watch Marketing Weights: Tyson $40/cwt



Watch Marketing Weights: Triumph $40/cwt



KSU Market Weight Tape



- Measure flank measurement on 30 pigs
- Average values to determine average weight of group

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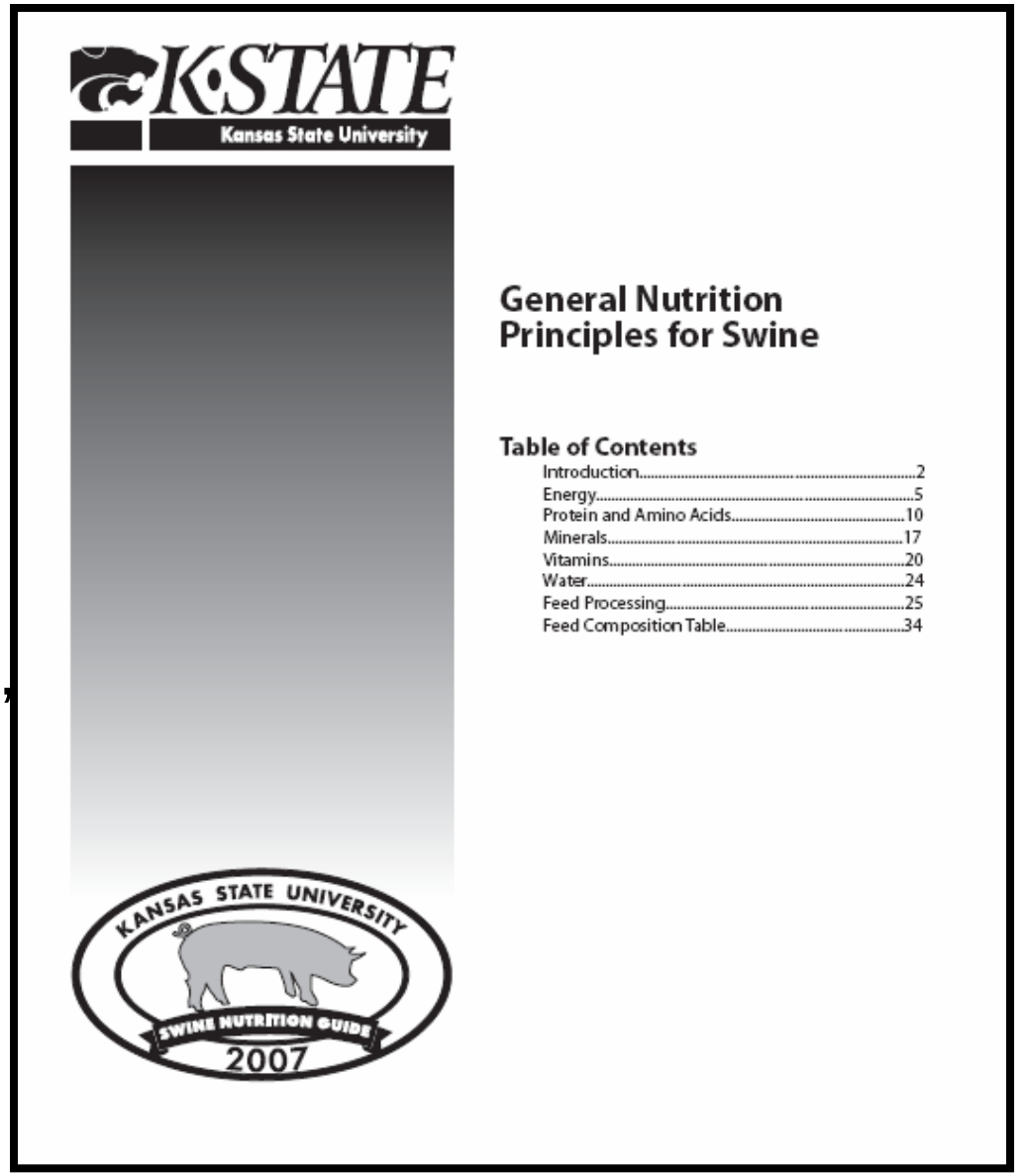
New Items

- 2007 Swine Industry Day
  - Swine Day Report available at: KSUSwine.org
- 2007 Swine Nutrition Guide
  - Latest recommendations, nursery pigs, grow-finish pigs, and the sow herd



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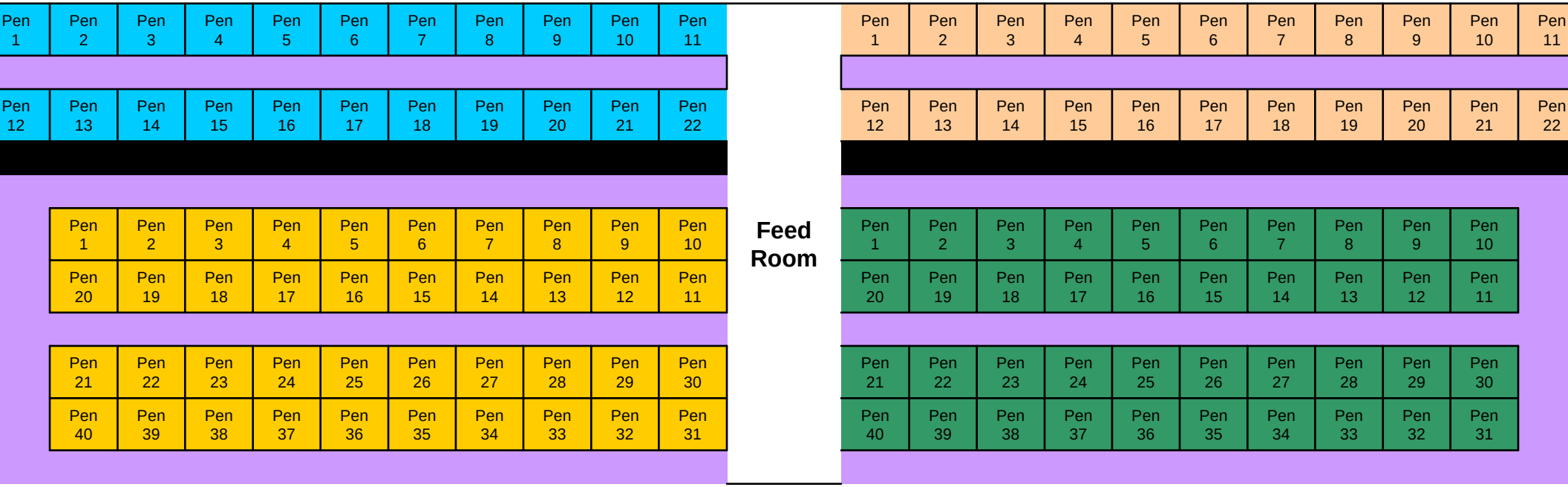
KSU Swine Farm New Building Plan



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KSU Swine Farm New Building

- Research projects funded by Kansas Pork Association have helped establish initial funding for facility
  - Commitment of $250,000
  - An additional $200,000 has been pledged through producers, allied industry, graduate student alumni and the KSU Livestock and Meat Industry Council
- Estimated cost is $650,000
  - We need additional support from producers and allied industry to complete the project

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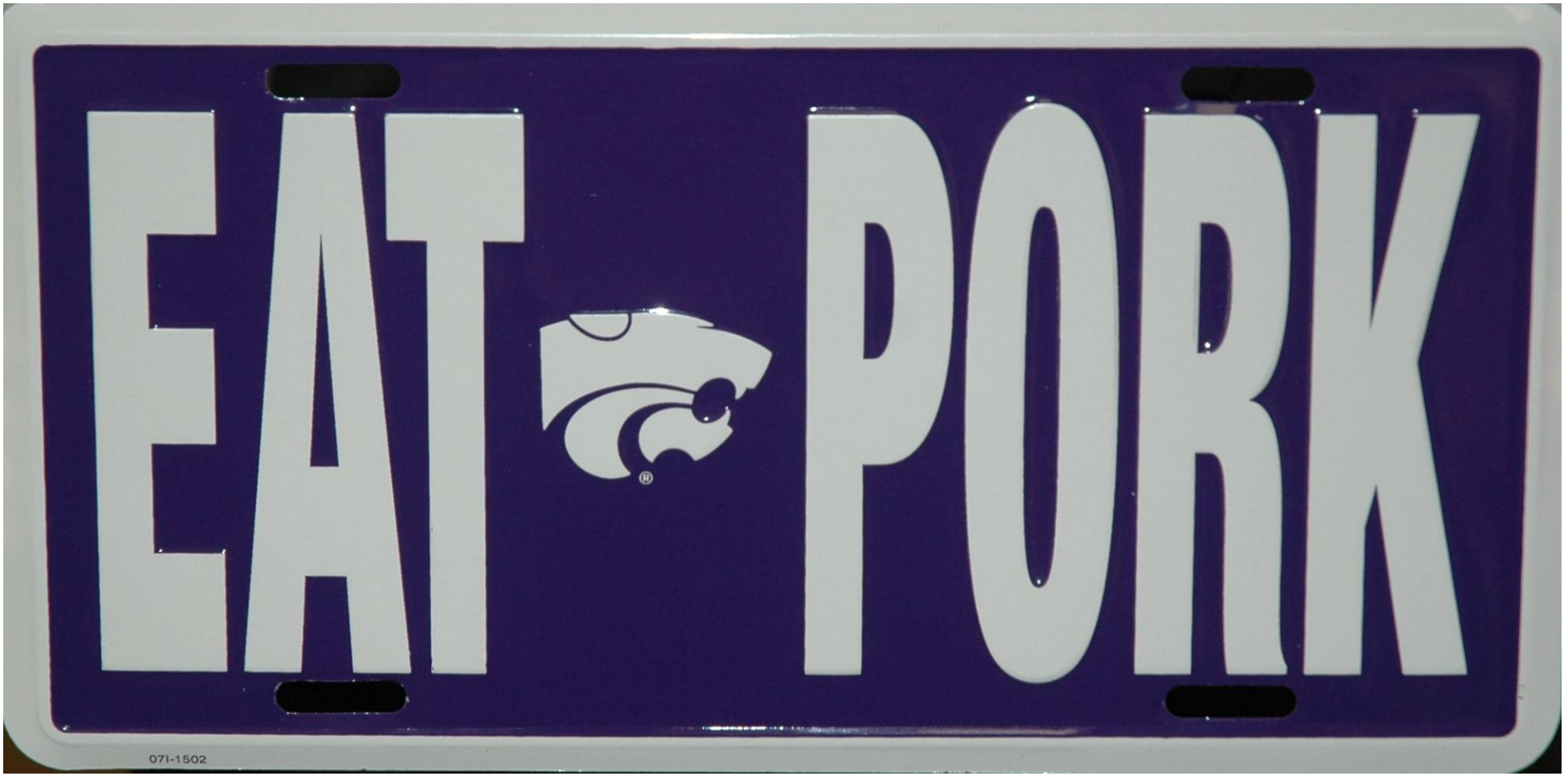

Pork License Plates being sold by
KSU Collegiate Cattlewomen

K-STATE

Thank you!

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