

2007-2008

Indiana

Beef

Evaluation and

Economics

Feeding Program



IBEEF Description



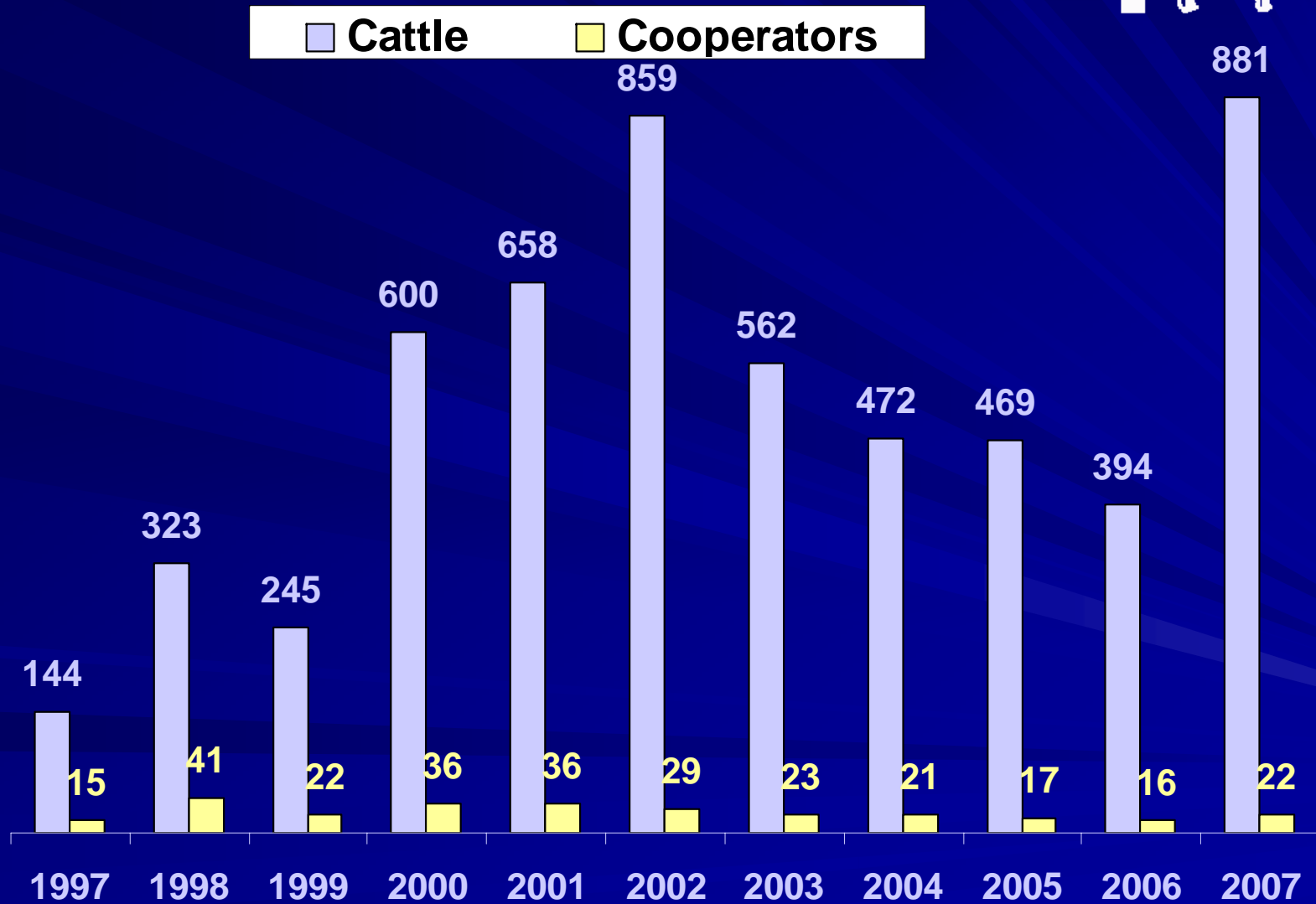
IBEEF is a steer and heifer feedout program that provides Indiana producers with a way to place cattle on feed and gather performance, carcass, and economic information to make genetic and management improvements in their herd. Cooperators receive individual and group feedlot performance, feedlot costs, and individual and group carcass information, including quality and yield grade, ribeye area, fat thickness, carcass weight, etc. IBEEF also allows producers to compare sires, as well as evaluate alternative marketing strategies and their impact upon profitability. The program also helps to improve the reputation of producer cattle by establishing a database of feedlot performance and carcass merit on their calves.

2007-2008 IBEEF Participation



- 22 cooperators
- 636 steers and 245 heifers
- Weaned at least 30 days before delivery
- Delivered October 21, November 12-14, and December 2, 2007
- 335 Steers fed in Indiana
 - G&D Smoker Farm, Wanatah, IN
- 301 Steers and 245 Heifers fed in Iowa
 - 81 steers and 68 heifers at Gary Nilan, Oakland, IA
 - 82 heifers at C Bar D Cattle Company, Gravity, IA
 - 136 steers and 19 heifers at CLAN Farms, Inc., Atlantic, IA
 - 84 steers and 76 heifers at S&B Farms, Macedonia, IA

History of Fall IBEEF



Vaccination Requirements



At weaning or 2 weeks prior:

- Four-way respiratory virus (IBR, BVD, PI3, and BRSV), may be killed or modified live (modified live preferred)
- Seven-way clostridial vaccine
- Pasturella vaccine

Two weeks before delivery:

- Repeat four-way respiratory virus vaccine (modified live)

2007-2008

IBEEF Participation



- Sire breeds represented: Angus, Charolais, Chiangus, Gelbvieh, Gelbvieh Balancer, Hereford, Lim-Flex, Maine-Anjou, Red Angus, Shorthorn, SimAngus, Simmental, Composite, and Cross
- Color: Black/BWF 85%, Red/RWF 8%, White 3%, Brown 2%, Smoke 1%, Gray 1%

Feedlot Performance



	<u>Steer</u>	<u>Heifer</u>
Delivery Point Weight, lbs.	643	570
Feedlot In Weight, lbs.	630	569
Harvest Weight, lbs.	1211	1080
ADG	3.29	2.86
Days on Feed	177	180
Age at Harvest	427	424

Carcass Characteristics



	<u>Steer</u>	<u>Heifer</u>
Hot Carcass Weight, lbs.	758	665
Ribeye Area	12.9	11.6
Backfat	0.45	0.51
Yield Grade	2.8	3.1
% YG 1 and 2	60.4	41.6
% YG 4	2.4	2.9
% Choice and Prime	57.5	82.0
% CAB	9.4	14.7

Calf Value At Delivery



<u>Delivery Point Weight, lbs.</u>	<u>\$/cwt Steer</u>	<u>\$/cwt Heifer</u>
449 and below	\$115.00	\$105.00
450 - 499	\$112.50	\$102.50
500 - 549	\$110.00	\$100.00
550 - 599	\$107.50	\$97.50
600 - 649	\$105.00	\$95.00
650 - 699	\$102.50	\$92.50
700 - 749	\$100.00	\$90.00
750 - 799	\$97.50	\$87.50
800 and above	\$95.00	\$85.00
Avg. Weight	643	570
Avg. \$/cwt	\$103.84	\$98.36

Economics



	<u>Steer</u>	<u>Heifer</u>
Feed Cost/cwt Gain	\$64.05	\$60.64
Nonfeed Cost/cwt Gain	\$18.18	\$20.32
Total Cost/cwt Gain	\$82.23	\$80.96
Carcass Price, \$/cwt	\$146.90	\$146.55
Sale Value	\$1,126.78	\$1,002.51
Calf Value	\$667.69	\$560.63
Profit	-\$15.19	\$30.61
BE Feeder Calf Value/cwt	\$101.86	\$102.55

IBEEF Cattle Compared to 2005 NBQA Native



	<u>Steer</u>	<u>Heifer</u>	<u>NBQA</u>
% Prime	1.1	2.0	2.1
% Prem. Choice	9.7	15.1	18.9
% Low Choice	46.7	64.9	35.3
% Select	39.8	17.6	38.2
% Standard	2.7	0.4	5.5
% YG 1&2	60.4	41.6	49.1
% YG 4	2.4	2.9	12.6



Steers

Steer Feedlot Performance (Cooperator Average)



	<u>Average</u>	<u>Range</u>
Delivery Point Weight, lbs.	623	455 to 732
Initial Value at Delivery, \$/cwt	\$104.52	\$99.21 to \$112.88
Feedlot In Weight, lbs.	610	442 to 718
Sale Weight	1186	1035 to 1270
Days on Feed	180	156 to 206
Daily Gain	3.22	2.88 to 3.54

How Steers Were Sold

Base Price and Grid



Sale Group	Sell Date	Base Price	Premiums		Discounts		Avg. Y4	\$/cwt
			Prime	CAB	Select	Standard		
01 IA	4/3	\$143.81	--	N/A	\$2.45	--	--	\$143.59
02 IA	4/3	\$143.82	--	N/A	\$2.45	\$9.17	\$13.50	\$141.99
04 IA	4/10	\$140.75	--	N/A	\$2.25	--	--	\$140.80
07 IN	4/27	\$144.00	\$12.00	\$1.00	\$2.00	\$5.00	\$15.00	\$143.41
08 IN	5/4	\$147.00	--	\$4.00	\$2.00	\$5.00	\$15.00	\$147.55
09 IA	5/8	\$149.79	--	N/A	\$2.77	--	--	\$150.14
10 IA	5/8	\$149.15	--	N/A	\$2.77	\$5.56	\$13.50	\$147.31
12 IA	5/8	\$149.79	--	\$3.50	\$2.77	--	\$13.50	\$150.10
14 IA	5/15	\$149.90	--	N/A	\$3.29	\$6.61	--	\$149.47
17 IN	5/18	\$150.00	\$11.00	\$6.00	\$3.00	--	--	\$152.37
18 IN	5/26	\$149.00	--	\$4.00	\$3.00	\$9.00	--	\$148.26
19 IN	6/8	\$148.00	--	\$6.00	\$3.00	\$10.00	--	\$145.49
20 IN	6/8	\$148.00	\$12.00	\$6.00	\$3.00	\$10.00	\$15.00	\$149.28
21 IA	6/12	\$150.07	--	\$4.60	\$3.79	--	\$13.50	\$149.84

Base price, premiums, and discounts are \$/cwt

Other Premiums: YG 1: \$4.00; YG 2: \$2.00

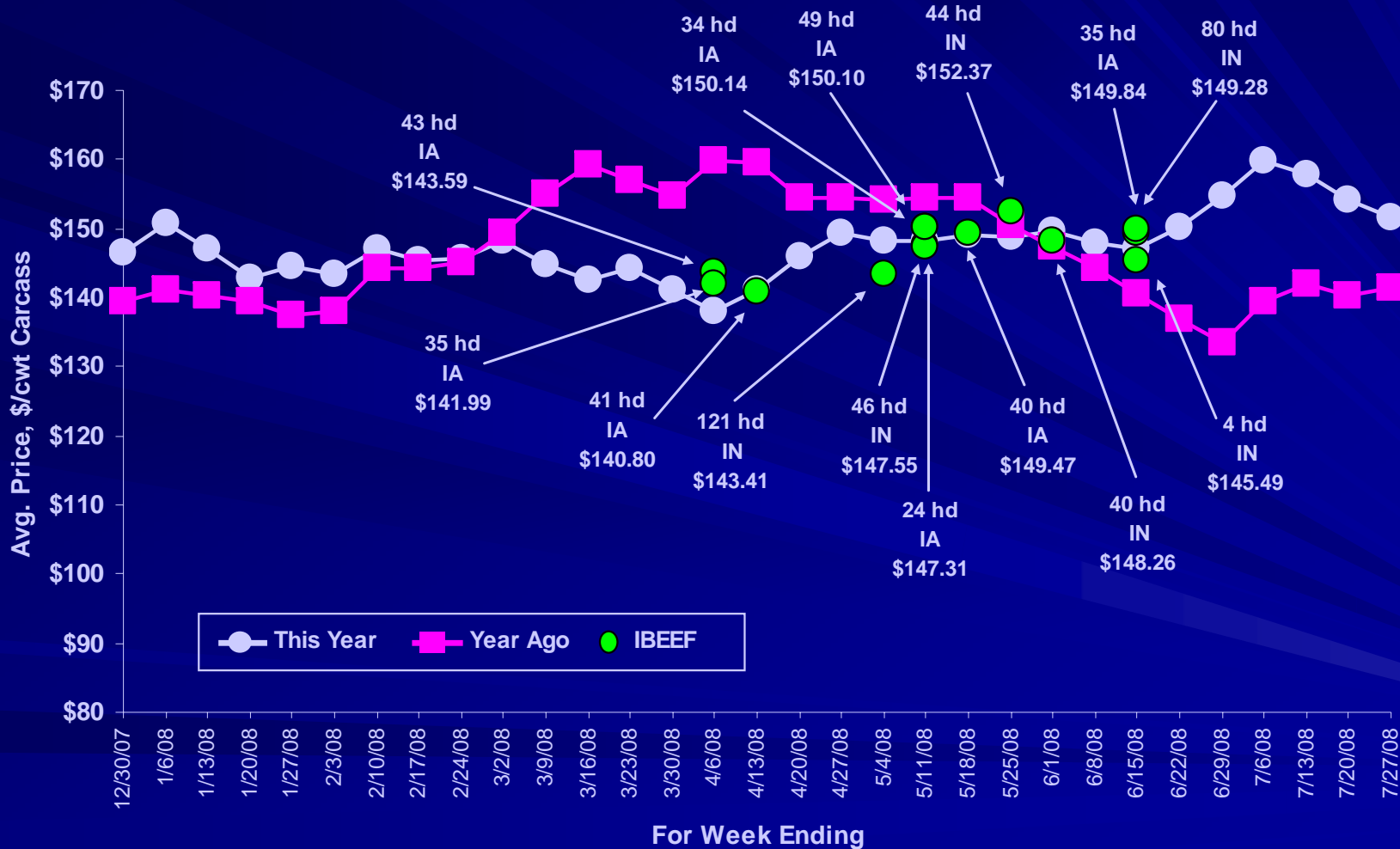
In addition, most Iowa cattle received an Age Verified Premium of \$30.00/hd or \$20.00/hd (21 IA)

Other Discounts: >1000 lbs: \$15.00 (07 IN); <550lbs: \$25.00 (08 IN), \$17.18 (14 IA)

All cattle sold to Tyson Fresh Meats, True Value or Standard Grid:

Iowa cattle – Denison, IA; Indiana cattle – Joslin, IL

Steers Avg. Price, \$/cwt Carcass Weight Basis



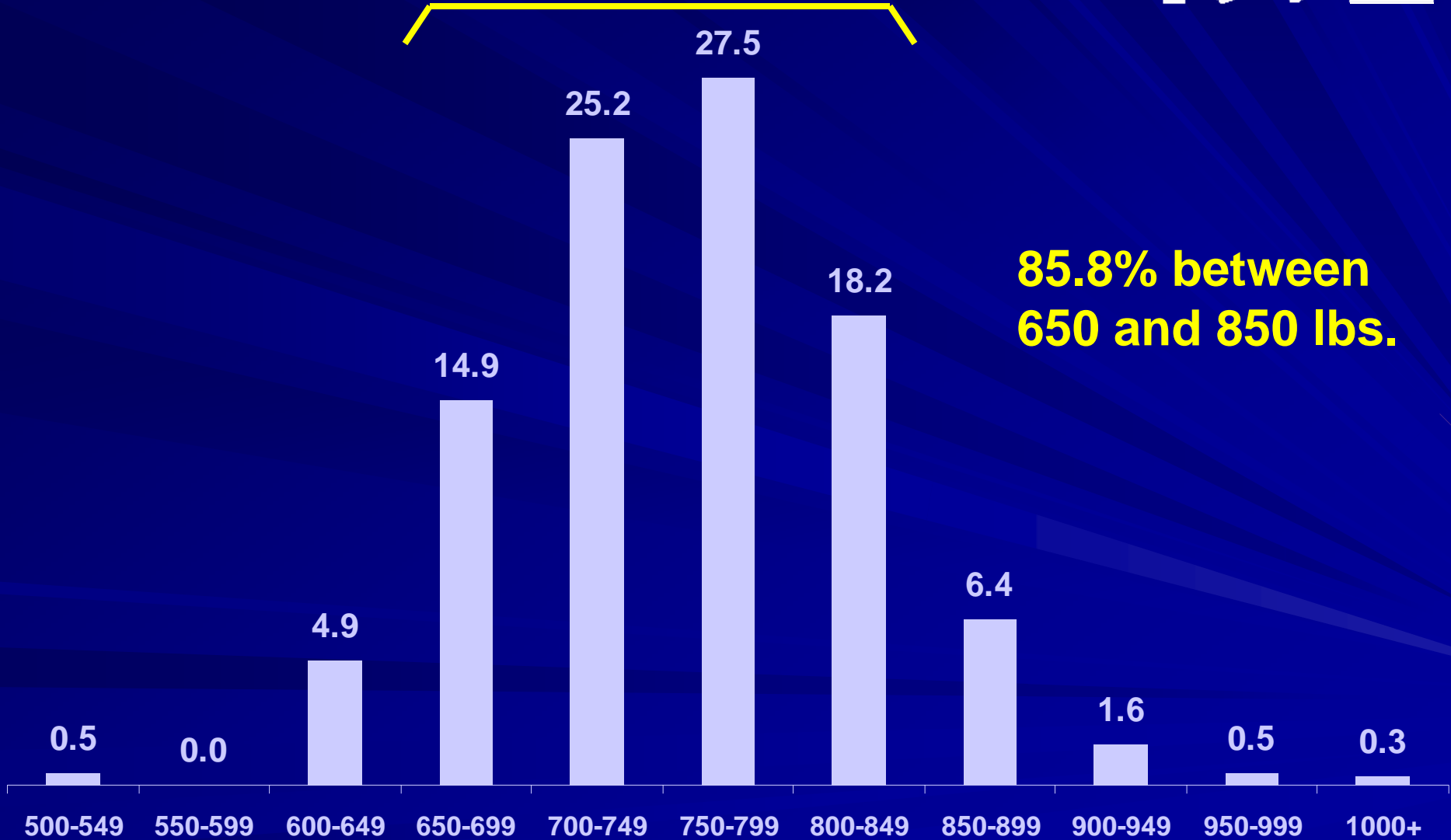
Source: 5 Area Weekly Weighted Average Direct Slaughter Cattle (Texas/Oklahoma, Kansas, Nebraska, Colorado, Iowa/Minnesota feedlots), USDA Market News Service.

Steer Carcass Characteristics (Cooperator Average)

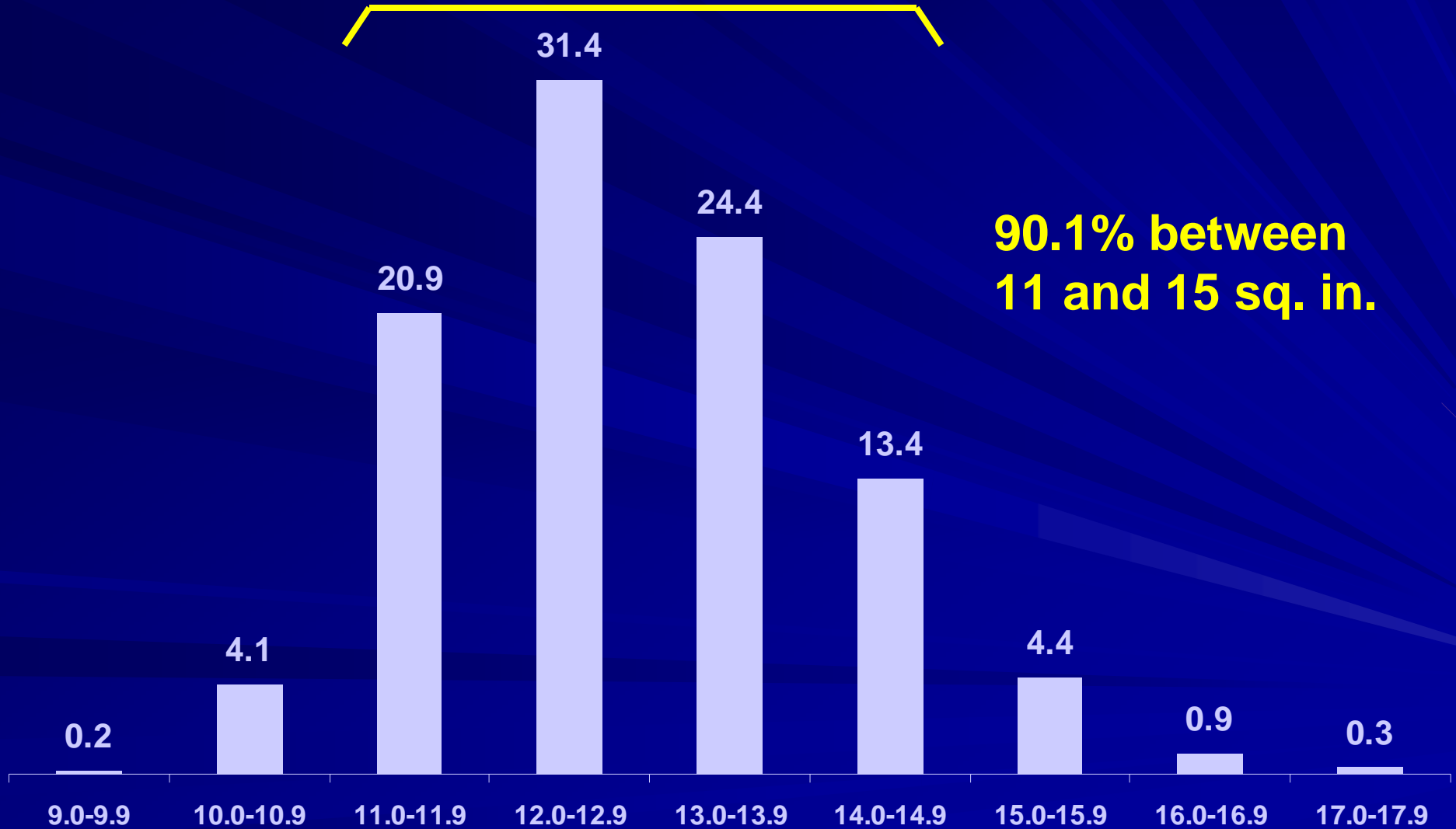


	<u>Average</u>	<u>Range</u>
Carcass Weight	739	625 to 807
Dressing %	62.3	60.2 to 64.8
Ribeye Area	12.7	11.2 to 14.0
REA/cwt carcass	1.72	1.61 to 2.00
Backfat	0.44	0.26 to 0.54
Yield Grade	2.8	1.9 to 3.4
% Choice or Prime	57.1	0.0 to 100.0
Sale Price, \$/cwt	\$147.52	\$143.05 to \$152.16
Sale Value/Hd.	\$1,104.77	\$927.91 to \$1,185.69

Steers Carcass Weight

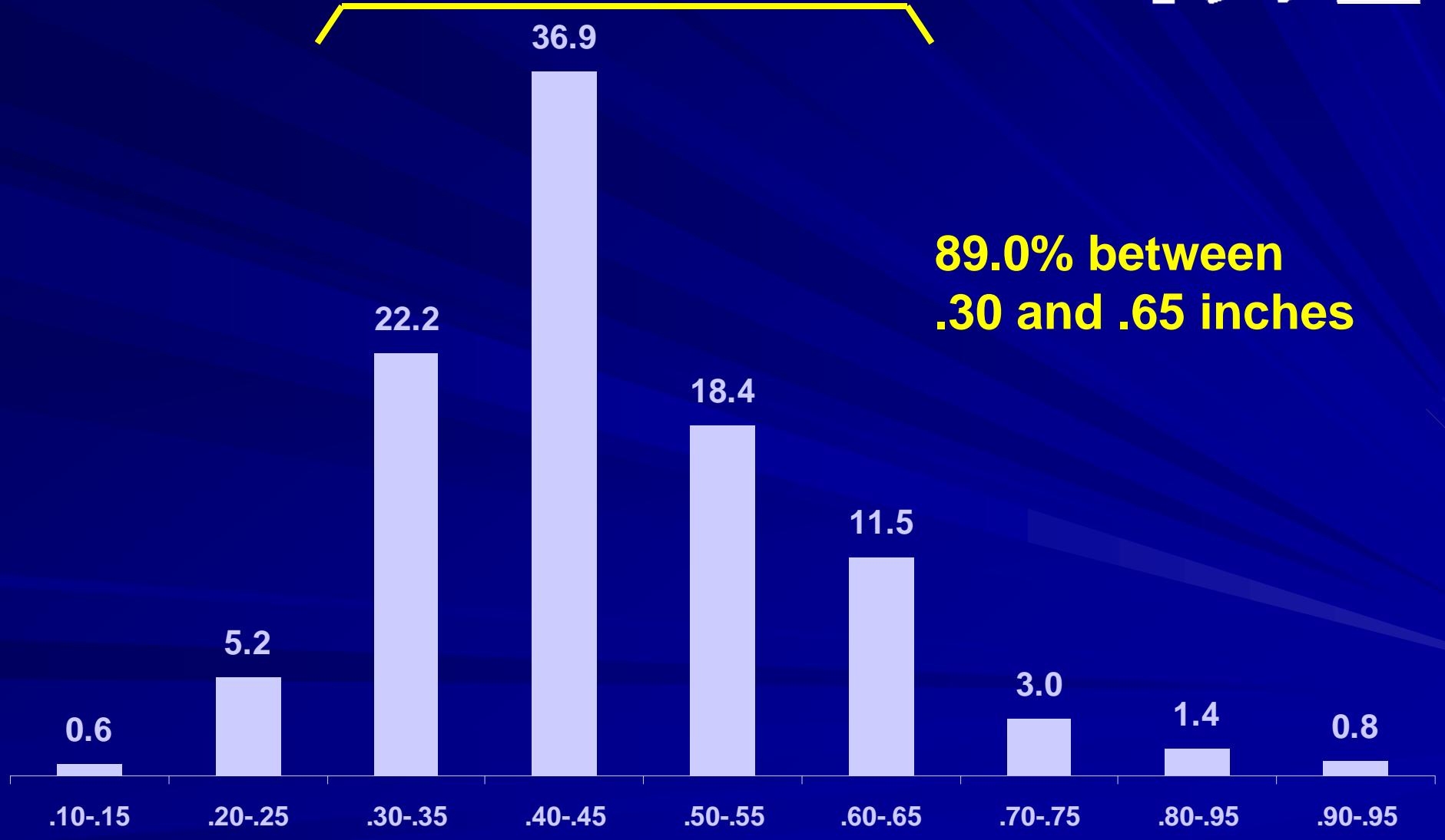


Steers Ribeye Area

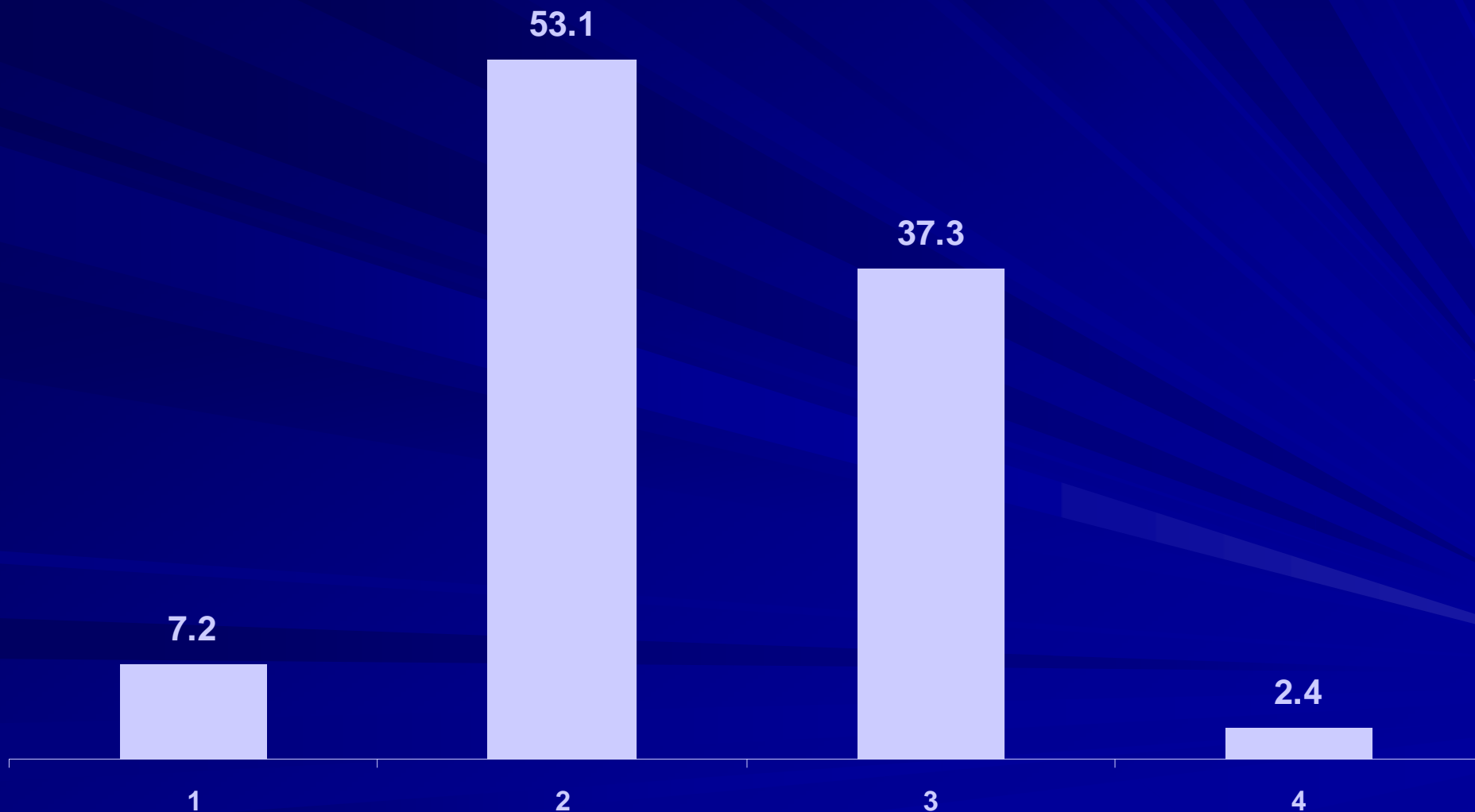


**90.1% between
11 and 15 sq. in.**

Steers Backfat



Steers Yield Grade



Steer Feeding Cost (Cooperator Average)



	<u>Average</u>	<u>Range</u>
Feed	\$360.05	\$278.29 to \$442.89
Medication	\$9.84	\$0.47 to \$21.56
Yardage	\$53.37	\$47.10 to \$62.03
Misc. (processing, trucking, data collection)	\$42.83	\$38.19 to \$46.55
Total	\$466.09	\$385.66 to \$556.58

Steers - The Bottom Line (Cooperator Average)



	<u>Average</u>	<u>Range</u>
Feed Cost of Gain, \$/cwt	\$62.48	\$55.05 to \$72.67
Nonfeed Cost of Gain, \$/cwt	\$18.78	\$15.48 to \$23.20
Total Cost of Gain, \$/cwt	\$81.26	\$75.40 to \$92.84
Profit/Head	-\$13.36	-\$53.79 to \$62.58
Break Even Feeder Calf Value, \$/cwt	\$102.83	\$94.66 to \$111.81

Break Even Feeder Calf Value



Calculation:

$$\frac{\text{Harvest Sale Value} - \text{Feedlot Costs}}{\text{Calf Weight at Delivery}}$$

Example for Steers:

Harvest Sale Value = 758 lbs x \$146.90/cwt = \$1,113.50

Feedlot Costs = \$474.28

Net = \$1,113.50 - \$474.28 = \$639.22

Calf Weight at Delivery = 643 lbs

Break Even Calf Value = \$639.22/643 lbs = \$99.41/cwt

Profit Groups



- Based on initial assigned feeder calf value at delivery, feeding costs, and harvest sale value, cattle were divided into profit group quartiles (159 steers/group)
- Profit = Sale Value - Feedlot Costs - Calf Value
- Example:
Profit = \$1,113.50 - \$474.28 - \$667.69 = -\$28.47

Steer Profit Groups



<u>Profit Group</u>	<u>No. Steers</u>	<u>Profit \$/Hd.</u>	<u>Break Even Feeder Calf Value, \$/cwt</u>
1	159	\$62.60	\$115.89
2	159	\$4.97	\$104.98
3	159	-\$31.71	\$98.32
4	159	-\$96.63	\$88.27
<hr/>			
Average		-\$15.19	\$101.86

Differences Between High And Low Profit Groups *Feedlot Performance*



	<u>High vs. Low</u>
Delivery Point Weight, lbs.	614 vs. 671
Start Weight, lbs.	608 vs. 649
% Shrink (delivery - feedlot in)	-0.67 vs. -4.42
Final Weight, lbs.	1247 vs. 1177
Feedlot Daily Gain	3.50 vs. 3.07
Medication Cost	\$3.64 vs. \$10.08
Total Feedlot Cost	\$497.67 vs. \$458.76
Cost of Gain, \$/cwt	\$78.10 vs. \$87.52
Days on Feed	183 vs. 172

Differences Between High And Low Profit Groups *Carcass Characteristics*

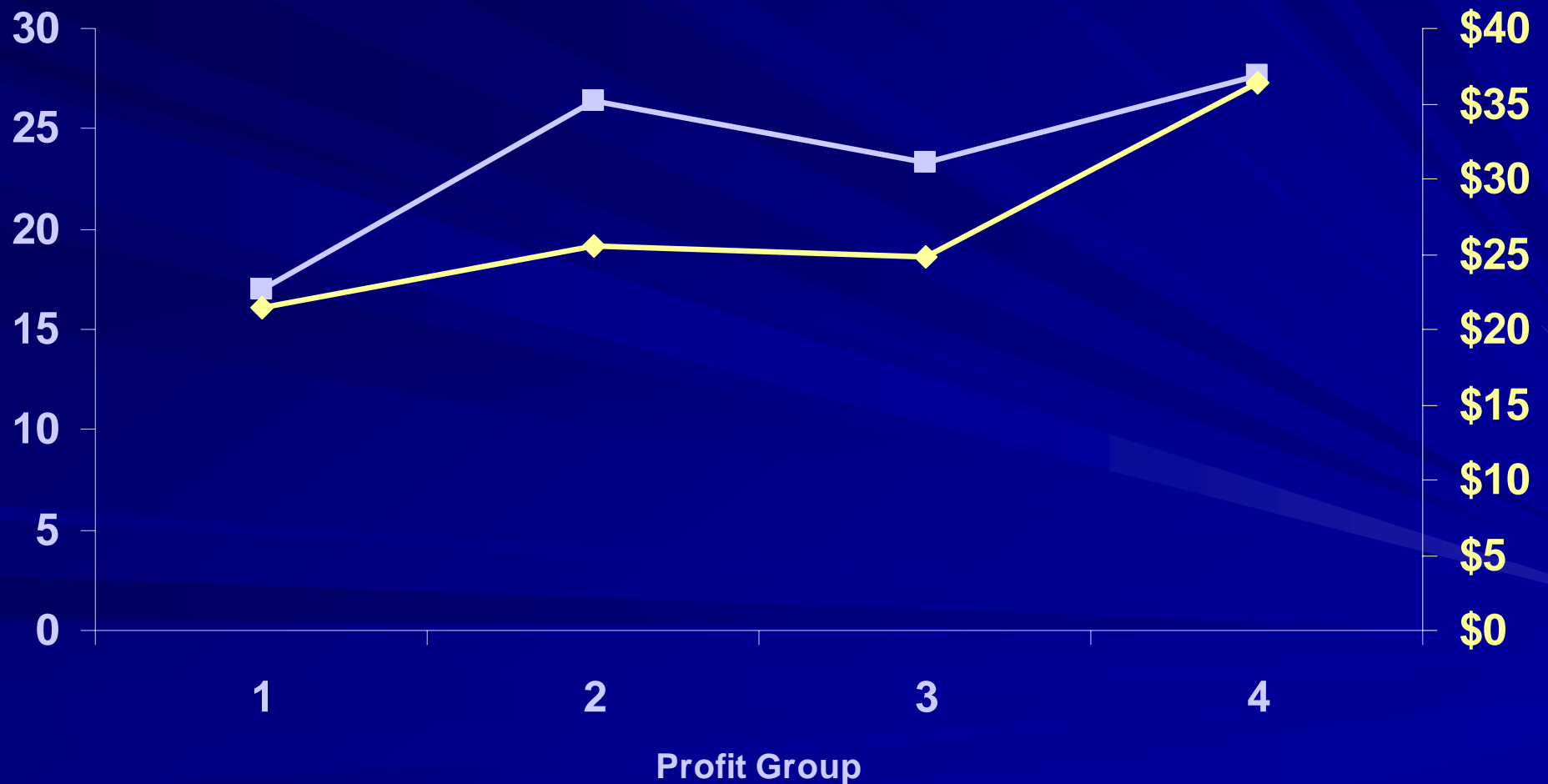


	<u>High vs. Low</u>
Hot Carcass Weight, lbs.	791 vs. 726
Ribeye Area	13.3 vs. 12.3
Backfat	0.43 vs. 0.48
% Yield Grade 4	0.6 vs. 8.8
% Yield Grade 1 and 2	67.3 vs. 48.4
% Choice or Prime	78.0 vs. 44.0
Carcass Price, \$/cwt	\$150.56 vs. \$143.11

Impact of Health on Profit



■ Percent Treated ◆ Medication Cost



% of Steers in Each Category Which are in the 4 Profit Groups



<u>Category</u>	<u>No. Steers</u>	<u>Profit Group</u>			
		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
Breed of Sire					
Angus	369	25.2	23.8	26.6	24.4
Charolais	24	8.3	37.5	33.3	20.8
Cross	26	7.7	26.9	34.6	30.8
Gelbvieh	23	26.1	30.4	26.1	17.4
Hereford	16	18.8	18.8	25.0	37.5
Other Breeds	29	17.2	20.7	13.8	48.3
Shorthorn	36	27.8	27.8	25.0	19.4
SimAngus	39	41.0	12.8	28.2	17.9
Simmental	74	29.7	32.4	13.5	24.3

“Other Breeds” = Breeds with fewer than 10 steers.
Includes Red Angus (9 steers), Lim-Flex (8), Chiangus (6), Maine-Anjou (3), Composite (1), Gelbvieh Balancer (1), and Unknown (1).

% of Steers in Each Category Which are in the 4 Profit Groups



<u>Category</u> Sale Group	<u>No.</u> <u>Steers</u>	<u>Profit Group</u>			
		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
01 IA 4/3	43	14.0	25.6	34.9	25.6
02 IA 4/3	35	2.9	17.1	31.4	48.6
04 IA 4/10	41	0.0	17.1	34.1	48.8
07 IN 4/27	121	11.6	19.0	33.9	35.5
08 IN 5/4	46	39.1	28.3	17.4	15.2
09 IA 5/8	34	64.7	23.5	2.9	8.8
10 IA 5/8	24	4.2	33.3	25.0	37.5
12 IA 5/8	49	26.5	34.7	24.5	14.3
14 IA 5/15	40	40.0	40.0	15.0	5.0
17 IN 5/18	44	59.1	27.3	9.1	4.5
18 IN 5/26	40	15.0	25.0	35.0	25.0
19 IN 6/8	4	0.0	0.0	25.0	75.0
20 IN 6/8	80	26.3	22.5	26.3	25.0
21 IA 6/12	35	42.9	28.6	14.3	14.3



Heifers

Heifer Feedlot Performance (Cooperator Average)



	<u>Average</u>	<u>Range</u>
Delivery Point Weight, lbs.	570	504 to 639
Initial Value at Delivery, \$/cwt	\$97.14	\$92.47 to \$100.45
Feedlot In Weight, lbs.	567	458 to 677
Sale Weight	1074	1027 to 1157
Days on Feed	178	157 to 196
Daily Gain	2.86	2.72 to 3.13

How Heifers Were Sold

Base Price and Grid



Sale Group	Sell Date	Base Price	Premiums		Discounts		Avg. Y4	\$/cwt
			Prime	CAB	Select	Standard		
03 IA	4/3	\$143.82	--	N/A	\$2.45	\$9.17	--	\$141.96
05 IA	4/10	\$140.75	--	N/A	\$2.25	--	--	\$140.67
06 IA	4/10	\$140.91	--	N/A	\$2.25	--	\$13.50	\$139.83
11 IA	5/8	\$149.15	--	N/A	\$2.77	--	--	\$149.14
13 IA	5/8	\$149.79	\$11.41	\$3.50	2.77	--	\$13.50	\$150.49
15 IA	5/15	\$149.90	\$11.23	N/A	\$3.29	--	\$13.50	\$149.34
16 IA	5/15	\$150.03	\$11.23	N/A	\$3.29	--	\$13.50	\$150.10
22 IA	6/12	\$150.07	\$11.43	\$4.60	\$3.79	--	\$13.50	\$151.79

Base price, premiums, and discounts are \$/cwt

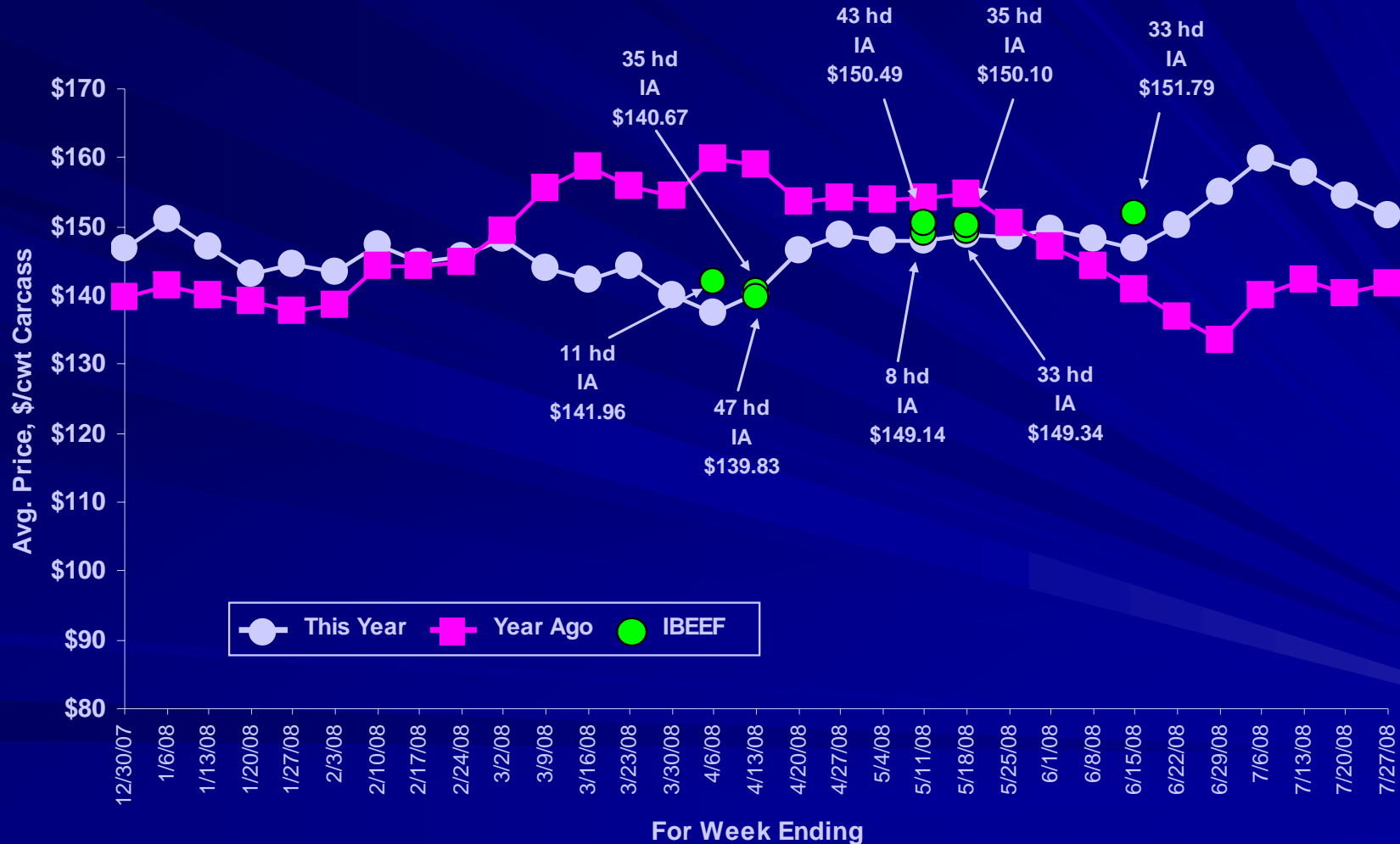
Other Premiums: YG 1: \$4.00, YG 2: \$2.00

In addition, most cattle received an Age Verified Premium of \$30.00/hd or \$20.00/hd (22 IA)

Other Discounts: <550 lbs: \$15.82 (05 IA), \$17.18 (15 IA, 16IA)

All cattle sold to Tyson Fresh Meats, True Value Grid - Denison, IA

Heifers Avg. Price, \$/cwt Carcass Weight Basis



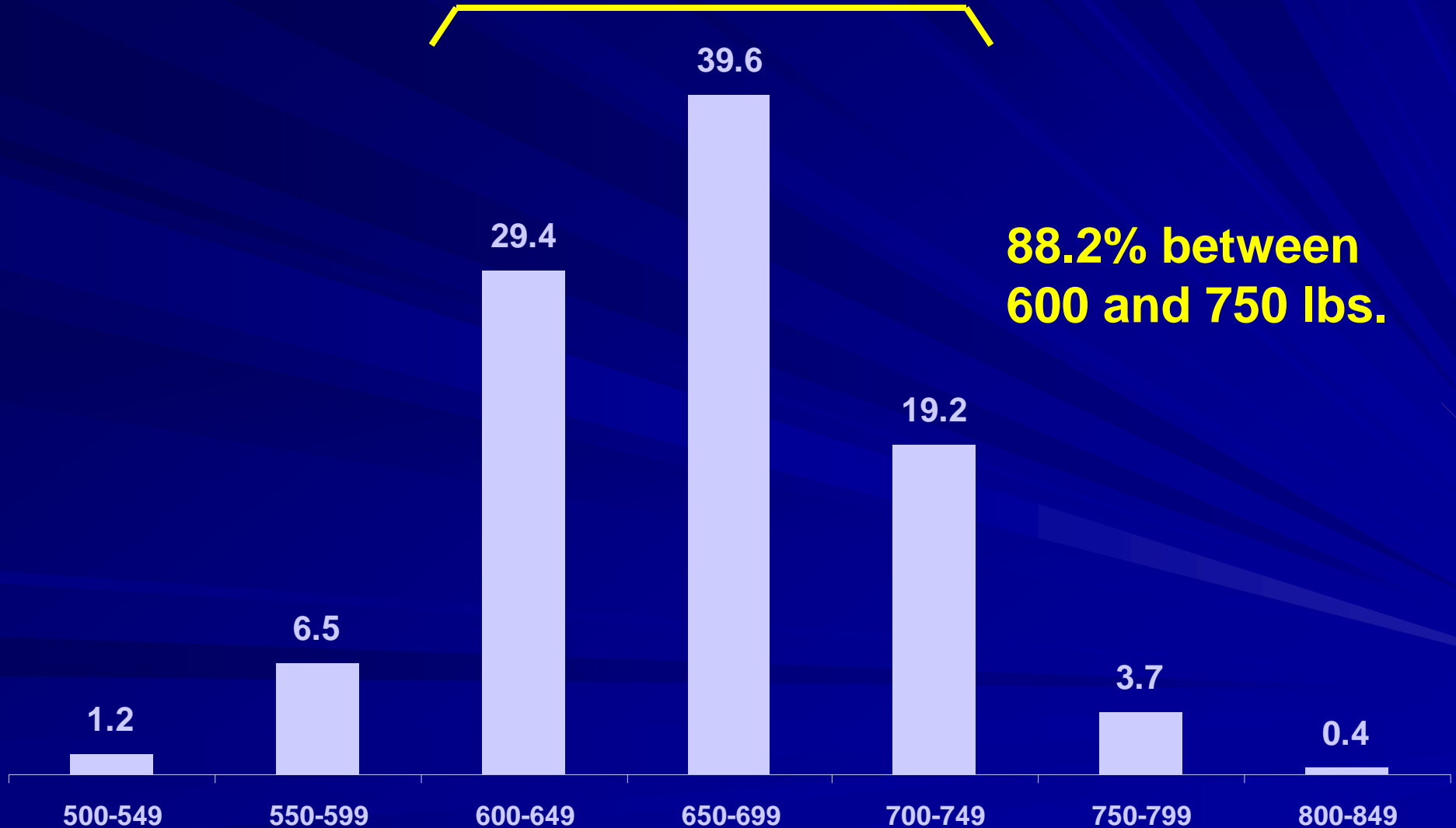
Source: 5 Area Weekly Weighted Average Direct Slaughter Cattle (Texas/Oklahoma, Kansas, Nebraska, Colorado, Iowa/Minnesota feedlots), USDA Market News Service.

Heifer Carcass Characteristics (Cooperator Average)

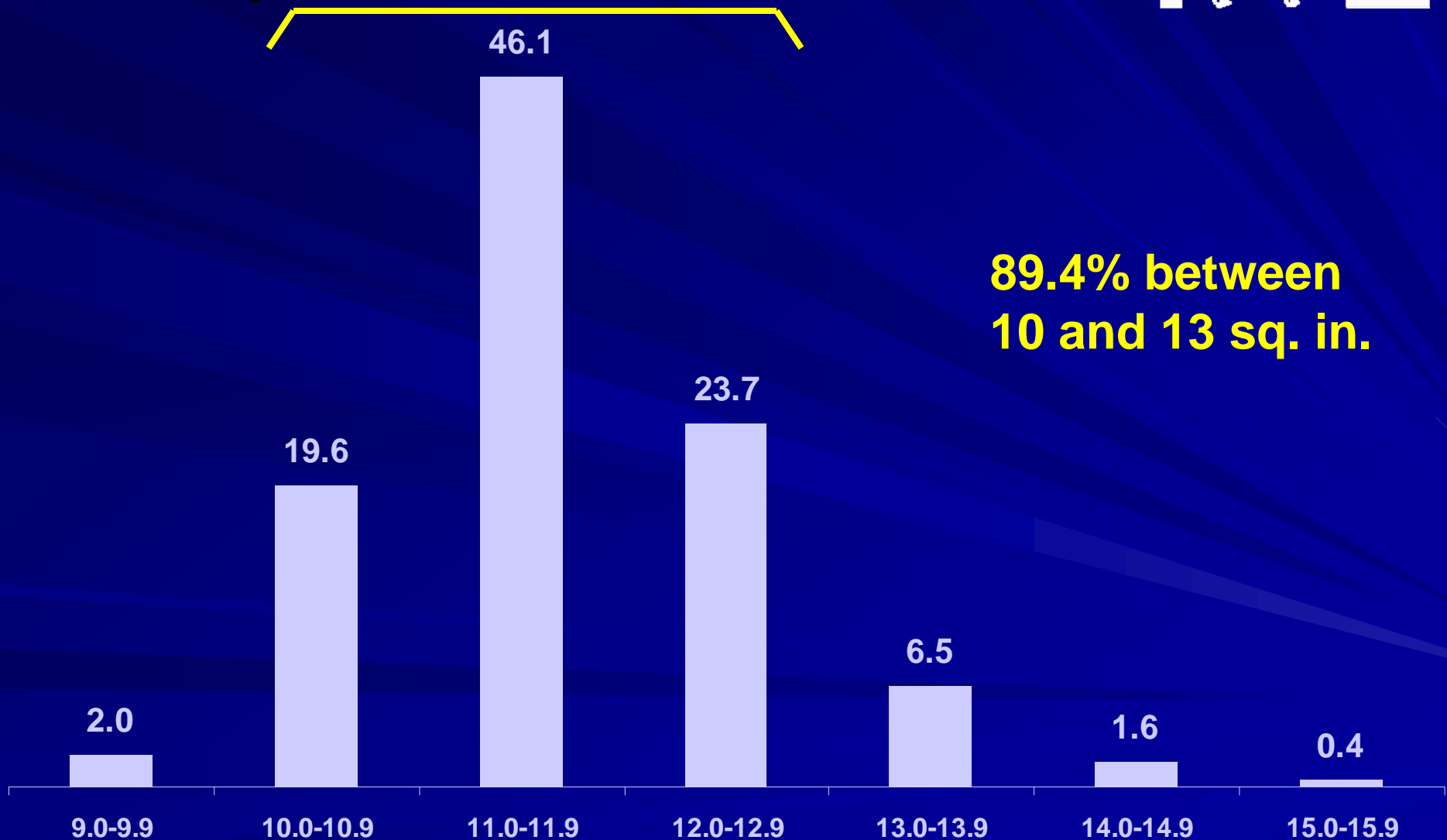


	<u>Average</u>	<u>Range</u>
Carcass Weight	662	628 to 717
Dressing %	61.7	60.8 to 62.9
Ribeye Area	11.5	11.0 to 12.7
REA/cwt carcass	1.74	1.58 to 1.81
Backfat	0.50	0.43 to 0.56
Yield Grade	3.1	2.8 to 3.4
% Choice or Prime	84.8	42.1 to 100.0
Sale Price, \$/cwt	\$148.08	\$141.32 to \$154.04
Sale Value/Hd.	\$1,006.22	\$947.87 to \$1,079.27

Heifers Carcass Weight

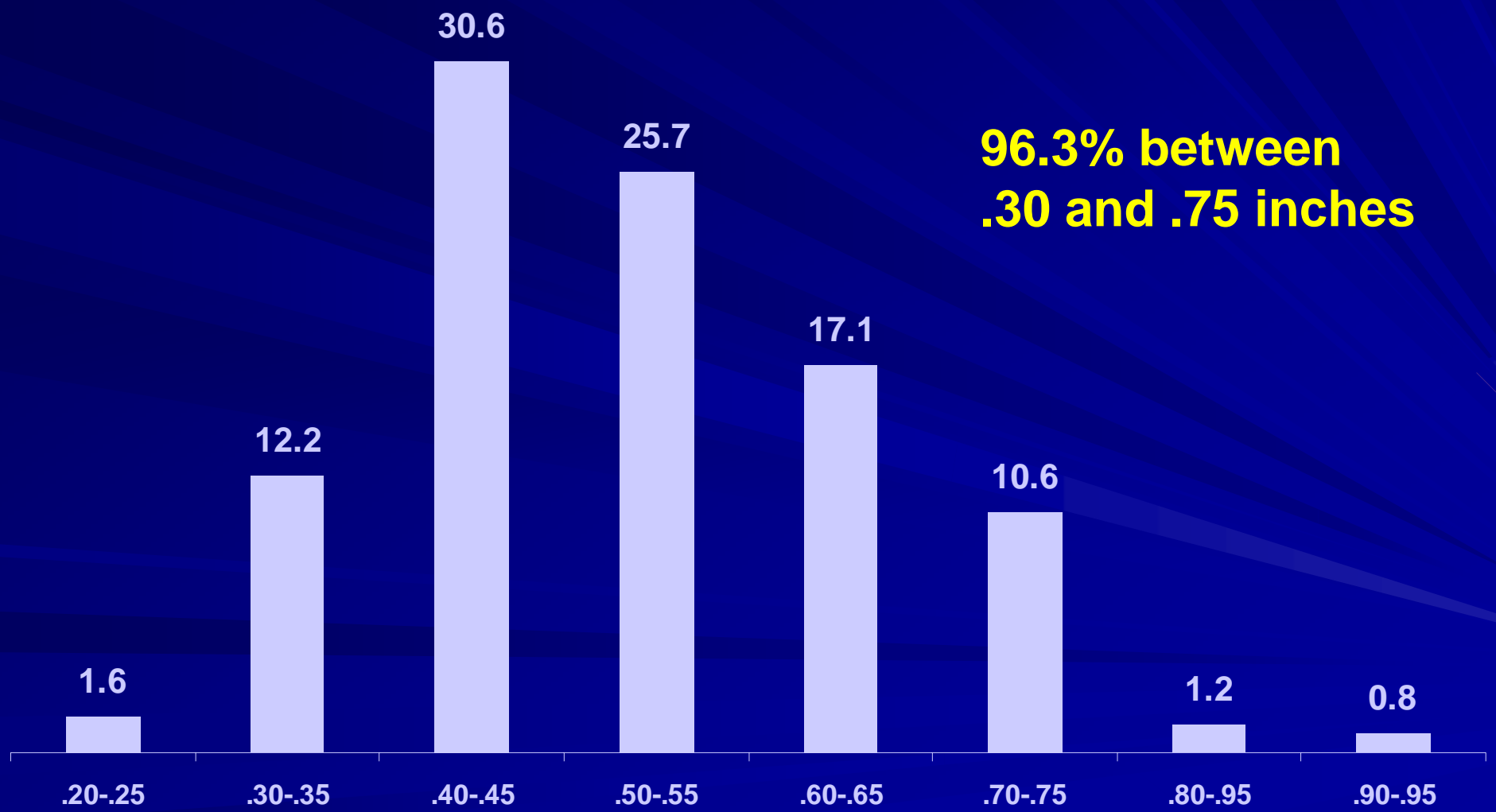


Heifers Ribeye Area



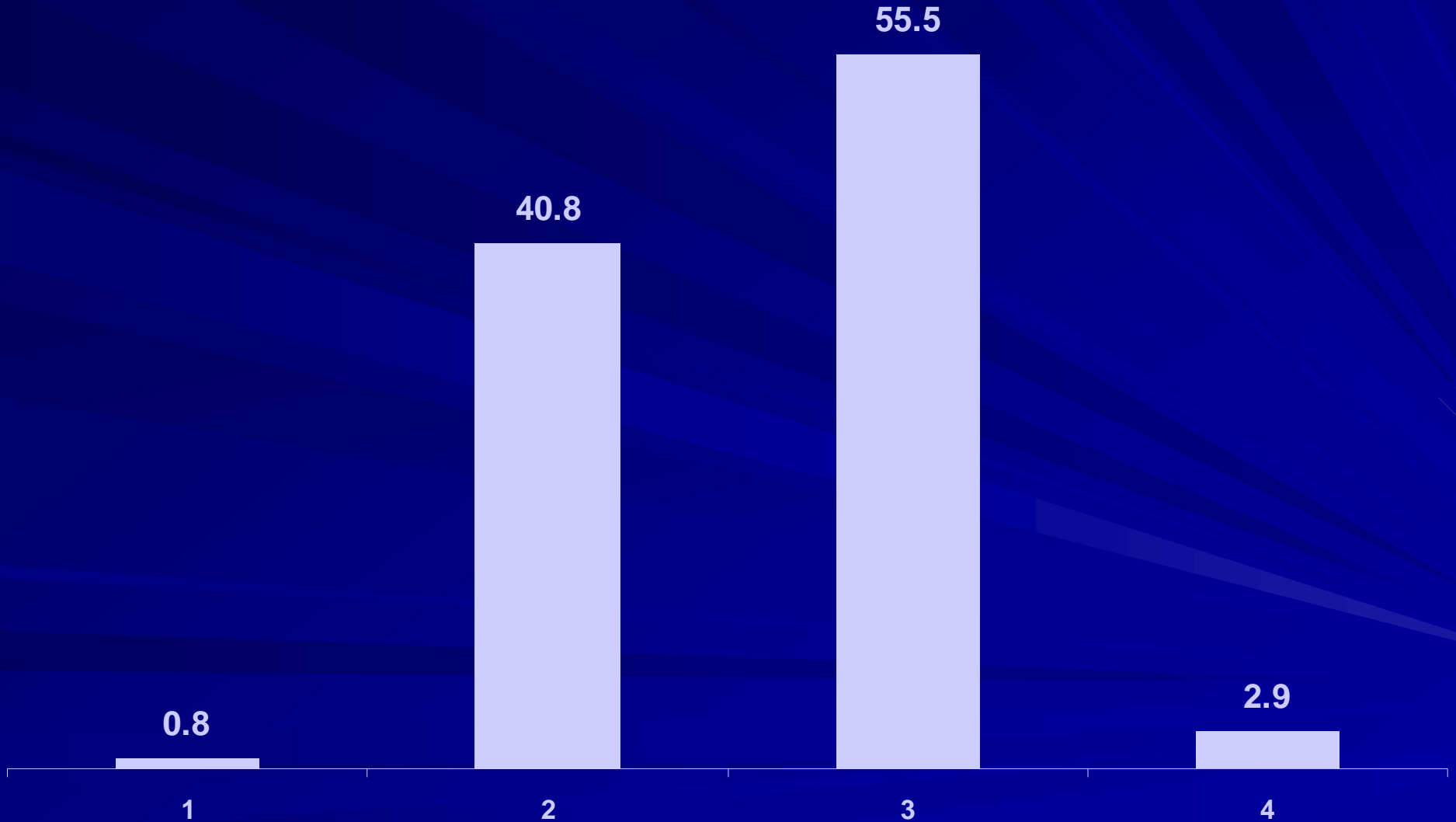
**89.4% between
10 and 13 sq. in.**

Heifers Backfat



**96.3% between
.30 and .75 inches**

Heifers Yield Grade



Heifer Feeding Cost (Cooperator Average)



	<u>Average</u>	<u>Range</u>
Feed	\$303.70	\$277.94 to \$351.00
Medication	\$6.62	\$0.00 to \$21.50
Yardage	\$52.66	\$47.32 to \$58.49
Misc. (processing, trucking, data collection)	\$43.39	\$38.23 to \$49.94
Total	\$406.38	\$375.08 to \$455.09

Heifers - The Bottom Line (Cooperator Average)



	<u>Average</u>	<u>Range</u>
Feed Cost of Gain, \$/cwt	\$60.19	\$55.02 to \$67.18
Nonfeed Cost of Gain, \$/cwt	\$20.47	\$17.01 to \$22.93
Total Cost of Gain, \$/cwt	\$80.66	\$74.58 to \$87.68
Profit/Head	\$40.04	-\$24.88 to \$86.65
Break Even Feeder Calf Value, \$/cwt	\$104.26	\$95.91 to \$112.35

Heifer Profit Groups



<u>Profit Group</u>	<u>No. Heifers</u>	<u>Profit \$/Hd.</u>	<u>Break Even Feeder Calf Value, \$/cwt</u>
1	61	\$108.21	\$115.45
2	61	\$49.75	\$105.79
3	61	\$18.36	\$100.12
4	62	-\$52.52	\$89.07
<hr/>			
Average		\$30.95	\$102.61

Differences Between High And Low Profit Groups *Feedlot Performance*



	<u>High vs. Low</u>
Delivery Point Weight, lbs.	599 vs. 551
Start Weight, lbs.	583 vs. 543
% Shrink (delivery - feedlot in)	-1.79 vs. -3.30
Final Weight, lbs.	1122 vs. 1043
Feedlot Daily Gain	3.00 vs. 2.79
Medication Cost	\$1.64 vs. \$12.24
Total Feedlot Cost	\$407.58 vs. \$429.71
Cost of Gain, \$/cwt	\$75.92 vs. \$86.35
Days on Feed	181 vs. 180

Differences Between High And Low Profit Groups *Carcass Characteristics*

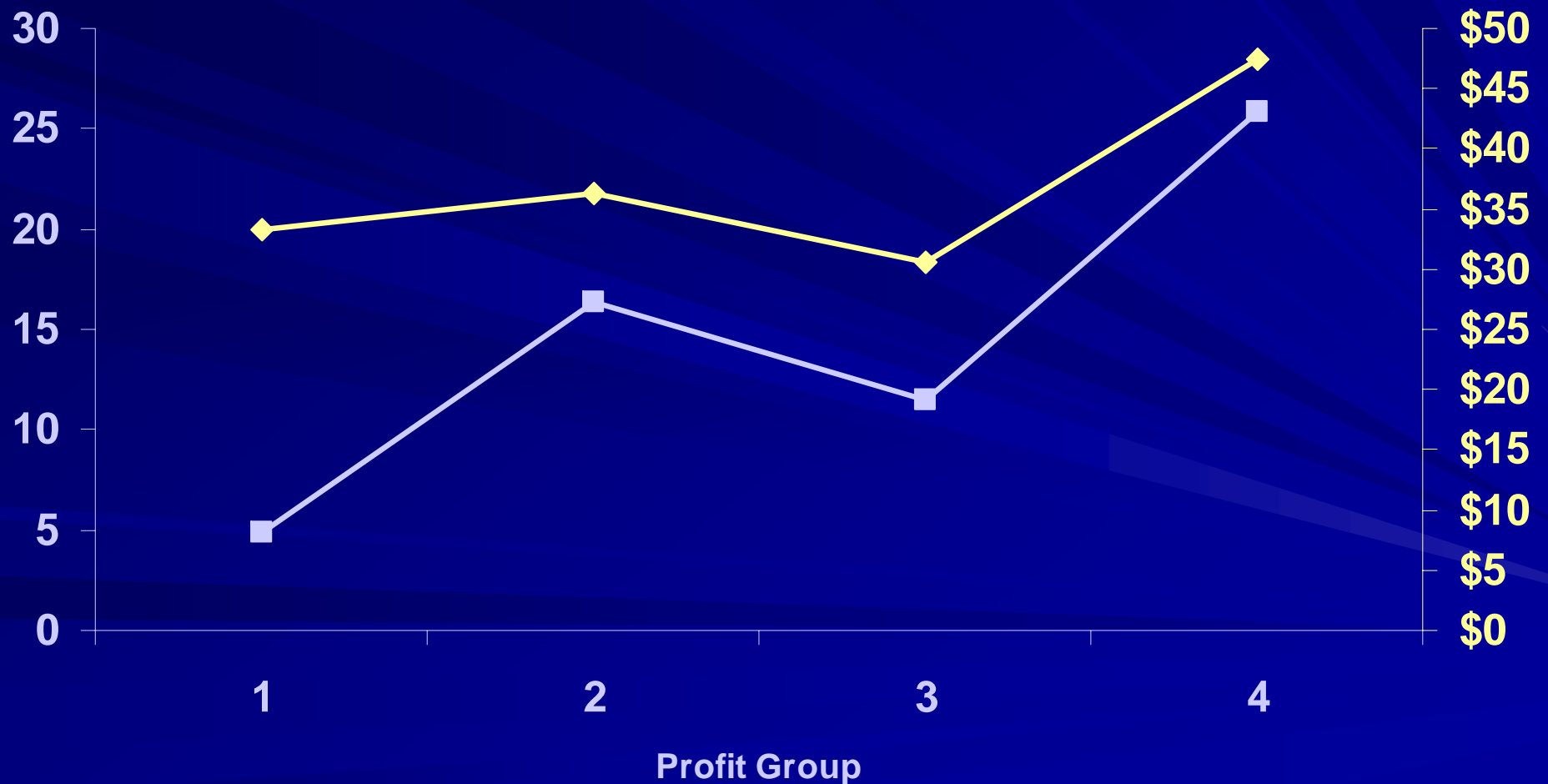


	<u>High vs. Low</u>
Hot Carcass Weight, lbs.	700 vs. 632
Ribeye Area	12.0 vs. 11.2
Backfat	0.48 vs. 0.56
% Yield Grade 4	0.0 vs. 11.3
% Yield Grade 1 and 2	50.8 vs. 37.1
% Choice or Prime	90.2 vs. 74.2
Carcass Price, \$/cwt	\$150.88 vs. \$141.73

Impact of Health on Profit



■ Percent Treated ◆ Medication Cost



% of Heifers in Each Category Which are in the 4 Profit Groups



<u>Category</u>	<u>No. Heifers</u>	<u>Profit Group</u>			
		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
<u>Breed of Sire</u>					
Angus	142	25.4	25.4	22.5	26.8
Cross	18	5.6	16.7	27.8	50.0
Other Breeds	21	19.0	47.6	14.3	19.0
SimAngus	20	25.0	20.0	30.0	25.0
Simmental	44	34.1	18.2	34.1	13.6

“Other Breeds” = Breeds with fewer than 10 heifers.
Includes Chiangus (9 heifers), Shorthorn (9), Charolais (2), and Unknown (1).

% of Heifers in Each Category Which are in the 4 Profit Groups



<u>Category</u>	<u>No.</u> <u>Heifers</u>	<u>Profit Group</u>			
		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
Sale Group					
03 IA 4/3	11	9.1	18.2	45.5	27.3
05 IA 4/10	35	0.0	8.6	17.1	74.3
06 IA 4/10	47	14.9	27.7	40.4	17.0
11 IA 5/8	8	0.0	37.5	37.5	25.0
13 IA 5/8	43	51.2	37.2	7.0	4.7
15 IA 5/15	33	9.1	21.2	33.3	36.4
16 IA 5/15	35	45.7	22.9	17.1	14.3
22 IA 6/12	33	36.4	27.3	24.2	12.1

Factors That Affect Profitability



- Health
- Feedlot Daily Gain
- Harvest Weight
- Quality Grade
- Yield Grade

Profit



■ Profit = Value – (Feeding Cost + Calf Value)

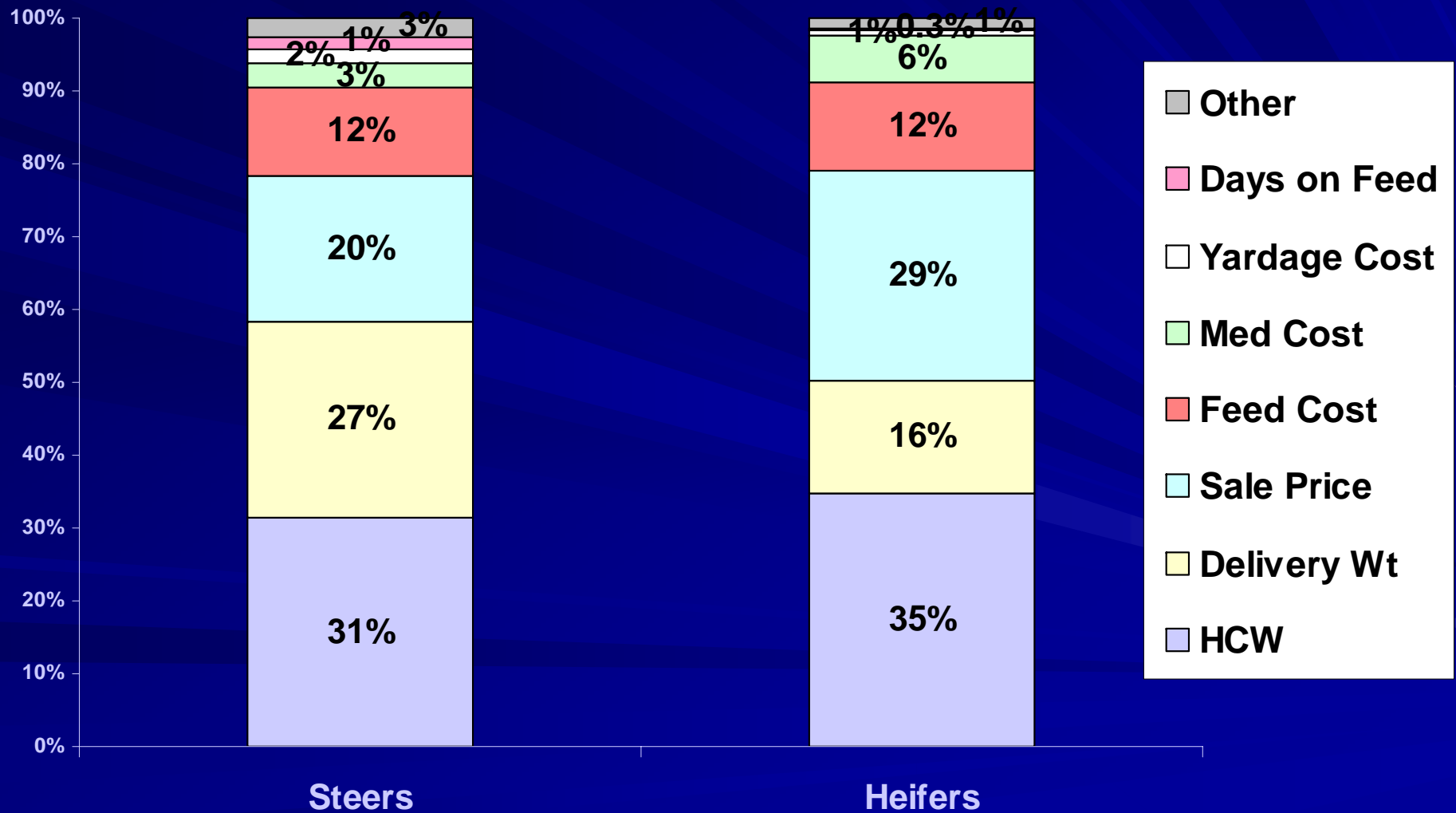
■ Steers:

$$-\$15.19 = \$1,126.78 - (\$474.28 + \$667.69)$$

■ Heifers:

$$\$30.60 = \$1,002.51 - (\$411.28 + \$560.63)$$

Factors Affecting Variation in Profit



Factors Affecting Variation in Profit



■ Steers

Profit = -1313.22

+7.77 Sale Price

-1.15 Feed Cost

+1.48 HCW

-0.74 Delivery Wt

-1.01 Med Cost

-7.97 Yardage Cost

+2.08 Days on Feed

$R^2 = .973$

■ Heifers

Profit = -1124.69

+6.63 Sale Price

-1.01 Feed Cost

+1.47 HCW

-0.69 Delivery Wt

-1.03 Med Cost

-5.13 Yardage Cost

+1.09 Days on Feed

$R^2 = .987$

Factors Affecting Variation in Profit



■ Steers

\$1.00 ↑ in Sale Price	⇒	\$7.77 ↑ in Profit
\$1.00 ↑ in Feed Cost	⇒	\$1.15 ↓ in Profit
1 lb ↑ in HCW	⇒	\$1.48 ↑ in Profit
1 lb ↑ in Delivery Wt	⇒	\$0.74 ↓ in Profit
\$1.00 ↑ in Med Cost	⇒	\$1.01 ↓ in Profit
\$1.00 ↑ in Yard. Cost	⇒	\$7.97 ↓ in Profit
1 day ↑ in Days Fed	⇒	\$2.08 ↑ in Profit

Factors Affecting Variation in Profit



■ Heifers

\$1.00 ↑ in Sale Price	⇒	\$6.63 ↑ in Profit
\$1.00 ↑ in Feed Cost	⇒	\$1.01 ↓ in Profit
1 lb ↑ in HCW	⇒	\$1.47 ↑ in Profit
1 lb ↑ in Delivery Wt	⇒	\$0.69 ↓ in Profit
\$1.00 ↑ in Med Cost	⇒	\$1.03 ↓ in Profit
\$1.00 ↑ in Yard. Cost	⇒	\$5.13 ↓ in Profit
1 day ↑ in Days Fed	⇒	\$1.09 ↑ in Profit

IBEEF Participation



Data



Information



Knowledge



Action



For more information about IBEEF:



- <http://www.ansc.purdue.edu/ibeef/>
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