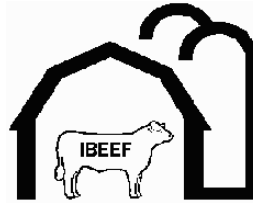


**2009-2010**  
**Indiana**  
**Beef**  
**Evaluation and**  
**Economics**  
**Feeding Program**



**IBEEF Description**



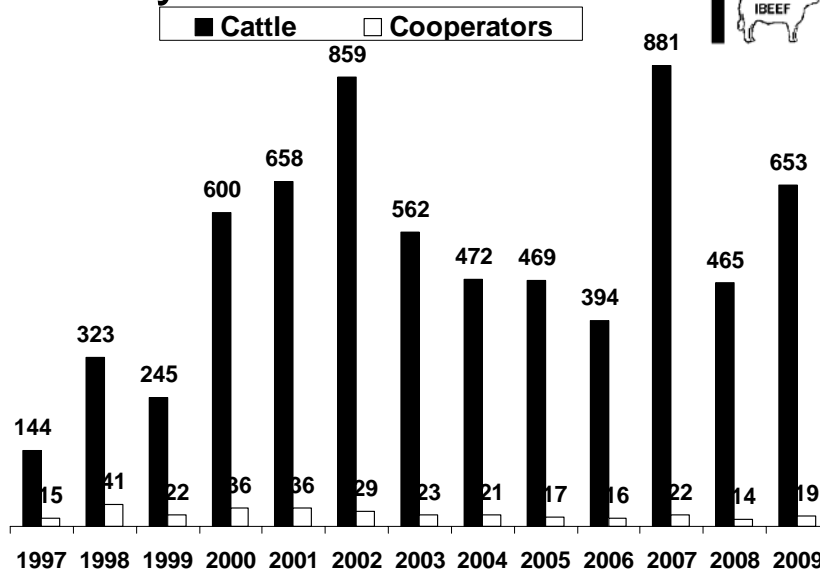
IBEEF is a steer and heifer feedout program that provides Indiana producers with a way to place cattle on feed and gather performance, carcass, and economic information to make genetic and management improvements in their herd. Cooperators receive individual and group feedlot performance, feedlot costs, 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.

# 2009-2010 IBEEF Participation



- 19 cooperators
- 548 steers and 105 heifers
- Weaned at least 30 days before delivery
- Delivered October 26, November 9, and December 7, 2009
- 335 Steers and 83 Heifers fed in Indiana
  - G&D Smoker Farm, Wanatah, IN
- 213 Steers and 22 Heifers fed in Iowa
  - Carson Feeders, Carson, IA
  - CLAN Farms, Inc., Atlantic, IA
  - 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)

## 2009-2010 IBEEF Participation



- Sire breeds represented: Angus, Charolais, Gelbvieh, Gelbvieh Balancer, Hereford, Maine-Anjou, Red Poll, Shorthorn, SimAngus, and Simmental
- Color: Black/BWF 82%, Red/RWF 13%, Brown 2%, Gray/Smoke 2%, White 2%

## Feedlot Performance



	<u>Steer</u>	<u>Heifer</u>
Delivery Point Weight, lbs.	656	569
Feedlot In Weight, lbs.	639	557
Harvest Weight, lbs.	1249	1155
ADG	3.38	3.08
Days on Feed	181	195
Age at Harvest	435	437

## Carcass Characteristics



	<u>Steer</u>	<u>Heifer</u>
Hot Carcass Weight, lbs.	778	736
Ribeye Area	13.0	13.0
Backfat	0.47	0.51
Yield Grade	2.9	2.9
% YG 1 and 2	59.9	51.4
% YG 4	3.8	2.9
% Choice and Prime	60.4	81.0
% CAB	10.8	21.0

## Calf Value At Delivery



<u>Delivery Point Weight, lbs.</u>	<u>\$/cwt Steer</u>	<u>\$/cwt Heifer</u>
449 and below	\$93.00	\$83.00
450 - 499	\$91.50	\$81.50
500 - 549	\$90.00	\$80.00
550 - 599	\$88.50	\$78.50
600 - 649	\$87.00	\$77.00
650 - 699	\$85.50	\$75.50
700 - 749	\$84.00	\$74.00
750 - 799	\$82.50	\$72.50
800 and above	\$81.00	\$71.00
Avg. Weight	656	569
Avg. \$/cwt	\$85.72	\$78.59

## Economics



	<u>Steer</u>	<u>Heifer</u>
Feed Cost/cwt Gain	\$48.92	\$49.46
Nonfeed Cost/cwt Gain	\$21.12	\$23.00
Total Cost/cwt Gain	\$70.03	\$72.46
Carcass Price, \$/cwt	\$155.35	\$159.88
Sale Value	\$1,216.23	\$1,180.46
Calf Value	\$562.35	\$447.16
Profit	\$232.41	\$303.78
BE Feeder Calf Value/cwt	\$121.80	\$132.42

## IBEEF Cattle Compared to 2005 NBQA Native



	<u>Steer</u>	<u>Heifer</u>	<u>NBQA</u>
% Prime	0.4	0.0	2.1
% Prem. Choice	11.5	21.9	18.9
% Low Choice	48.5	59.0	35.3
% Select	38.9	19.0	38.2
% Standard	0.7	0.0	5.5
% YG 1&2	59.9	51.4	49.1
% YG 4	3.8	2.9	12.6



Steers

## Steer Feedlot Performance (Cooperator Average)



	<u>Average</u>	<u>Range</u>
Delivery Point Weight, lbs.	649	451 to 773
Initial Value at Delivery, \$/cwt	\$86.09	\$82.36 to \$92.22
Feedlot In Weight, lbs.	633	451 to 796
Sale Weight	1248	1141 to 1353
Days on Feed	183	160 to 215
Daily Gain	3.38	2.70 to 4.21

## How Steers Were Sold Base Price and Grid



Sale Group	Sell Date	Base Price	Premiums			Discounts			Avg. \$/cwt
			Prime	CAB	Select	Standard	Y4		
01 IA	4/13	\$162.01	--	N/A	\$2.37	--	\$12.46	\$161.61	
02 IA	4/20	\$159.90	--	N/A	\$3.05	--	--	\$160.40	
03 IN	5/2	\$156.00	--	\$3.00	\$2.00	\$8.00	\$15.00	\$155.54	
04 IN	5/9	\$156.00	\$18.00	\$3.00	\$3.00	\$10.00	--	\$156.22	
05 IA	5/17	\$162.49	--	N/A	\$3.64	--	\$12.46	\$161.93	
06 IA	5/17	\$162.69	--	N/A	\$3.64	--	\$12.46	\$160.80	
08 IN	5/23	\$159.00	--	\$4.00	\$3.00	--	\$15.00	\$159.00	
10 IA	5/24	\$153.92	--	N/A	\$4.00	\$17.00	--	\$154.09	
11 IN	6/6	\$155.00	\$16.00	\$3.00	\$7.00	--	\$15.00	\$154.45	
12 IN	6/13	\$151.00	--	\$3.00	\$9.00	\$20.00	\$15.00	\$147.63	
13 IA	6/22	\$148.48	--	N/A	\$7.64	--	\$12.46	\$147.69	

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

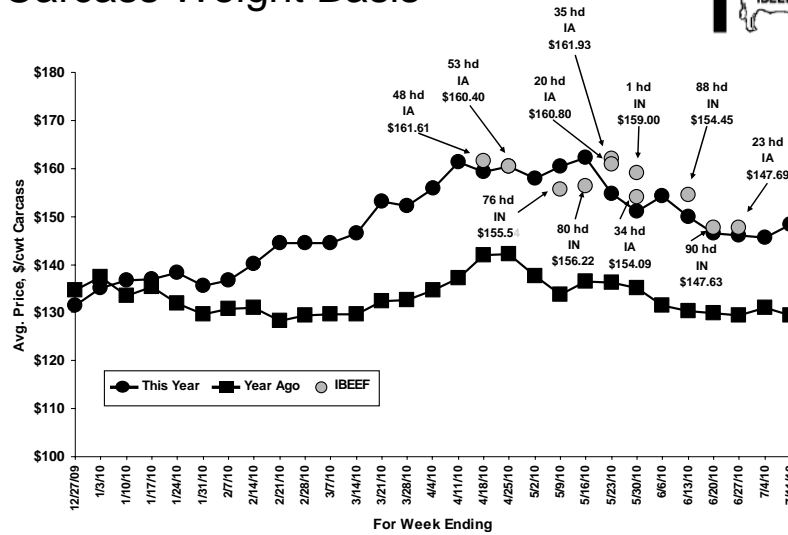
Other Premiums: YG 1: \$4.00; YG 2: \$2.00

In addition, most Iowa cattle received an Age Verified Premium of \$35.00/hd (01 IA), \$30.00/hd (02 IA), or \$15.00/hd

Other Discounts: >1000 lbs: \$15.00 (03 IN)

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



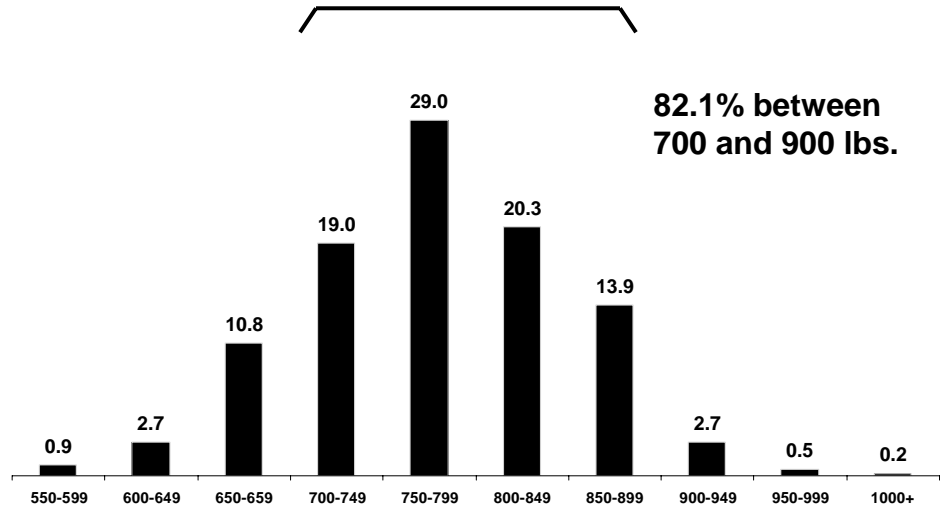
Source: 5 Area Weekly Weighted Average Direct Slaughter Cattle (Texas/Oklahoma, Kansas, Nebraska, Colorado, Iowa/Minnesota feedlots), USDA Market News Service.

## Steer Carcass Characteristics (Cooperator Average)

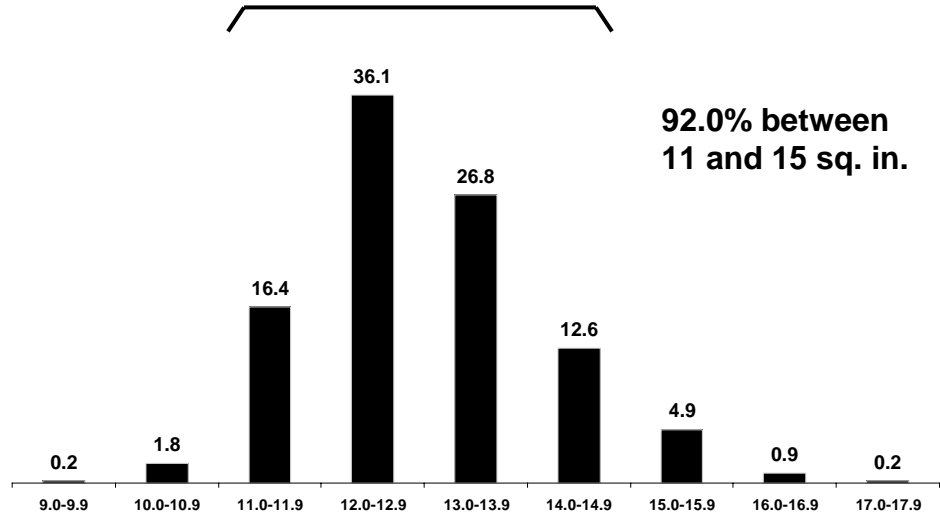


	<u>Average</u>	<u>Range</u>
Carcass Weight	779	712 to 838
Dressing %	62.4	61.2 to 63.2
Ribeye Area	13.1	11.8 to 13.8
REA/cwt carcass	1.69	1.52 to 1.91
Backfat	0.45	0.31 to 0.68
Yield Grade	2.8	2.1 to 3.8
% Choice or Prime	49.5	0.0 to 88.4
Sale Price, \$/cwt	\$153.15	\$144.00 to \$160.06
Sale Value/Hd.	\$1,198.60	\$1,040.40 to \$1,290.73

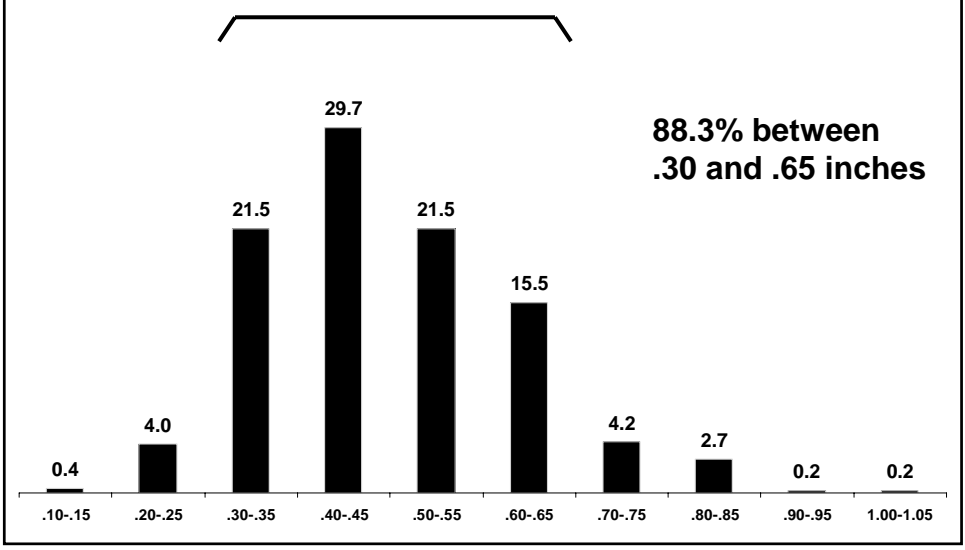
## Steers Carcass Weight



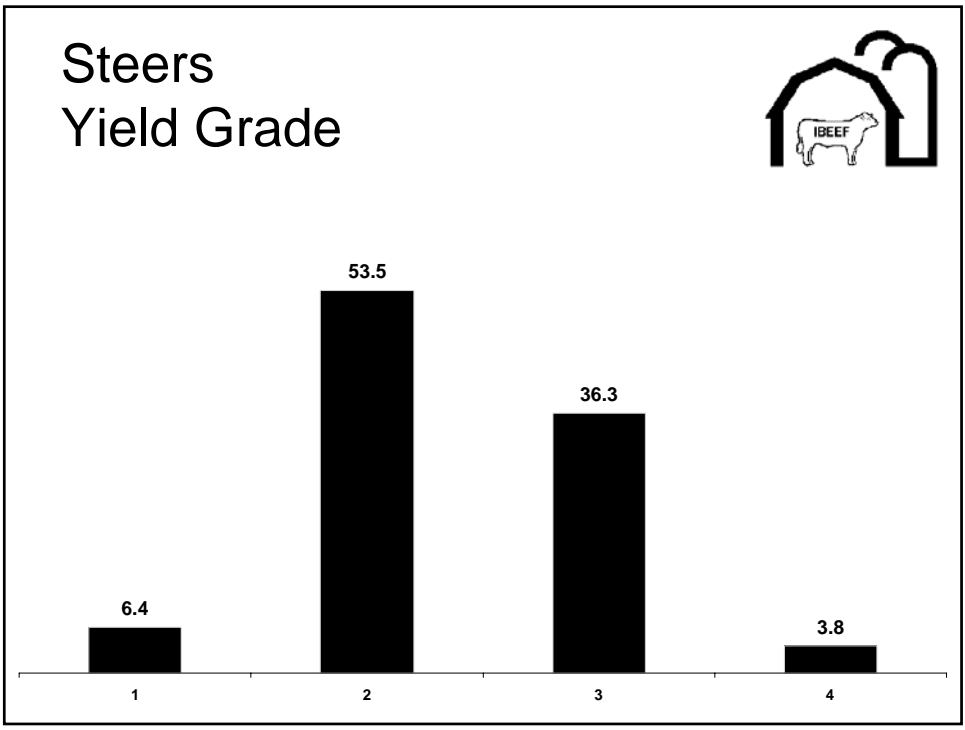
## Steers Ribeye Area



# Steers Backfat



# Steers Yield Grade



## Steer Feeding Cost (Cooperator Average)



	<u>Average</u>	<u>Range</u>
Feed	\$291.60	\$229.48 to \$326.13
Medication	\$11.68	\$0.00 to \$35.96
Yardage	\$55.42	\$43.52 to \$65.10
Misc. (processing, trucking, data collection)	\$62.44	\$43.60 to \$74.34
<b>Total</b>	<b>\$421.13</b>	<b>\$325.34 to \$484.76</b>

## Steers - The Bottom Line (Cooperator Average)



	<u>Average</u>	<u>Range</u>
Feed Cost of Gain, \$/cwt	\$47.80	\$41.48 to \$57.75
Nonfeed Cost of Gain, \$/cwt	\$21.44	\$17.99 to \$26.98
Total Cost of Gain, \$/cwt	\$69.24	\$60.24 to \$82.37
Profit/Head	\$220.99	\$147.53 to \$308.39
Break Even Feeder Calf Value, \$/cwt	\$120.53	\$109.96 to \$139.78

## 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 = 778 lbs x \$155.35/cwt = \$1,208.62

Feedlot Costs = \$421.46

Net = \$1,208.62 - \$421.46 = \$787.16

Calf Weight at Delivery = 656 lbs

Break Even Calf Value = \$787.16/656 lbs = \$119.99/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 (137 steers/group)
- Profit = Sale Value - Feedlot Costs - Calf Value
- Example:  
Profit = \$1,208.62 - \$421.46 - \$562.35 = \$224.81

## Steer Profit Groups



<u>Profit Group</u>	<u>No. Steers</u>	<u>Profit \$/Hd.</u>	<u>Break Even Feeder Calf Value, \$/cwt</u>
1	137	\$330.25	\$135.18
2	137	\$261.12	\$125.02
3	137	\$209.91	\$119.77
4	137	\$128.37	\$107.23
Average		\$232.41	\$121.80

## Differences Between High And Low Profit Groups *Feedlot Performance*



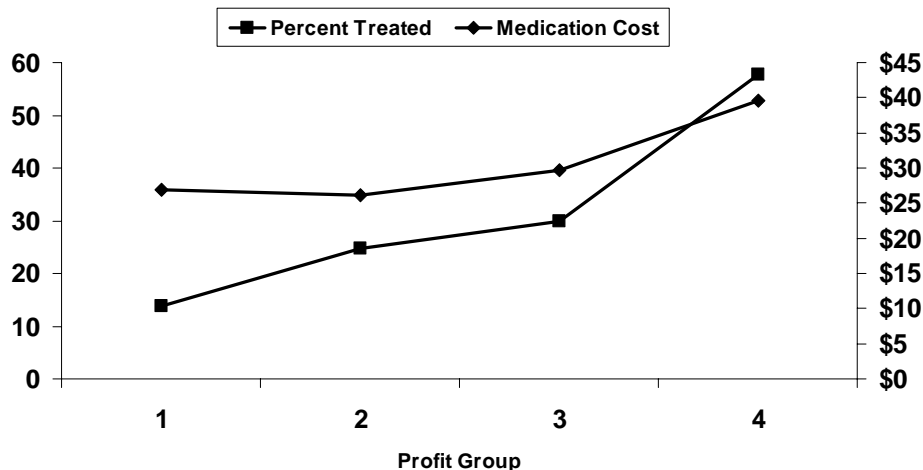
	<u>High vs. Low</u>
Delivery Point Weight, lbs.	676 vs. 633
Start Weight, lbs.	669 vs. 611
% Shrink (delivery - feedlot in)	-1.01 vs. -4.78
Final Weight, lbs.	1323 vs. 1185
Feedlot Daily Gain	3.74 vs. 3.01
Medication Cost	\$3.73 vs. \$22.83
Total Feedlot Cost	\$415.09 vs. \$440.15
Cost of Gain, \$/cwt	\$63.97 vs. \$77.88
Days on Feed	175 vs. 191

## Differences Between High And Low Profit Groups *Carcass Characteristics*



	<u>High vs. Low</u>
Hot Carcass Weight, lbs.	833 vs. 732
Ribeye Area	13.7 vs. 12.3
Backfat	0.44 vs. 0.50
% Yield Grade 4	0.0 vs. 11.7
% Yield Grade 1 and 2	72.3 vs. 45.3
% Choice or Prime	69.3 vs. 48.2
Carcass Price, \$/cwt	\$157.70 vs. \$151.22

## Impact of Health on Profit



## % 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	347	25.4	27.1	25.6	21.9
Charolais	15	0.0	6.7	13.3	80.0
Gelbvieh	15	60.0	33.3	0.0	6.7
Hereford	12	8.3	8.3	50.0	33.3
Other Breeds	15	6.7	0.0	40.0	53.3
Shorthorn	38	7.9	34.2	31.6	26.3
SimAngus	72	29.2	26.4	15.3	29.2
Simmental	34	41.2	11.8	32.4	14.7

"Other Breeds" = Breeds with fewer than 10 steers.  
Includes Red Poll (8 steers), Gelbvieh Balancer (4),  
Unknown (2), and Maine-Anjou (1).

## % 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>
Sale Group					
01 IA 4/13	48	4.2	35.4	25.0	35.4
02 IA 4/20	53	49.1	37.7	9.4	3.8
03 IN 5/2	76	57.9	25.0	11.8	5.3
04 IN 5/9	80	25.0	40.0	23.8	11.3
05 IA 5/17	35	5.7	11.4	28.6	54.3
06 IA 5/17	20	15.0	15.0	40.0	30.0
08 IN 5/23	1	0.0	100.0	0.0	0.0
10 IA 5/24	34	29.4	23.5	35.3	11.8
11 IN 6/6	88	17.0	20.5	37.5	25.0
12 IN 6/13	90	16.7	16.7	30.0	36.7
13 IA 6/22	23	0.0	0.0	8.7	91.3



## Heifers

### Heifer Feedlot Performance (Cooperator Average)



	<u>Average</u>	<u>Range</u>
Delivery Point Weight, lbs.	531	418 to 627
Initial Value at Delivery, \$/cwt	\$79.72	\$77.27 to \$83.00
Feedlot In Weight, lbs.	519	418 to 593
Sale Weight	1126	1039 to 1246
Days on Feed	194	194 to 196
Daily Gain	3.13	2.92 to 3.37

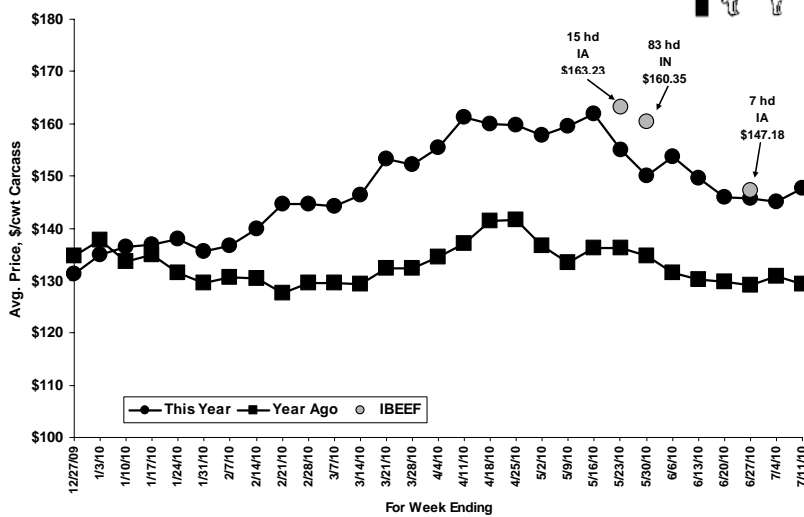
## How Heifers Were Sold Base Price and Grid



Sale Group	Sell Date	Base Price	Premiums		Discounts			Avg. \$/cwt
			Prime	CAB	Select	Standard	Y4	
07 IA	5/17	\$162.69	--	N/A	\$3.64	--	--	\$163.23
09 IN	5/23	\$159.00	--	\$4.00	\$3.00	--	\$15.00	\$160.35
14 IA	6/22	\$148.48	--	N/A	--	--	\$12.46	\$147.18

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 \$15.00/hd  
 Other Discounts: none  
 All cattle sold to Tyson Fresh Meats, True Value or Standard Grid:  
 Iowa cattle - Denison, IA; Indiana cattle - Joslin, IL

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



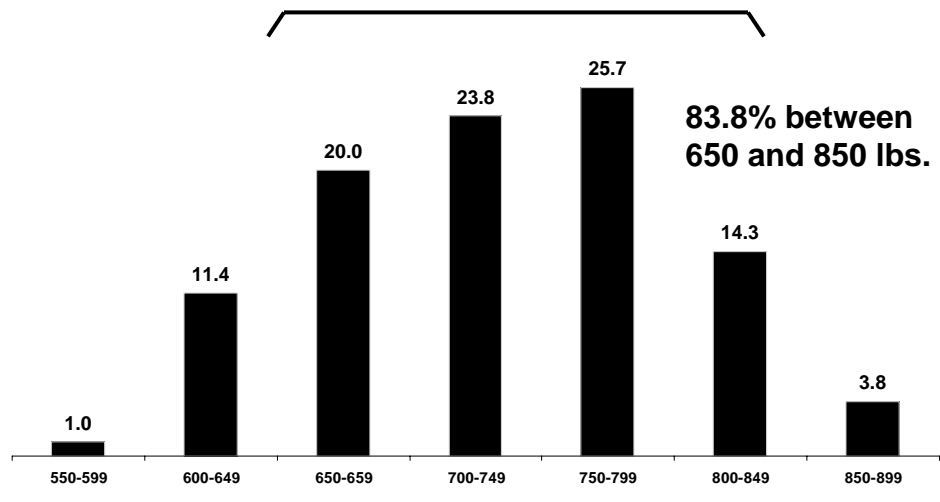
Source: 5 Area Weekly Weighted Average Direct Slaughter Cattle (Texas/Oklahoma, Kansas, Nebraska, Colorado, Iowa/Minnesota feedlots), USDA Market News Service.

## Heifer Carcass Characteristics (Cooperator Average)

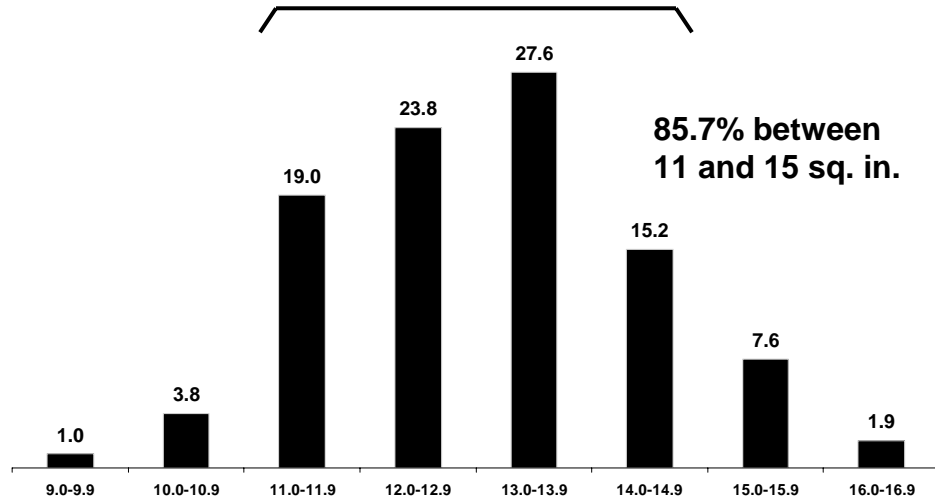


	<u>Average</u>	<u>Range</u>
Carcass Weight	713	637 to 798
Dressing %	63.3	61.3 to 64.7
Ribeye Area	12.9	11.5 to 14.1
REA/cwt carcass	1.82	1.67 to 2.07
Backfat	0.46	0.20 to 0.70
Yield Grade	2.8	1.9 to 3.7
% Choice or Prime	71.8	0.0 to 100.0
Sale Price, \$/cwt	\$159.33	\$154.00 to \$162.88
Sale Value/Hd.	\$1,138.39	\$1,019.20 to \$1,281.76

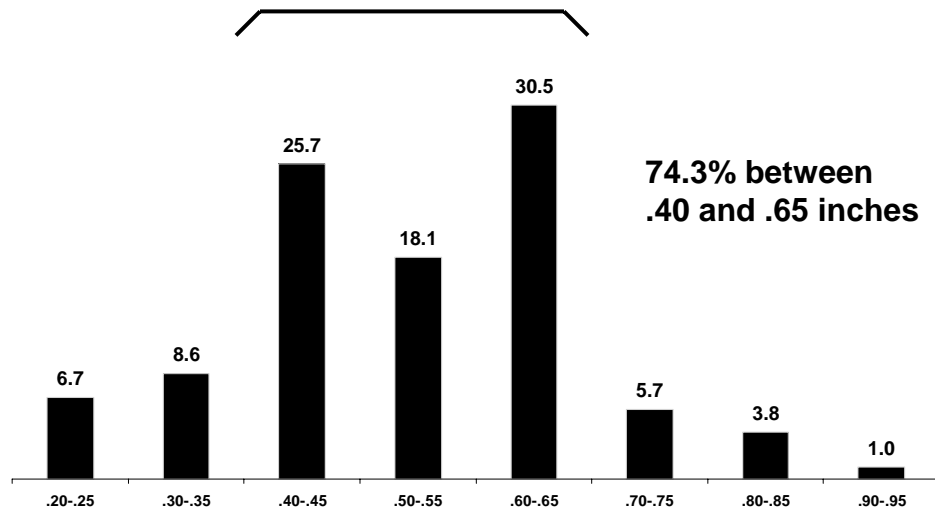
## Heifers Carcass Weight



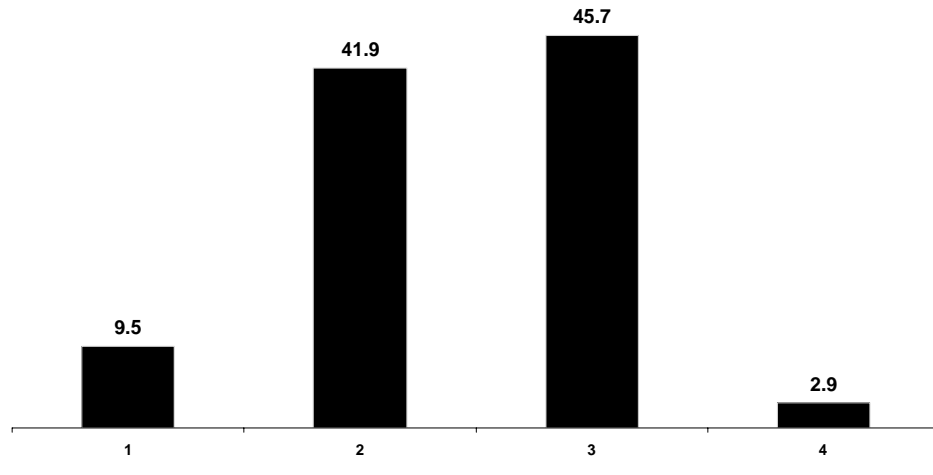
## Heifers Ribeye Area



## Heifers Backfat



## Heifers Yield Grade



## Heifer Feeding Cost (Cooperator Average)



	<u>Average</u>	<u>Range</u>
Feed	\$283.94	\$247.79 to \$312.77
Medication	\$5.36	\$0.00 to \$30.28
Yardage	\$61.03	\$58.80 to \$72.16
Misc. (processing, trucking, data collection)	\$67.61	\$51.99 to \$72.78
<b>Total</b>	<b>\$417.94</b>	<b>\$375.74 to \$444.35</b>

## Heifers - The Bottom Line (Cooperator Average)



	<u>Average</u>	<u>Range</u>
Feed Cost of Gain, \$/cwt	\$46.99	\$39.90 to \$50.59
Nonfeed Cost of Gain, \$/cwt	\$22.34	\$20.37 to \$27.25
Total Cost of Gain, \$/cwt	\$69.32	\$60.51 to \$77.35
Profit/Head	\$298.15	\$220.80 to \$374.62
Break Even Feeder Calf Value, \$/cwt	\$137.11	\$121.92 to \$156.45

## Heifer Profit Groups



<u>Profit Group</u>	<u>No. Heifers</u>	<u>Profit \$/Hd.</u>	<u>Break Even Feeder Calf Value, \$/cwt</u>
1	26	\$391.64	\$145.16
2	26	\$334.25	\$134.95
3	27	\$292.16	\$133.91
4	26	\$197.52	\$115.62
Average		\$303.89	\$132.41

## Differences Between High And Low Profit Groups *Feedlot Performance*



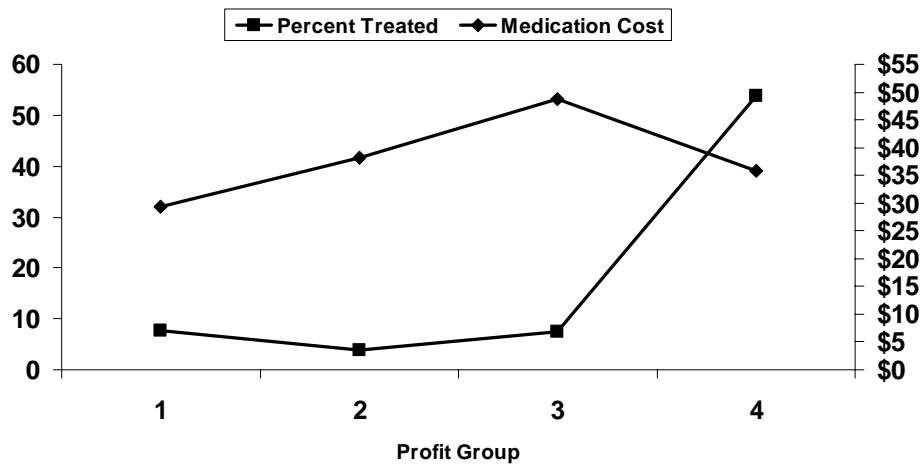
	<u>High vs. Low</u>
Delivery Point Weight, lbs.	590 vs. 549
Start Weight, lbs.	573 vs. 534
% Shrink (delivery - feedlot in)	-2.75 vs. -4.82
Final Weight, lbs.	1238 vs. 1090
Feedlot Daily Gain	3.43 vs. 2.79
Medication Cost	\$2.26 vs. \$17.21
Total Feedlot Cost	\$449.25 vs. \$428.19
Cost of Gain, \$/cwt	\$67.92 vs. \$77.57
Days on Feed	194 vs. 200

## Differences Between High And Low Profit Groups *Carcass Characteristics*



	<u>High vs. Low</u>
Hot Carcass Weight, lbs.	804 vs. 678
Ribeye Area	14.2 vs. 11.9
Backfat	0.48 vs. 0.54
% Yield Grade 4	0.0 vs. 11.5
% Yield Grade 1 and 2	61.5 vs. 38.5
% Choice or Prime	88.5 vs. 80.8
Carcass Price, \$/cwt	\$161.80 vs. \$155.82

## Impact of Health on Profit



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



Category	No. Heifers	Profit Group			
		1	2	3	4
Breed of Sire					
Angus	74	20.3	27.0	27.0	25.7
Other Breeds	16	25.0	18.8	37.5	18.8
SimAngus	15	46.7	20.0	6.7	26.7

“Other Breeds” = Breeds with fewer than 10 heifers.  
Includes Shorthorn (6 heifers), Simmental (4), Charolais (3), Gelbvieh Balancer (2), and Red Poll (1).

## % 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>
Sale Group					
07 IA 5/17	15	6.7	26.7	33.3	33.3
09 IN 5/23	83	30.1	26.5	26.5	16.9
14 IA 6/22	7	0.0	0.0	0.0	100.0

## Factors That Affect Profitability



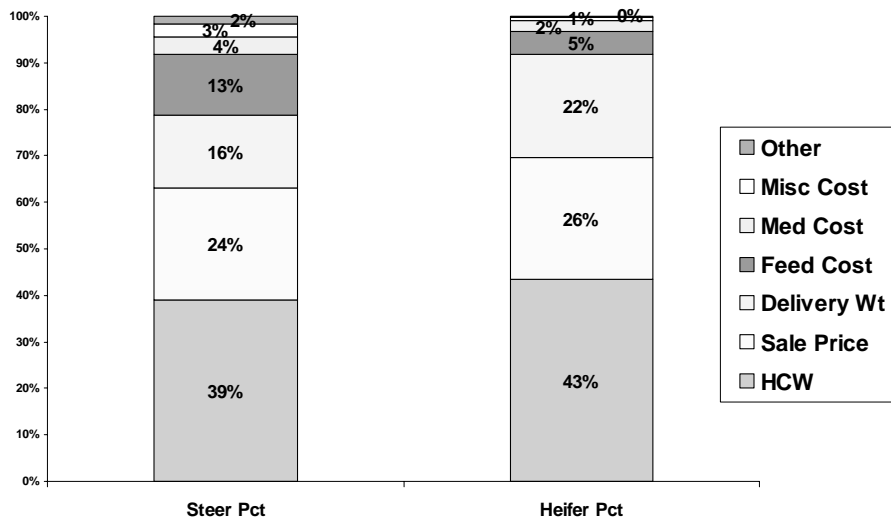
- Health
- Feedlot Daily Gain
- Harvest Weight
- Quality Grade
- Yield Grade

# Profit



- Profit = Value – (Feeding Cost + Calf Value)
- Steers:  
 $\$232.42 = \$1,216.23 - (\$421.46 + \$562.35)$
- Heifers:  
 $\$303.77 = \$1,180.46 - (\$429.53 + \$447.16)$

# Factors Affecting Variation in Profit



## Factors Affecting Variation in Profit



- Steers

Profit = -1404.14  
 +1.56 HCW  
 +8.10 Sale Price  
 -0.61 Delivery Wt  
 -1.12 Feed Cost  
 -1.04 Med Cost  
 -1.57 Misc Cost

$R^2 = .984$

- Heifers

Profit = -1327.83  
 +1.61 HCW  
 +7.45 Sale Price  
 -0.64 Delivery Wt  
 -1.03 Feed Cost  
 -0.99 Med Cost  
 -1.09 Misc Cost

$R^2 = .997$

## Factors Affecting Variation in Profit



- Steers

\$1 lb ↑ in HCW	⇒	\$1.56 ↑ in Profit
\$1.00 ↑ in Sale Price	⇒	\$8.10 ↑ in Profit
1 lb ↑ in Delivery Wt	⇒	\$0.61 ↓ in Profit
\$1.00 ↑ in Feed Cost	⇒	\$1.12 ↓ in Profit
\$1.00 ↑ in Med Cost	⇒	\$1.04 ↓ in Profit
\$1.00 ↑ in Misc Cost	⇒	\$1.57 ↓ in Profit

## Factors Affecting Variation in Profit



- Heifers

\$1 lb ↑ in HCW	⇒	\$1.61 ↑ in Profit
\$1.00 ↑ in Sale Price	⇒	\$7.45 ↑ in Profit
1 lb ↑ in Delivery Wt	⇒	\$0.64 ↓ in Profit
\$1.00 ↑ in Feed Cost	⇒	\$1.03 ↓ in Profit
\$1.00 ↑ in Med Cost	⇒	\$0.99 ↓ in Profit
\$1.00 ↑ in Misc Cost	⇒	\$1.09 ↓ in Profit

IBEEF Participation



Data



Information



Knowledge



Action



## For more information about IBEEF:



- <http://www.ansc.purdue.edu/ibeeff/>
- Brad Shelton, Purdue CES
  - Washington County Extension Educator
  - 812-883-4601
  - [sheltonb@purdue.edu](mailto:sheltonb@purdue.edu)