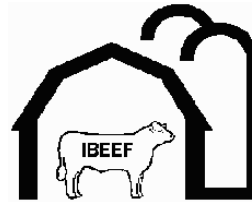


2002-2003
Indiana
Beef
Evaluation and
Economics
Feeding Program



IBEEF Description



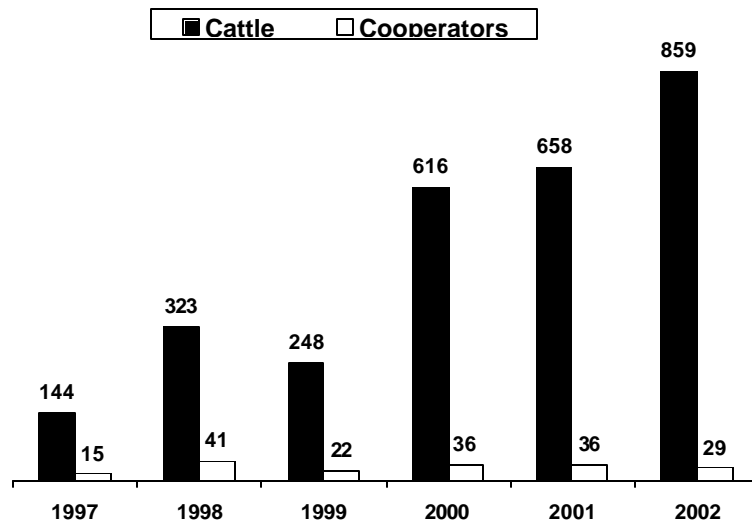
IBEEF is a steer and heifer feedout program that provides Indiana producers with a way to place cattle on feed and gather performance, carcass, and economic information to make genetic and management improvements in their herd. Cooperators receive individual and group feedlot performance, feedlot costs,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

2002-2003 IBEEF Participation



- 29 cooperators
- 643 steers and 216 heifers
- Weaned at least 30 days before delivery
- Delivered October 21, November 11, and December 2, 2002
- 733 Steers and Heifers fed in Iowa
 - 349 steers at Gregory Feedlots, Tabor, IA
 - 168 steers at Silver Creek Feeders, Council Bluffs, IA
 - 216 heifers at SMB Farms, Macedonia, IA
- 126 Steers fed in Indiana
 - Smoker Farms, Wanatah, IN

History of Fall IBEEF



Vaccination Requirements



At weaning or 2 weeks prior:

- Four-way respiratory virus (IBR, BVD, PI3, and BRSV)
- preferably killed vaccine
- Seven-way clostridial vaccine
- Haemophilus somnus vaccine
- Pasturella vaccine

Two weeks before delivery:

- Repeat four-way respiratory virus vaccine (MLV)
- Repeat Haemophilus somnus vaccine

2002-2003 IBEEF Participation



- Sire breeds represented: Angus, Brangus, Braunvieh, Charolais, Chiangus, Gelbvieh, Gelbvieh Balancer, Hereford, Limousin, Salers, Shorthorn, Simmental, South Devon, and Cross
- Color: Black/BWF 74%, Red/RWF 10%, Smoke 10%, White 3%, Gray 2%, Brown 1%
- 34% were sired by IBEP Test Station Bulls

Feedlot Performance



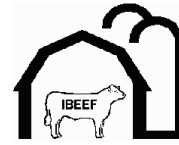
	<u>Steer</u>	<u>Heifer</u>
Delivery Point Weight, lbs.	626	589
Feedlot In Weight, lbs.	592	567
Harvest Weight, lbs.	1208	1067
ADG	3.37	3.04
Days on Feed	184	166
Age at Harvest	425	420

Carcass Characteristics



	<u>Steer</u>	<u>Heifer</u>
Hot Carcass Weight, lbs.	749	657
Ribeye Area	12.4	11.5
Backfat	0.45	0.49
Yield Grade	2.9	3.0
% YG 1 and 2	55.2	53.2
% YG 4	1.9	5.1
% Choice and Prime	79.6	82.9
% CAB	22.7	19.0

Calf Value At Delivery



<u>Delivery Point Weight, lbs.</u>	<u>\$/cwt Steer</u>	<u>\$/cwt Heifer</u>
400 - 499	\$87.50	\$78.50
500 - 549	\$85.00	\$76.00
550 - 599	\$82.50	\$73.50
600 - 649	\$80.00	\$71.00
650 - 699	\$77.50	\$68.50
700 - 749	\$75.00	\$66.00
750 - 799	\$72.50	\$63.50
800 and above	\$70.00	\$61.00

Economics



	<u>Steer</u>	<u>Heifer</u>
Feed Cost/cwt Gain	\$33.33	\$35.29
Nonfeed Cost/cwt Gain	\$16.74	\$16.36
Total Cost/cwt Gain	\$50.08	\$51.65
Carcass Price, \$/cwt	\$126.60	\$124.42
Sale Value	\$949.10	\$817.27
Calf Value	\$495.33	\$424.38
Profit	\$148.70	\$136.39
BE Feeder Calf Value/cwt	\$103.88	\$96.09

IBEEF Cattle Compared to 2000 NBQA Native



	<u>Steer</u>	<u>Heifer</u>	<u>NBQA</u>
% Prime	2.0	3.7	1.6
% Prem. Choice	28.6	28.7	16.8
% Low Choice	49.0	50.5	32.2
% Select	18.5	16.7	42.9
% Standard	1.7	0.5	5.7
% YG 1&2	55.2	53.2	54.4
% YG 4	1.9	5.1	3.4

Steers Compared to 2000 NBQA Steers



	<u>IBEEF</u>	<u>NBQA</u>
Yield Grade	2.9	3.2
Fat Thickness	.45	.47
Carcass Wt.	749	808
Ribeye Area	12.4	13.1
Marbling	SM 50	SM 18

Heifers Compared to 2000 NBQA Heifers



	<u>IBEEF</u>	<u>NBQA</u>
Yield Grade	3.0	2.9
Fat Thickness	.49	.53
Carcass Wt.	657	741
Ribeye Area	11.5	13.0
Marbling	SM 58	SM 31



Steers

Steer Feedlot Performance (Cooperator Average)



	<u>Average</u>	<u>Range</u>
Delivery Point Weight, lbs.	602	486 to 756
Initial Value at Delivery, \$/cwt	\$80.79	\$73.20 to \$85.95
Feedlot In Weight, lbs.	574	483 to 687
Sale Weight	1205	1102 to 1293
Days on Feed	188	168 to 205
Daily Gain	3.36	2.96 to 3.89

How Steers Were Sold Base Price and Grid



Sale Group	Sell Date	Base Price	Premiums		Select	Discounts		Avg. \$/cwt
			Prime	CAB		Standard	Y4	
02 IA	4/3	\$123.93	\$13.80	\$5.51	\$5.70	--	\$15.00	\$126.15
03 IA	4/8	\$126.52	\$12.95	\$4.72	\$6.40	\$8.70	\$15.00	\$128.42
04 IA	4/8	\$126.52	\$12.95	\$4.72	\$6.40	\$8.70	\$15.00	\$128.39
07 IA	5/6	\$123.43	\$14.20	\$9.41	\$9.20	--	\$15.00	\$126.41
08 IN	5/11	\$126.55	--	\$8.12	\$12.10	--	--	\$127.05
09 IA	5/15	\$126.55	\$14.80	\$8.12	\$12.10	\$14.40	\$15.00	\$126.34
10 IA	5/15	\$126.55	\$14.80	\$8.12	\$12.10	\$14.40	\$15.00	\$126.67
11 IA	5/22	\$127.23	--	\$10.08	\$13.80	--	--	\$129.09
13 IN	6/8	\$127.79	--	\$9.27	\$13.45	--	--	\$128.61
14 IA	6/24	\$121.08	--	\$1.06	\$11.50	\$13.80	--	\$119.42

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

Other Premiums: YG 1: \$6.50, YG 2: \$2.50

Other Discounts: Heavy carcass >950 lbs: \$8.29 (08 IN) with no YG premiums

Light carcass <525 lbs: \$23.79 (09 IA); <550 lbs STD: \$31.13 (07 IA)

Canner: \$30.00 (13 IN)

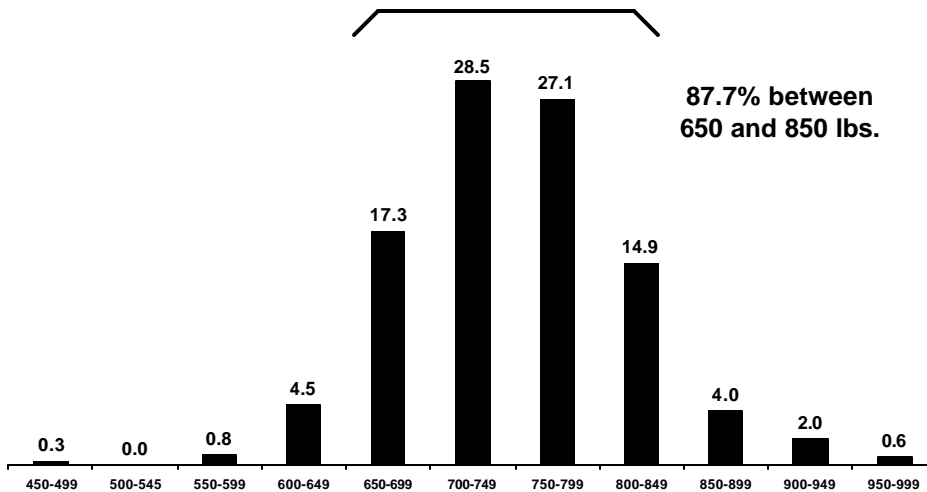
All cattle sold to IBP: Iowa cattle – Denison, IA; Indiana cattle – Joslin, IL

Steer Carcass Characteristics (Cooperator Average)

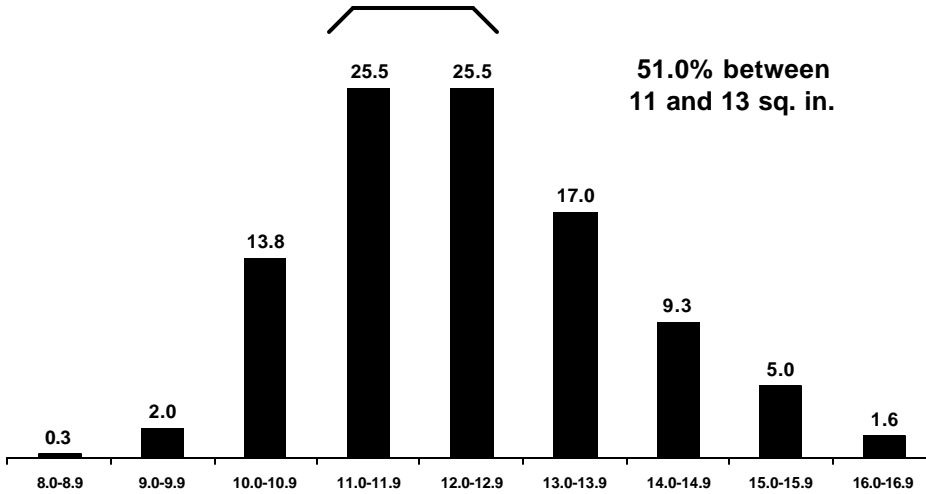


	<u>Average</u>	<u>Range</u>
Carcass Weight	751	657 to 835
Dressing %	62.3	59.7 to 65.4
Ribeye Area	12.6	10.9 to 14.8
REA/cwt carcass	1.68	1.54 to 1.81
Backfat	0.43	0.24 to 0.55
Yield Grade	2.8	2.0 to 3.3
% Choice or Prime	73.4	0.0 to 100.0
Sale Price, \$/cwt	\$126.40	\$111.92 to \$134.46
Sale Value/Hd.	\$949.81	\$735.26 to \$1,062.95

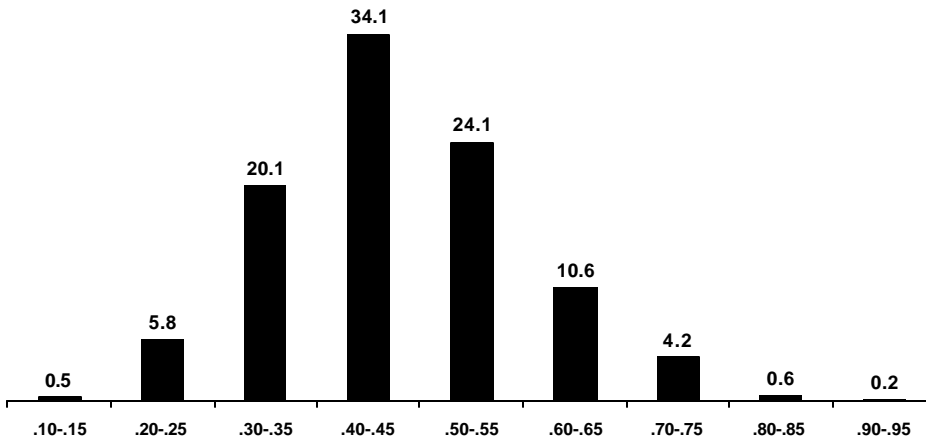
Steers Carcass Weight



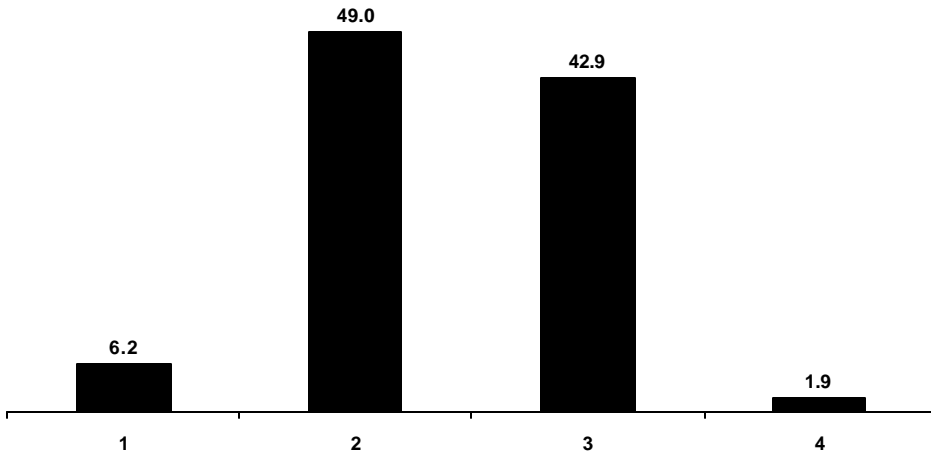
Steers Ribeye Area



Steers Backfat



Steers Yield Grade



Steer Feeding Cost (Cooperator Average)



	<u>Average</u>	<u>Range</u>
Feed	\$204.13	\$188.02 to \$226.34
Medication	\$15.30	\$0.00 to \$71.18
Yardage	\$58.75	\$44.91 to \$69.68
Misc. (processing, trucking, data collection)	\$31.56	\$25.39 to \$37.43
Total	\$309.74	\$289.19 to \$354.79

Steers - The Bottom Line (Cooperator Average)



	<u>Average</u>	<u>Range</u>
Feed Cost of Gain, \$/cwt	\$32.54	\$29.90 to \$36.76
Nonfeed Cost of Gain, \$/cwt	\$17.02	\$13.21 to \$26.40
Total Cost of Gain, \$/cwt	\$49.56	\$44.07 to \$58.02
Profit/Head	\$155.59	-\$51.86 to \$257.63
Break Even Feeder Calf Value, \$/cwt	\$106.97	\$75.57 to \$131.38

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 = 749 lbs x \$126.60/cwt = \$948.23

Feedlot Costs = \$305.07

Net = \$948.23 - \$305.07 = \$643.16

Calf Weight at Delivery = 626 lbs

Break Even Calf Value = \$643.16/626 lbs = \$102.74/cwt

Profit Groups



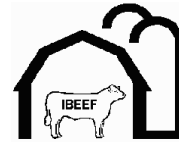
- Based on initial assigned feeder calf value at delivery, feeding costs, and harvest sale value, cattle were divided into profit group quartiles (160 or 161 steers/group)
- Profit = Sale Value - Feedlot Costs - Calf Value
- Example:
Profit = \$949.10 - \$305.07 - \$495.33 = \$148.70

Steer Profit Groups



<u>Profit Group</u>	<u>No. Steers</u>	<u>Profit \$/Hd.</u>	<u>Break Even Feeder Calf Value, \$/cwt</u>
1	160	\$255.95	\$119.29
2	161	\$176.31	\$108.86
3	161	\$124.43	\$100.47
4	161	\$38.80	\$87.00
Average		\$148.87	\$103.91

Differences Between High And Low Profit Groups *Feedlot Performance*



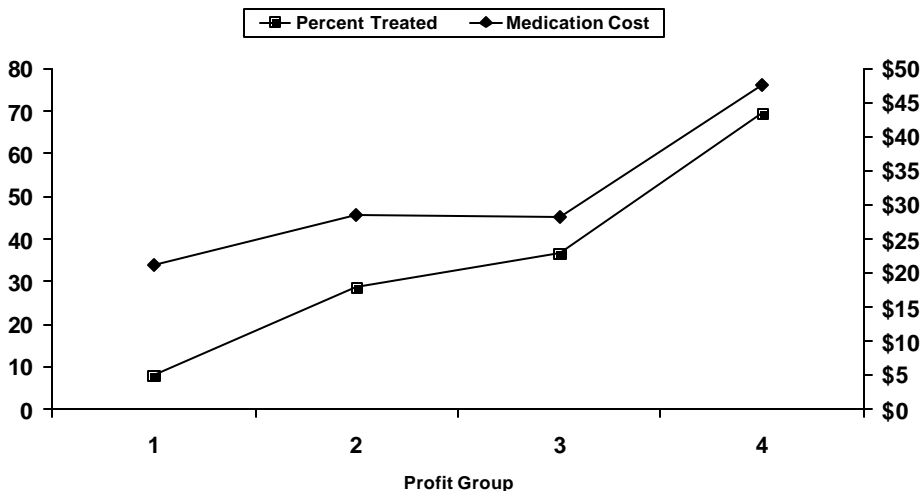
	<u>High vs. Low</u>
Delivery Point Weight, lbs.	645 vs. 613
Start Weight, lbs.	618 vs. 573
% Shrink (delivery - feedlot in)	4.13 vs. 6.31
Final Weight, lbs.	1285 vs. 1146
Feedlot Daily Gain	3.67 vs. 3.06
Medication Cost	\$1.72 vs. \$33.08
Total Feedlot Cost	\$306.23 vs. \$314.27
Cost of Gain, \$/cwt	\$46.14 vs. \$55.48
Days on Feed	183 vs. 188

Differences Between High And Low Profit Groups *Carcass Characteristics*



	<u>High vs. Low</u>
Hot Carcass Weight, lbs.	813 vs. 697
Ribeye Area	13.3 vs. 11.8
Backfat	0.46 vs. 0.42
% Yield Grade 4	1.9 vs. 2.5
% Yield Grade 1 and 2	55.6 vs. 62.1
% Choice or Prime	97.5 vs. 52.8
Carcass Price, \$/cwt	\$131.42 vs. \$120.81

Impact of Health on Profit



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



Category	No. Steers	Profit Group			
		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
Breed of Sire					
Angus	400	24.8	27.5	23.8	24.0
Charolais	15	33.3	20.0	33.3	13.3
Chiangus	11	27.3	36.4	27.3	9.1
Cross	41	14.6	19.5	36.6	29.3
Gelbvieh Balancer	13	76.9	15.4	7.7	0.0
Hereford	14	28.6	21.4	21.4	28.6
Limousin	12	25.0	25.0	16.7	33.3
Other Breeds	30	33.3	26.7	20.0	20.0
Salers	12	0.0	16.7	58.3	25.0
Simmental	71	23.9	21.1	28.2	26.8
Unknown	24	12.5	12.5	16.7	58.3

"Other Breeds" = Breeds with fewer than 10 steers. Includes Brangus (7 steers), Braunvieh (6), Gelbvieh (9), Shorthorn (7), and South Devon (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>
Color					
Black	465	25.4	26.7	25.6	22.4
Other	178	23.6	20.8	23.6	32.0
IBEP Bull					
Yes	216	20.8	23.1	26.4	29.6
No	427	26.9	26.0	24.4	22.7
Delivery Date					
10/21/02	419	16.0	28.9	29.6	25.5
11/11/02	129	61.9	19.8	15.1	3.2
12/2/02	98	15.3	15.3	18.4	51.0

**% 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					
02 IA 4/3	97	8.2	23.7	32.0	36.1
03 IA 4/8	104	29.8	39.4	19.2	11.5
04 IA 4/8	51	15.7	31.4	33.3	19.6
07 IA 5/6	71	12.7	23.9	36.6	26.8
08 IN 5/11	79	64.6	20.3	15.2	0.0
09 IA 5/15	22	18.2	27.3	31.8	22.7
10 IA 5/15	74	9.5	24.3	31.1	35.1
11 IA 5/22	36	38.9	25.0	19.4	16.7
13 IN 6/8	47	57.4	19.1	14.9	8.5
14 IA 6/24	62	1.6	9.7	17.7	71.0



Heifers

Heifer Feedlot Performance (Cooperator Average)



	<u>Average</u>	<u>Range</u>
Delivery Point Weight, lbs.	578	488 to 710
Initial Value at Delivery, \$/cwt	\$72.93	\$66.02 to \$77.83
Feedlot In Weight, lbs.	550	469 to 665
Sale Weight	1052	947 to 1142
Days on Feed	170	152 to 183
Daily Gain	2.97	2.46 to 3.40

How Heifers Were Sold Base Price and Grid



Sale Group	Sell Date	Base Price	Premiums		Select	Discounts		Avg. \$/cwt
			Prime	CAB		Standard	Y4	
01 IA	3/18	\$119.77	\$12.00	\$2.88	\$4.75	--	\$15.00	\$120.15
05 IA	4/22	\$124.89	\$12.60	\$7.21	\$7.10	--	\$15.00	\$126.26
06 IA	4/29	\$121.86	\$13.35	\$8.15	\$7.40	--	--	\$125.59
12 IA	6/3	\$126.64	\$14.50	\$10.05	\$14.25	\$16.55	\$15.00	\$124.08

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

Other Premiums: YG 1: \$6.50, YG 2: \$2.50

Other Discounts: <550 lbs: \$17.29 (05 IA); \$15.15 (12 IA)

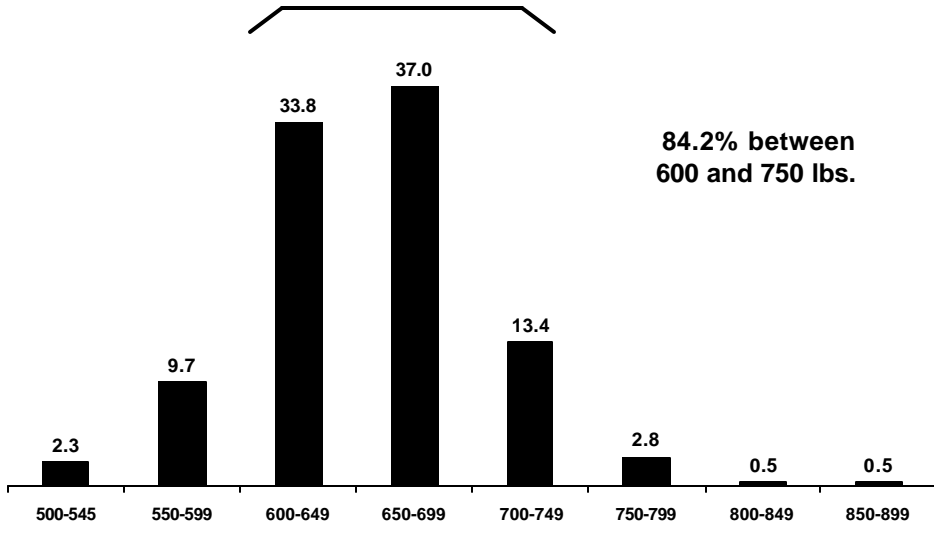
All cattle sold to IBP - Denison, IA

Heifer Carcass Characteristics (Cooperator Average)

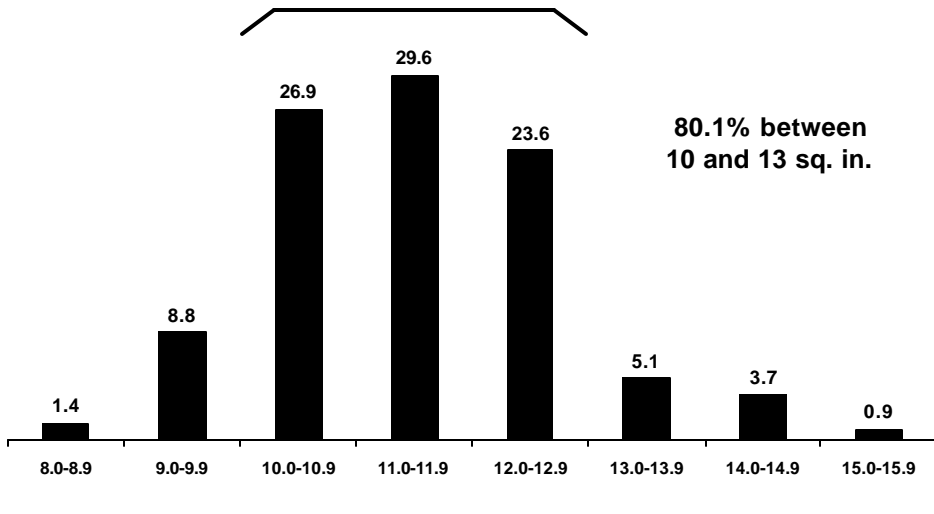


	<u>Average</u>	<u>Range</u>
Carcass Weight	647	597 to 699
Dressing %	61.5	59.4 to 63.2
Ribeye Area	11.3	10.1 to 12.5
REA/cwt carcass	1.74	1.59 to 2.04
Backfat	0.51	0.27 to 0.83
Yield Grade	3.1	2.0 to 4.1
% Choice or Prime	82.3	50.0 to 100.0
Sale Price, \$/cwt	\$122.28	\$112.38 to \$126.66
Sale Value/Hd.	\$791.79	\$684.11 to \$862.33

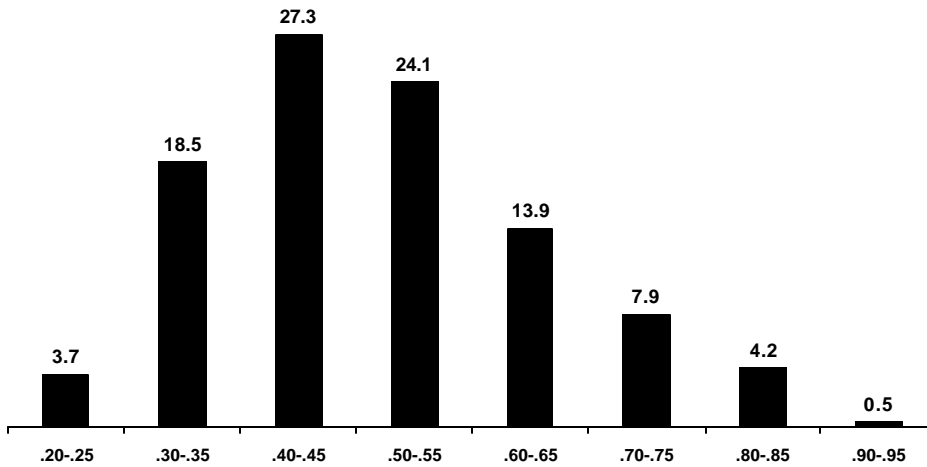
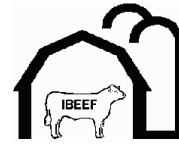
Heifers Carcass Weight



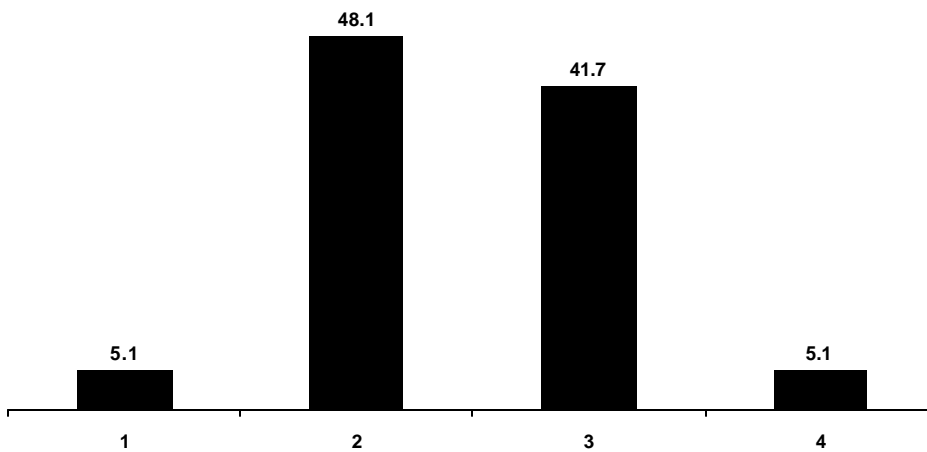
Heifers Ribeye Area



Heifers Backfat



Heifers Yield Grade



Heifer Feeding Cost (Cooperator Average)



	<u>Average</u>	<u>Range</u>
Feed	\$178.07	\$142.68 to \$216.75
Medication	\$2.68	\$0.00 to \$12.94
Yardage	\$47.84	\$42.84 to \$51.24
Misc. (processing, trucking, data collection)	\$30.68	\$29.36 to \$31.77
Total	\$259.27	\$225.07 to \$297.50

Heifers - The Bottom Line (Cooperator Average)



	<u>Average</u>	<u>Range</u>
Feed Cost of Gain, \$/cwt	\$35.55	\$31.31 to \$39.27
Nonfeed Cost of Gain, \$/cwt	\$16.39	\$14.53 to \$19.71
Total Cost of Gain, \$/cwt	\$51.94	\$47.44 to \$55.64
Profit/Head	\$113.06	\$26.04 to \$183.01
Break Even Feeder Calf Value, \$/cwt	\$92.64	\$81.31 to \$106.06

Heifer Profit Groups



<u>Profit Group</u>	<u>No. Heifers</u>	<u>Profit \$/Hd.</u>	<u>Break Even Feeder Calf Value, \$/cwt</u>
1	54	\$211.39	\$108.50
2	54	\$158.73	\$99.69
3	54	\$124.18	\$93.91
4	54	\$51.26	\$82.25
Average		\$136.39	\$96.09

Differences Between High And Low Profit Groups *Feedlot Performance*



	<u>High vs. Low</u>
Delivery Point Weight, lbs.	595 vs. 575
Start Weight, lbs.	581 vs. 542
% Shrink (delivery - feedlot in)	2.34 vs. 5.66
Final Weight, lbs.	1113 vs. 1024
Feedlot Daily Gain	3.26 vs. 2.86
Medication Cost	\$1.87 vs. \$5.76
Total Feedlot Cost	\$260.03 vs. \$260.05
Cost of Gain, \$/cwt	\$49.28 vs. \$54.49
Days on Feed	164 vs. 170

Differences Between High And Low Profit Groups *Carcass Characteristics*



	<u>High vs. Low</u>
Hot Carcass Weight, lbs.	689 vs. 622
Ribeye Area	12.1 vs. 10.7
Backfat	0.48 vs. 0.52
% Yield Grade 4	1.9 vs. 16.7
% Yield Grade 1 and 2	63.0 vs. 37.0
% Choice or Prime	98.1 vs. 55.6
Carcass Price, \$/cwt	\$130.47 vs. \$117.28

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



<u>No.</u> <u>Category</u>	<u>Heifers</u>	<u>Profit Group</u>			
		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
Breed of Sire					
Angus	138	19.6	25.4	25.4	29.7
Cross	13	30.8	23.1	38.5	7.7
Gelbvieh Balancer	12	66.7	16.7	0.0	16.7
Other Breeds	26	11.5	23.1	30.8	34.6
Simmental	27	44.4	29.6	22.2	3.7

“Other Breeds” = Breeds with fewer than 10 heifers. Includes Brangus (5 heifers), Chiangus (9), Gelbvieh (5), Hereford (5), and Salers (2).

**% 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>
Color					
Black	151	31.8	21.9	22.5	23.8
Other	65	9.2	32.3	30.8	27.7
IBEP Bull					
Yes	78	21.8	26.9	23.1	28.2
No	138	26.8	23.9	26.1	23.2
Delivery Date					
10/21/02	92	18.5	29.3	26.1	26.1
12/2/02	124	29.8	21.8	24.2	24.2

**% 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					
01 IA 3/18	36	11.1	30.6	27.8	30.6
05 IA 4/22	56	23.2	28.6	25.0	23.2
06 IA 4/29	61	37.7	21.3	29.5	11.5
12 IA 6/3	63	22.2	22.2	19.0	36.5

Factors That Affect Profitability



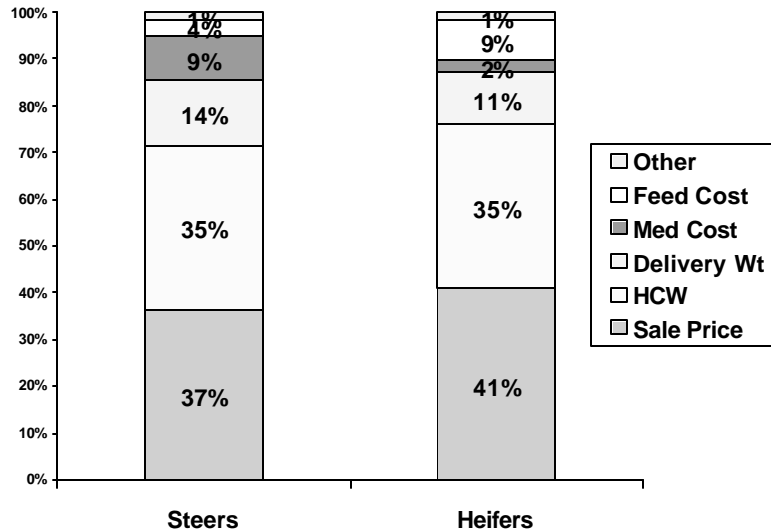
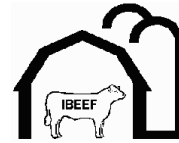
- Health
- Feedlot Daily Gain
- Harvest Weight
- Quality Grade
- Yield Grade

Profit



- Profit = Value – (Feeding Cost + Calf Value)
- Steers:
 $\$148.70 = \$949.10 - (\$305.07 + \$495.33)$
- Heifers:
 $\$136.39 = \$817.27 - (\$256.50 + \$424.38)$

Factors Affecting Variation in Profit



Factors Affecting Variation in Profit



- Steers

Profit = -1188.5
 +7.37 Sale Price
 +1.20 HCW
 -0.43 Delivery Wt
 -1.06 Med Cost
 -1.04 Feed Cost

- Heifers

Profit = -1018.0
 +6.13 Sale Price
 +1.28 HCW
 -0.42 Delivery Wt
 -0.92 Med Cost
 -1.13 Feed Cost

IBEEF Participation



Data



Information



Knowledge



Action



For more information
about IBEEF:



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