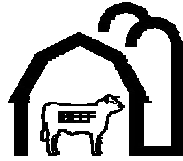


**2000-2001**

**I**ndiana  
**B**eef  
**E**valuation and  
**E**conomics  
**F**eeding 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, 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.

**2000-2001**  
**IBEEF Overview**



- ❖ 36 Cooperators
- ❖ 503 Steers and 113 Heifers  
➢ 5-81 head/cooperator
- ❖ Weaned at least 30 days before delivery
- ❖ Delivered October, 20, November 13, and December 4, 2000

**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






**2000-2001  
IBEEF Participation** 

- ❖ Sires represented: Angus, Beefmaster, Brangus, Charolais, Chiangus, Gelbvieh, Hereford, Limousin, Maine Anjou, Red Angus, Salers, Shorthorn, Simmental, Cross
- ❖ Color: Black/BWF 75%, Red/RWF 12%, White 2%, Smoke 4%, Gray 2%, Brown 4%
- ❖ 46% sired by IBEP Test Station Bulls

**IBEEF Steer Summary  
Feedlot Performance** 

Delivery Point Weight, lbs.	621
Feedlot in Weight, lbs.	601
Harvest Weight, lbs.	1153
ADG	2.99
Days on Feed	185
Age at Harvest	441

**Comparison of IBEEF Steer  
Carcasses and 2000 Beef  
Quality Audit (9396 head)** 

	<u>IBEEF</u>	<u>BOA</u>
Hot Carcass Weight, lbs.	718	787
Rib Eye Area	12.3	13.1
Back Fat	0.40	0.49
Yield Grade	2.7	3.0
% YG 1 and 2	68.1	49.6
% YG 4	0.4	11.7
% Choice and Prime	63.0	51.1

## “Out” Cattle (%)



Reason	IBEEF	BQA
Light Carcass (<550 lbs.)	0.7	N/A
Heavy Carcass (>950 lbs.)	0.0	N/A
YG 4 (Calculated)	1.0	11.7
--None Plant Called		
Standard Grade	2.3	5.6
Dark Cutter	0.5	2.3
<b>Total “Out” Cattle</b>	<b>4.5</b>	<b>19.6</b>

## Yield Grade vs. Quality Grade

**IBEEF vs. Purdue Steers**  
(112 Angus and Simmental Sired)



	IBEEF	Purdue
Days on Feed	185	172
Hot Carcass Weight, lbs.	718	833
Rib Eye Area	12.3	13.5
Back Fat	0.40	0.51
Yield Grade	2.7	3.1
% YG 1 and 2	68.1	43.8
% YG 4	0.4	7.1
% Choice and Prime	63.0	92.0
% CAB	11.2	28.6

## Calf Value at Delivery (Steers)



Delivery Point	\$/cwt	\$/cwt
<u>Weight, lbs.</u>	<u>Steers</u>	<u>Heifers</u>
400 – 450	\$97.50	\$92.50
450 – 500	\$95.00	\$90.00
500 – 550	\$92.50	\$87.50
550 – 600	\$90.00	\$85.00
600 – 650	\$87.50	\$82.50
650 – 700	\$85.00	\$80.00
700 – 750	\$82.50	\$77.50

## Steer Feedlot Performance (Cooperator Average)



	Average	Range
Delivery Point Weight, lbs.	619	415 to 722
Initial Value at Delivery, \$/cwt	\$87.63	\$82.43 to \$99.10
Feedlot In Weight, lbs.	601	419 to 721
Sale Weight	1165	992 to 1272
Days on Feed	188	174 to 208
Daily Gain	3.01	2.45 to 3.68

## How Steers Were Sold

**Base Price and Grid**

IBP – Joslin, IL and Denison, IA

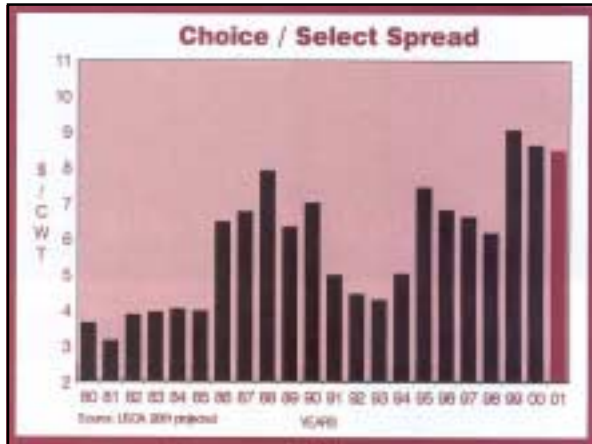


Sale Grp.	Sale Date	Base Price	Select Discount	Avg. \$/cwt
1 IA	4/9	\$128.08	-\$4.70	\$129.07
2 IN	4/29	\$119.00	-\$4.00	\$119.67
3 IA	5/7	\$121.21	-\$9.20	\$121.12
4 IA	5/16	\$121.16	-\$11.20	\$119.17
5 IN	6/10	\$125.50	-\$17.00	\$120.98
6 IA	6/11	\$125.63	-\$16.65	\$123.77
7 IA	7/9	\$117.00	-\$11.00	\$116.14


Premiums: CAB \$2.00 to \$6.00, Prime \$10.00, YG 1 \$6.50, YG 2 \$2.50  
Other Discounts: YG 4, light, and heavy carcass -\$15.00 to -\$20.00

## Choice / Select Price Spread






### Steer Carcass Information (Cooperator Average)




	<u>Average</u>	<u>Range</u>
Carcass Weight	729	590 to 844
Dressing %	62.5	59.1 to 66.4
REA	12.5	10.7 to 14.9
REA/cwt carcass	1.72	1.52 to 1.96
Backfat	0.38	0.20 to 0.59
Yield Grade	2.6	1.7 to 3.2
% Choice or Prime	55.4	0 to 100
Sale Price, \$/cwt	\$121.89	\$113.31 to \$129.12
Sale Value/Hd.	\$881.72	\$698.65 to \$1,046.19

### Steer Feeding Cost (Cooperator Average)




	<u>Avg.</u>	<u>Range</u>
Feed	\$190.71	\$173.02 to \$211.97
Medication	\$5.15	\$0.00 to \$31.54
Yardage	\$48.92	\$44.20 to \$55.55
Misc. (processing, trucking, data collection)	\$31.72	\$28.19 to \$35.87
<b>Total</b>	<b>\$276.49</b>	<b>\$253.74 to \$309.71</b>

### The Bottom Line - Steers (Cooperator Average)



	<u>Average</u>	<u>Range</u>
Feed Cost of Gain, \$/cwt	\$34.11	\$30.14 to \$38.29
Nonfeed Cost of Gain, \$/cwt	\$15.43	\$12.48 to \$21.76
Total Cost of Gain, \$/cwt	\$49.54	\$43.32 to \$58.97
Profit/Head	\$64.05	-\$46.74 to \$170.20
Break Even Feeder Calf Value, \$/cwt	\$98.19	\$81.11 to \$118.12

### Breakeven Feeder Calf Value




❖ **Calculation:**

**(Harvest Sale Value – Feedlot Costs)**  
**Calf Weight at Delivery**

Harvest Sale Value = 729 lbs. x \$120.91/cwt = \$881.43  
 Feedlot Costs = \$273.63  
 Net = \$881.43 - \$273.63 = \$607.80  
 Calf Weight at Delivery = 619 lbs.  
 Breakeven Calf Value = \$607.80/619 lbs. = \$98.19/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 (123 steers/group)

❖ Profit = Sale Value – Feedlot Costs – Calf Value

Example:  
 Profit = \$875.71 - \$274.61 - \$542.41 = \$58.69

## Steer Profit Groups



Profit Group	No. Steers	Profit \$/Hd.	Break Even Feeder Calf Value, \$/cwt
1	123	\$154.58	\$112.10
2	123	\$82.58	\$101.47
3	123	\$34.10	\$93.41
4	123	-\$36.52	\$82.14
Average	492	\$58.69	\$97.28

## Differences Between High and Low Profit Groups Feedlot Performance



	High vs. Low
Delivery Point Weight, lbs.	632 vs. 614
Start Weight, lbs.	618 vs. 591
% Shrink (delivery-feedlot)	2.22 vs. 3.63
Final Weight, lbs.	1223 vs. 1106
Feedlot Daily Gain	3.29 vs. 2.74
Medication Cost	\$1.43 vs. \$8.73
Total Feedlot Cost	\$280.76 vs. \$273.96
Cost of Gain, \$/cwt	\$46.71 vs. \$53.57

## Impact of Health on Feedlot Profit of Steers and Heifers<sup>1</sup>



Profit Group	% Treated	Avg. Cost/hd Treated
1	6.0	\$19.46
2	13.3	\$23.66
3	17.3	\$24.54
4	26.7	\$32.29

<sup>1</sup>600 head on feed

## Variability of Cattle Health Status Among Cooperators



% Treated	% Cooperators	No. Cattle Represented
0	40.4	140 (23%)
1-25	33.3	345 (57%)
26-50	15.8	80 (13%)
51-75	3.5	18 (3%)
76-100	7.0	17 (3%)

## Differences Between High and Low Profit Groups Carcass Characteristics



	High vs. Low
Ribeye Area, in <sup>2</sup>	12.9 vs. 11.9
Backfat, in.	0.39 vs. 0.38
% Yield Grade 4	0.8 vs. 0.8
% Yield Grade 1 and 2	64.2 vs. 79.7
% Choice or Prime	87.8 vs. 22.0
Carcass Price, \$/cwt	\$126.79 vs. \$114.41

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



Category	No. Steers	Profit Group			
		1	2	3	4
Breed of Sire					
Angus	351	22.2	26.5	26.5	24.8
Charolais	11	9.1	9.1	36.4	45.5
Chiangus	22	22.7	18.2	18.2	40.9
Gelbvieh	13	46.2	15.4	38.5	0.0
Hereford	30	23.3	30.0	13.3	33.3
Other Breeds	25	24.0	24.0	20.0	32.0
Shorthorn	22	50.0	31.8	9.1	9.1
Simmental	18	50.0	5.6	33.3	11.1

<sup>1</sup>"Other Breeds" = Breeds with fewer than 10 steers. Includes Beefmaster (1 steer), Brangus (3), Cross (2), Limousin (6), Maine Anjou (4), Red Angus (1), and Salers (8).

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



Category	No. Steers	Profit Group			
		1	2	3	4
<b>Color</b>					
Black	363	27.3	24.8	25.9	22.0
Other	129	18.6	25.6	22.5	33.3
<b>IBEP Bull</b>					
Yes	231	26.8	20.3	26.0	26.8
No	261	23.4	29.1	24.1	23.4
<b>Delivery Date</b>					
10/20	140	22.1	33.6	21.4	22.9
11/13	215	35.8	23.3	26.5	14.4
12/4	137	10.9	19.0	26.3	43.8

**% of Steers in Each Sale Group  
Which are in the 4 Profit Groups**



Category	No. Steers	Profit Group			
		1	2	3	4
<b>Sale Group</b>					
1 IA 4/9	57	45.6	43.9	8.8	1.8
2 IN 4/29	80	40.0	26.3	28.7	5.0
3 IA 5/7	78	3.8	16.7	42.3	37.2
4 IA 5/16	83	6.0	26.5	30.1	37.3
5 IN 6/10	81	49.4	14.8	17.3	18.5
6 IA 6/11	102	16.7	29.4	21.6	32.4
7 IA 7/9	11	0.0	0.0	9.1	90.9

**IBEEF Heifer Summary  
Feedlot Performance**



Delivery Point Weight, lbs.	579
Feedlot in Weight, lbs.	570
Harvest Weight, lbs.	1081
ADG	2.60
Days on Feed	199
Age at Harvest	450

**IBEEF Heifer Summary  
Carcass Characteristics**



Days on Feed	199
Hot Carcass Weight, lbs.	665
Rib Eye Area	12.2
Back Fat	0.50
Yield Grade	2.8
% YG 1 and 2	61.1
% YG 4	3.7
% Choice and Prime	70.4
% CAB	26.9

**Heifer Feedlot Performance  
(Cooperator Average)**



	Avg.	Range
Delivery Point Weight, lbs.	571	441 to 675
Initial Value at Delivery, \$/cwt	\$85.38	\$80.00 to \$91.66
Feedlot In Weight, lbs.	561	444 to 666
Sale Weight	1094	968 to 1209
Days on Feed	207	180 to 245
Daily Gain	2.59	2.17 to 3.07

**How Heifers Were Sold  
Base Price and Grid  
IBP, Denison, IA**



Sale Grp.	Sale Date	Base Price	Select Discount	Avg. \$/cwt
1 IA	5/7	\$120.60	-\$9.20	\$121.09
2 IA	5/16	\$121.16	-\$11.20	\$134.36
3 IA	6/11	\$124.01	-\$16.65	\$122.73
4 IA	7/9	\$117.00	-\$11.00	\$112.45

Premiums: CAB \$3.50 to \$6.00, Prime \$10.00, YG 1 \$6.50, YG 2 \$2.50  
Other Discounts: YG 4, light, and heavy carcass -\$15.00 to -\$25.00

### Heifer Carcass Information (Cooperator Average)



	<u>Avg.</u>	<u>Range</u>
Carcass Weight	671	600 to 774
Dressing %	61.3	58.0 to 64.0
REA	12.3	10.5 to 13.9
REA/cwt carcass	1.84	1.73 to 1.95
Backfat	0.47	0.21 to 0.65
Yield Grade	2.7	1.7 to 3.4
% Choice or Prime	78.3	25 to 100
Sale Value/Hd.	\$815.94	\$685.35 to \$978.10

### Heifer Feeding Cost (Cooperator Average)



	<u>Avg.</u>	<u>Range</u>
Feed	\$175.89	\$152.50 to \$199.00
Medication	\$6.89	\$0.00 to \$45.41
Yardage	\$52.76	\$46.19 to \$62.00
Misc. (processing, trucking, data collection)	\$32.09	\$31.38 to \$32.83
<b>Total</b>	<b>\$267.63</b>	<b>\$244.53 to \$324.78</b>

### The Bottom Line - Heifers (Cooperator Average)



	<u>Avg.</u>	<u>Range</u>
Feed Cost of Gain, \$/cwt	\$33.36	\$28.73 to \$37.66
Nonfeed Cost of Gain, \$/cwt	\$17.52	\$13.69 to \$22.13
Total Cost of Gain, \$/cwt	\$50.88	\$42.42 to \$58.18
Profit/Head	\$62.80	-\$20.33 to \$162.13
Break Even Feeder Calf Value, \$/cwt	\$96.27	\$78.94 to \$106.57

### Heifer Profit Groups



<u>Profit Group</u>	<u>No. Heifers</u>	<u>Profit Avg/Hd.</u>	<u>Break Even Feeder Calf Value, \$/cwt</u>
1	27	\$147.04	\$109.06
2	27	\$94.54	\$103.28
3	27	\$37.34	\$91.27
4	27	-\$69.33	\$72.72
<b>Avg.</b>	<b>108</b>	<b>\$52.40</b>	<b>\$94.08</b>

### Differences Between High and Low Profit Groups *Heifer Feedlot Performance*



Delivery Point Weight, lbs.	594 vs. 579
Start Weight, lbs.	591 vs. 567
% Shrink (delivery-feedlot)	0.55 vs. 2.18
Final Weight, lbs.	1142 vs. 1030
Feedlot Daily Gain	2.88 vs. 2.21
Medication Cost	\$0.00 vs. \$8.86
Total Feedlot Cost	\$261.29 vs. \$260.32
Cost of Gain, \$/cwt	\$47.58 vs. \$57.30

### Differences Between High and Low Profit Groups *Heifer Carcass Characteristics*



Ribeye Area, in <sup>2</sup>	12.2 vs. 12.3
Backfat, in.	0.50 vs. 0.42
% Yield Grade 4	3.7 vs. 0.0
% Yield Grade 1 and 2	55.6 vs. 70.4
% Choice or Prime	96.3 vs. 18.5
Carcass Price, \$/cwt	\$128.39 vs. \$107.39

**% of Heifers of Each Sire Breed  
Which are in the 4 Profit Groups**



Category	No. Heifers	Profit Group			
		1	2	3	4
<b>Breed of Sire</b>					
Angus	84	26.2	26.2	26.2	21.4
Other Breeds	24	20.8	20.8	20.8	37.5

"Other Breeds" = Breeds with fewer than 10 heifers. Includes Chiangus (6 heifers), Cross (2), Gelbvieh (3), Hereford (3), Limousin (4), Maine Anjou (2), and Simmental (4).

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



Category	No. Heifers	Profit Group			
		1	2	3	4
<b>Color</b>					
Black	91	24.2	26.4	26.4	23.1
Other	17	29.4	17.6	17.6	35.3
<b>IBEP Bull</b>					
Yes	47	31.9	17.0	27.7	23.4
No	61	19.7	31.1	23.0	26.2
<b>Delivery Date</b>					
10/20	14	35.7	42.9	7.1	14.3
11/13	82	24.4	20.7	29.3	25.6
12/4	12	16.7	33.3	16.7	33.3

**% of Heifers in Each Sale Group  
Which are in the 4 Profit Groups**



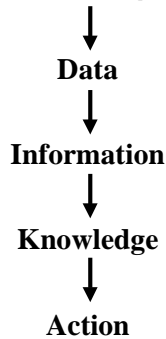
Category	No. Heifers	Profit Group			
		1	2	3	4
<b>Sale Group</b>					
3 IA 5/7	43	30.2	27.9	30.2	11.6
4 IA 5/16	1	100.0	0.0	0.0	0.0
6 IA 6/11	42	28.6	28.6	21.4	21.4
7 IA 7/9	22	4.5	13.6	22.7	59.1

**Factors That  
Affect Profitability**



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

**IBEEF Participation**



**For more information  
about IBEEF:**



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