

2000 Summary Iowa Beef Cow Business Record

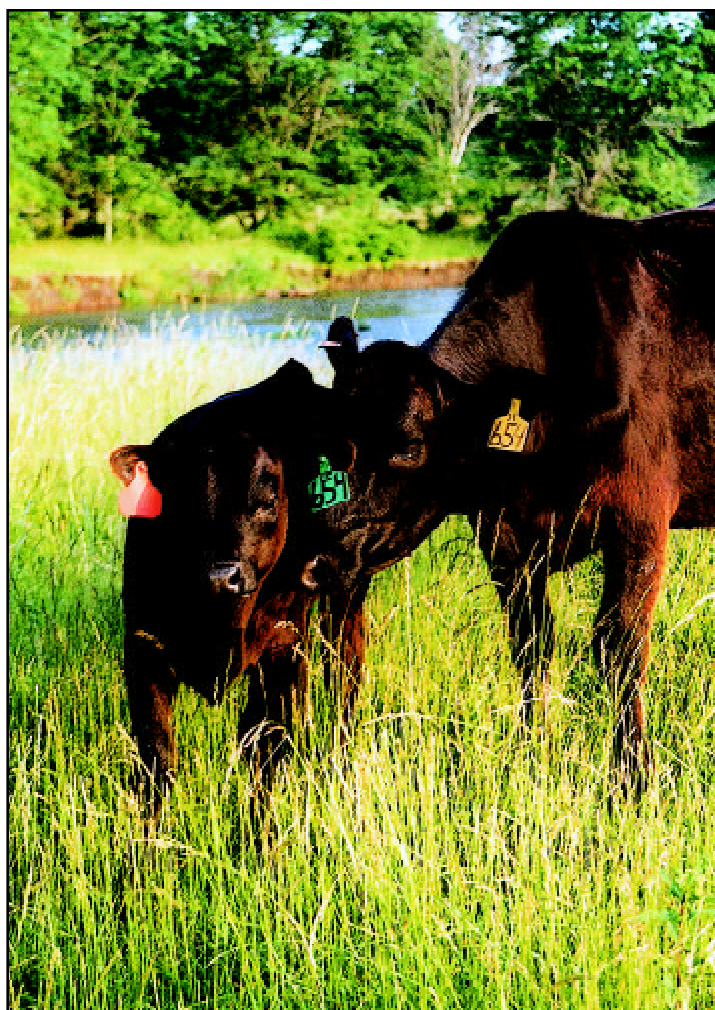


“Cost factors were far more influential in driving returns to labor and management than production, reproduction, or producer controlled marketing factors. Of these cost factors, feed cost had by far the largest impact.”

—Alan Miller, University of Illinois

Analysis of Iowa and Illinois ISU-IRM-SPA data* 1996 – 1999

- Eight cost and production factors explained 82 percent of the farm-to-farm variation in return to labor and management
- Feed cost was the most critical control point; it explained over 50 percent of the variation in herd-to-herd profits.
- Depreciation cost was the second most important factor, which means producers should carefully analyze the payoff of investments in equipment and housing.
- Operating cost was the third most important factor in determining returns to labor and management. Producers need to do the necessities in management, but be cautious about purchasing inputs that may not return added profits.
- Calf weight sold was the fourth most important indicator of profit. However, it only accounted for about 5 percent of the profit variation. This indicates that bigger does not always mean better profits, there is an optimum for each herd’s production system.
- The fifth factor in determining profit variation was capital charge or the amount of interest paid. This analysis showed that for each \$1 increase in interest, the profits went down \$1.38, which indicates that it is correlated with other factors that increase expenses.
- Calf price was the sixth most important factor in accounting for profit differences. A \$1 increase in calf price was worth an additional \$3.40 profit per cow.
- Weaning percentage came in seventh for importance. Producers need to keep in mind that there is an optimum level for calf crop percentage. If one strives for a real high percent calf crop the costs will likely outweigh the returns from added pounds available for sale.
- Herd size was the eighth factor to account for profit differences. However, herd size accounted for less than 1 percent of the herd-to-herd variation in profit.



* 225 commercial herd observations.
Analysis by Miller, et.al, University of Illinois.



“We have to improve grazing resource management to be competitive with our current investment levels.”

*—Daryl Strohhahn,
Iowa Beef Center*

Benchmarks for Iowa Cow-Calf Producers

Beef Cow Business Record
ISU-IRM-SPA

High Versus Low Profit Producers 1995-2000*

| | High 1/4 | Average | Low 1/4 |
|--|------------|------------|------------|
| Return & Cost Factors | | | |
| Financial return to capital, labor & mgmt. per cow | \$127.69 | -\$9.90 | -\$144.84 |
| Total financial cost per cow | \$230.11 | \$362.87 | \$461.96 |
| Total financial cost per cwt. produced | \$47.32 | \$72.23 | \$108.04 |
| Feed Resource Factors | | | |
| Total financial feed cost per cow | \$146.05 | \$195.06 | \$265.50 |
| Total financial feed costt per cwt. produced | \$29.71 | \$43.80 | \$63.84 |
| Financial pasture cost per animal unit month | \$6.47 | \$9.22 | \$12.33 |
| Stored feed fed per cow (dry matter) | 3,509 lbs. | 3,722 lbs. | 4,388 lbs. |
| Production Factors | | | |
| Calves born in first 42 days of calving season | 83.4% | 83.8% | 82.4% |
| Calf crop weaning percentage | 85.7% | 83.4% | 81.7% |
| Pounds weaned per exposed female | 421 lbs. | 401 lbs. | 360 lbs. |

*Sorted based on Financial Return to Capital, Labor and Management per cow.

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Form 18

Iowa State University Financial and Economic Production Summary

Averages for 19 Herds

| | Financial | Economic | Economic w/ Raised Hay @ Market Price |
|---|-----------------|------------------|---------------------------------------|
| 1. Return to Capital, Labor & Mgmt. | \$6,745 | \$4,617 | \$6,317 |
| 2. Return to Labor & Mgmt. | \$5,877 | \$74 | \$1,774 |
| 3. Net Profit | xxxxxxx | (\$2,674) | (\$974) |
| 4. Return per \$100 of Feed Fed | \$205.16 | \$185.53 | \$198.93 |
| 5. Annual % Return on Capital Investment | 8.4% | 4.9% | 5.7% |
| 6. Return per Hour of Operator Labor | \$18.45 | \$8.28 | \$13.86 |
| Costs for Cow-Calf Enterprises | | | |
| 7. January 1 Number of Cows in Herd | 96 | 96 | 96 |
| 8. a. Pasture Cost per Cow | \$76.25 | \$105.06 | \$105.06 |
| b. Crop Residues per Cow | \$1.65 | \$1.65 | \$1.65 |
| c. Harvested Forages per Cow | \$67.19 | \$85.09 | \$79.04 |
| d. Non-Purchased Raised Feed Fed per Cow | \$32.19 | \$32.19 | \$32.19 |
| e. Purchased Feed per Cow | \$27.18 | \$27.18 | \$27.18 |
| f. Total Feed Cost per Cow | \$204.46 | \$251.17 | \$245.12 |
| 9. Operating Cost per Cow | \$60.24 | \$60.24 | \$60.24 |
| 10. Depreciation Cost per Cow | \$53.48 | \$53.48 | \$53.48 |
| 11. Capital Charge per Cow | \$7.69 | \$36.76 | \$36.76 |
| 12. Hired Labor Cost per Cow | \$9.76 | \$9.76 | \$9.76 |
| 13. Family & Operator Labor Charge per Cow | xxxxxxx | \$34.83 | \$34.83 |
| 14. Total Cost per Cow in Herd, January 1 | \$335.64 | \$446.24 | \$440.19 |
| 15. a. Return to Management per Cow | \$60.75 | \$12.51 | \$18.56 |
| b. Margin per Cwt Beef Produced, Inventory Included | \$11.92 | \$1.60 | \$4.02 |
| Costs/Cwt for Cow-Calf Enterprises | | | |
| 16. Feed Cost per Cwt of Beef Produced | \$40.40 | \$50.11 | \$47.69 |
| 17. a. Operating Cost per Cwt of Beef Produced | \$8.41 | \$8.41 | \$8.41 |
| b. Vet Med Cost per Cwt of Beef Produced | \$4.67 | \$4.67 | \$4.67 |
| 18. Depreciation Cost per Cwt of Beef Produced | \$10.77 | \$10.77 | \$10.77 |
| 19. Capital Cost per Cwt of Beef Produced | \$1.62 | \$7.51 | \$7.51 |
| 20. Family & Operator Labor Cost per Cwt of Beef Produced | xxxxxxx | \$7.34 | \$7.34 |
| 21. Total Cost per Cwt of Beef Produced | \$65.88 | \$88.81 | \$86.39 |
| Production & Sales for Cow-Calf Enterprises | | | |
| 22. Total Number of Feeder Calves Sold | | 91 | |
| 23. Average Age at Weaning | | 182 | |
| 24. Average Weight of Feeder Calves Sold | | 467 | |
| 25. Pounds of Calf Weight Sold per Cow | | 439 | |
| 26. Price per Cwt of Feeder Calves Sold | | \$100.05 | |
| 27. Total Number of Breeding Stock Sold | | 13 | |
| 28. Average Weight of Breeding Stock Sold | | 1,288 | |
| 29. Pounds of Breeding Stock Sold per Cow | | 168 | |
| 30. Price per Cwt of Breeding Stock Sold | | \$45.96 | |
| 31. Total Pounds of Beef Produced per Cow | | 522 | |
| 32. Total Pounds of Beef Sold per Cow | | 607 | |
| 33. Total Value of Production Sold per Cow | | \$512 | |

Herd analyses and summaries done by ISU Field Livestock Specialists, CHIPS and SPA Technicians, and state summary prepared by Daryl Strohbehn, Extension Beef Specialist, Iowa Beef Center, ISU, Ames, IA 50011.

2000 Beef Cow Business Record ISU-IRM-SPA

Iowa State University Financial and Economic Production Summary

Averages for 19 Herds

| | Finan- cial | Economic |
|--|------------------------|-----------------|
| Forage Production Costs | | |
| 1. Number of Acres in Forage Production | 88 | 88 |
| 2. Land Charge per Acre | \$41.74 | \$63.55 |
| 3. Operating Cost per Acre | \$63.45 | \$63.45 |
| 4. Depreciation Cost per Acre | \$15.52 | \$15.52 |
| 5. Non-Real Estate Loan, Principal & Interest per Acre | | \$3.14 |
| 6. Family & Operator Labor per Acre | xxxxx | xxxxxxx |
| 7. Total Cost per Acre of Land in Forage Production | | \$123.85 |
| | | \$172.02 |
| 8. Yield per Acre of Forage Production, Tons | 3.4 | 3.4 |
| 9. Land Charge per Ton | \$11.66 | \$18.77 |
| 10. Operating Cost per Ton | \$18.88 | \$18.88 |
| 11. Depreciation Cost per Ton | \$3.88 | \$3.88 |
| 12. Non-Real Estate Loan, Principal & Interest per Ton | | \$0.90 |
| 13. Family & Operator Labor per Ton | xxxxx | xxxxxxx |
| 14. Total Cost per Ton of Forage Produced | \$35.32 | \$49.39 |
| Pasture Summary | | |
| 15. Number of Acres Pastured | 254 | 254 |
| 16. Land Charge per Acre | \$24.05 | \$31.52 |
| 17. Operating Cost per Acre | \$6.26 | \$6.26 |
| 18. Depreciation Cost per Acre | \$1.38 | \$1.38 |
| 19. Non-Real Estate Loan, Principal & Interest per Acre | | \$0.27 |
| 20. Family & Operator Labor per Acre | xxxxx | xxxxxxx |
| 21. Total Cost per Acre of Land in Pasture Production | \$31.96 | \$44.56 |
| 22. Acres per Cow-Calf Pair | 2.8 | 2.8 |
| 23. Animal Unit Months from Pasture | 1,146 | 1,146 |
| 24. Pasture Cost per Cow-Calf Pair | \$76.25 | \$105.06 |
| 25. AUM per Acre | 5.4 | 5.4 |
| 26. Cost per AUM | \$6.95 | \$9.33 |
| 27. Cost per Day for 1000 lbs of Body Weight | \$0.23 | \$0.31 |
| Aftermath Grazing Summary | | |
| 28. Acres per Producing Cow | 3.5 | 3.5 |
| 29. Cost per Acre | \$0.82 | \$0.82 |
| 30. Cost per Cow | \$2.13 | \$2.13 |
| 31. AUM per Acre | 1.0 | 1.0 |
| 32. Cost per AUM | \$1.49 | \$1.49 |
| 33. Cost per Day for 1000 lbs of Body Weight | \$0.05 | \$0.05 |
| Feed Utilization Summary | | |
| 34. Raised Hay Fed per Cow | 3,228 | \$67.19 |
| 35. Other Home-Raised Feed Fed per Cow | 1,198 | \$32.19 |
| 36. Purchased Hay Fed per Cow | 176 | \$3.69 |
| 37. Purchased Supplements Fed per Cow | 229 | \$15.15 |
| 38. Purchased Silages & Concentrates Fed per Cow | 149 | \$7.37 |
| 39. Total Feed Fed per Cow | 4,981 | \$125.59 |
| 40. Feed Fed per Cwt. Marketed | 859 | xxxxxxx |
| | | xxxxxxx |

Herd analyses and summaries done by ISU Field Livestock Specialists, CHIPS and SPA Technicians, and state summary prepared by Daryl Strohhahn, Extension Beef Specialist, Iowa Beef Center, ISU, Ames, IA 50011.

2000 Beef Cow Business Record ISU-IRM-SPA

Iowa State University Financial and Economic Production Summary

Averages for 19 Herds**Reproduction & Production Measures**

| | | |
|-----------|---|--------------|
| 1. | Pregnancy Percentage | 93.0% |
| 2. | Pregnancy Loss Percentage | 3.3% |
| 3. | Calving Percentage | 90.0% |
| 4. | Calf Death Loss | 3.9% |
| 5. | Calf Crop or Weaning Percentage | 86.1% |
| 6. | Female Replacement Rate | 17.7% |
| 7. | Calf Death Loss Based on No. of Calves Born | 2.8% |

Calving Distribution:

| | | |
|------------|---------------------------------------|--------------|
| 8. | Beginning Calving Date: | 23-Mar |
| 9. | Calves Born During 1st 21 Days | 48.9% |
| 10. | Calves Born During 1st 42 Days | 78.8% |
| 11. | Calves Born During 1st 63 Days | 89.9% |
| 12. | Calves Born After 1st 63 Days | 10.1% |

Production Performance Measures:

| | | |
|-------------------------------|---|------------|
| 13. | Average Age at Weaning (Days) | 181 |
| Actual Weaning Weights | | |
| 14. | Steers/Bulls | 486 |
| 15. | Heifers | 445 |
| 16. | Average Weaning Weight | 461 |
| 17. | Pounds Weaned per Exposed Female | 385 |

| | Cost | Market |
|---|--|---------------------|
| | <u>Basis</u> | <u>Basis</u> |
| Summary of Investment per Breeding Cow | | |
| 18. | Breeding Livestock | \$644 |
| 19. | Machinery, Equipment & Structures | \$103 |
| 20. | Current Assets | \$61 |
| 21. | Total Capital Investment in Breeding Stock & Equip./Cow | \$808 |

| | | |
|---|--|--------------|
| Summary of Investment per Forage Production Acre | | |
| 22. | Structures & Equipment | \$91 |
| 23. | Real Estate | \$305 |
| 24. | Current Assets | \$82 |
| 25. | Total Capital Investment/Forage Production Acre | \$478 |
| 26. | Total Capital Investment in Forage Production/Cow | \$329 |

| | | |
|---|---|--------------|
| Summary of Investment per Pasture Acre | | |
| 27. | Structures & Equipment | \$5 |
| 28. | Real Estate | \$181 |
| 29. | Current Assets | \$10 |
| 30. | Total Capital Investment/Pasture Production Acre | \$196 |
| 31. | Total Capital Investment in Pasture Production/Cow | \$453 |

| | | |
|------------|-------------------------------------|----------------|
| 32. | Total Capital Investment/Cow | \$1,538 |
| | | \$2,236 |

What is SPA?

SPA is a standardized beef cattle enterprise production and financial performance analysis system which was defined at the national level by the National Cattlemen's Beef Association and Extension Service. This system lets producers compare their operation with others within Iowa and the Midwest. The analysis is done with fiscal year production and financial data.

What does SPA cost?

For Iowa producers, ISU Extension Service offers this service at a fee of \$150 per year. Other organizations like CHIPS include the SPA analysis within their fee schedule for services offered.

Explanation of Terminology

Financial Costs: The financial enterprise analysis is taken directly from the income statement. Expenses include cash operating expenses, interest for operating capital, term debt, and non-cash expenses. The financial analysis does not account for the economic opportunity cost of land, raised feed, or equity capital invested in the enterprise. Actual land mortgage, livestock, machinery, and operating capital interest expense are included in the financing expense. In general, financial costs represent your direct "out-of-pocket" costs.

Economic Costs: The economic analysis accounts for the opportunity cost of resources (land, operator and family labor) used in production of the commodity in addition to expenses in the financial analysis. Land opportunity cost, for example, is the estimated rental rate that would be paid for land under an equivalent production system. The economic value of land may be greater or less than your true financial cost of land depending on your estimated rental value compared to your actual land payments. Opportunity cost of capital is the rate of return that one could expect to earn on that capital in an alternative investment with similar risks.

Summary of Investment Cost Basis: The actual monetary value invested in the enterprise. This includes the

actual or estimated cost to produce "raised" breeding stock, to purchase breeding stock, the undepreciated value of machinery and equipment, and the value of current assets associated with the beef cow enterprise.

Summary of Investment Market Basis: Represents monetary investment using current market values associated with the inventory of breeding stock, facilities, and equipment plus the value of current assets with the beef cow enterprise.

Feed Utilization Summary: Represents the quantity of various feeds supplied to the cow herd per producing female. Total dry matter supplied includes the feed fed to replacement heifers and bulls which support the cow-calf enterprise. If the quantity of harvested or purchased feed is greater than expected, it could indicate one or more of the following: 1) over-feeding, 2) below normal pasture production or utilization, 3) above normal feed wastage, 4) below normal use of aftermath (cornstalk or stockpiled grass) grazing, 5) below average feed quality, or 6) above average female replacement rates. The monetary value in the feed utilization summary is associated with the producer's estimated purchase value of feeds, not the actual costs associated with raising the feeds.

ISU-IRM-SPA Beef Cow Business Record

In cooperation with:

University of Illinois, Illinois Beef Association, Michigan State University Extension Service, and
University of Kentucky Extension Service

... and justice for all

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IBC-16 July 2001

File: Animal Science 4-1