
**Managing For Today's Cattle
Market And Beyond
A
Comparative Analysis
Of
Demo Herd 1997 Herd
To McKenzie County Database**

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June 1998

Managing for Today's Cattle Market and Beyond

Conducting A Comparative Analysis Of Your Herd's Production And Economic Facts With Other McKenzie County Herds

Introduction

A comparative analysis of your beef cow herds production and economic facts to the production and economic facts of a set of benchmark herds is the single most powerful farm and ranch management tool available, bar none. This management tool is a very effective way to identify where beef farmers or ranchers should focus their management attention to increase profits in these tough times. This comparative analysis takes a beef farmer or rancher through a step by step comparison of his beef cow profit center's production and economic facts with the production and economic facts of a set of benchmark herds. Areas, where the producer beats the benchmark herds suggest potential strengths in his beef cow herd. Areas where the producer is beat by the benchmark herds suggest potential weaknesses in his beef cow herd.

CLS CALCULATED SPA PRODUCTION & ECONOMIC MEASURES

REPRODUCTION:		ND-DEMO-160 COW HERD	YEAR:	1997
SPA ADJUSTED FEMALES EXPOSED	.....		178	Head
Pregnancy Percentage	.....		93%	
Calving Percentage	.....		87%	
Calf Death Loss (% of born live)	.....		5%	
PERCENT CALF CROP	.....		87%	
PRODUCTION:				
ACTUAL WEANING WEIGHT	.....		565	Lbs
Steers	.....		579	Lbs
Heifers	.....		548	Lbs
Total Pounds of Calf Produced	.....		87058	Lbs/herd
AVERAGE CALF AGE (Days = 180)	.....		6.00	Months
Weight Per Day of Age_1/	.....		3.14	Lbs
POUNDS OF WEANED CALF PER EXPOSED FEMALE	.....		489	Lbs
ECONOMIC:				
NUMBER OF COWS IN HERD JAN 1	.....		166	Head
MARKETING:				
Breed	.....		X BRED	
Marketing Method	.....		SALE BARN	
Pay Weight Dollars for Steer Calves	.....		\$85.00	/Cwt
Heifer Price Differential_1/	.....		\$10.00	/Cwt
Price Slide at Weaning Weight_1/	.....		\$- .30	/Cwt
Value of Additional Weight_1/	.....		\$42.01	/Cwt
FINANCIAL POSITION:				
Capital Invested (Cattle & Pasture land)				
Cost Basis	.....		_____	/Cow
Market Value	.....		\$2,086	/Cow
Debts (Cow Herd + Pasture Land)	.....		\$ 508	/Cow
Percent Ownership (Market Value)	.....		76%	
ECONOMIC PERFORMANCE:				
Accrual Income	.....		\$ 426	/Cow
Production Cost of Feed Fed	.....		\$ 189	/Cow
Grazing Costs	.....		\$ 78	/Cow
Non-Feed Costs	.....		\$ 98	/Cow
Total Production Costs	.....		\$ 365	/Cow
Financing Interest	.....		\$ 40	/Cow
Principal Payment	.....	\$16.11	xxxxx	/Cow
Net Pre-Tax Income (P&L)	.....		\$ 61	/Cow
Percent Return on Assets:				
Cost Basis	.....		_____	/Cow
Market Value (fl=		\$90	1%	/Cow
UNIT COSTS OF PRODUCTION:				
Financial	.....		_____	/Cwt_2/
Economic	.....		\$72.79	/Cwt_2/
Cash Costs_1/	.....		\$81.02	/Cwt_2/

_1/ Measure added by author and is not a SPA recommended measure.

_2/ Calculated using Hundred Weights of Steer Equivalents.

CALCULATED SPA PRODUCTION & ECONOMIC MEASURES

The National Beef Standardized Performance Analysis (SPA) Guidelines suggest that to properly manage a ranch business, a ranch manager needs to break his business into specific profit centers. Each profit center should then stand on its own in terms of profit generation. Suggested profit centers are beef cow herd (including replacement heifers), backgrounding calves, retained ownership cattle in a feedlot, forage acres, feed grain acres, cash grain acres etc.

The purpose of this report is to present the SPA generated data bank comparing your ranch's beef cow herd profit center to all McKenzie county IRM Cooperators to the herds profit center averages. This is part of North Dakota's Integrated Resource Management Financial & Reproductive Management System (IRM-Farms).

Your Calculated SPA Production & Economic Measures are compared to the McKenzie County data bank averages in the next table in this publication. You are encouraged to now go to that table and study its organization and labels. The rest of this section describes each individual item in that table. Note that the data bank has four columns:

- 1) Your herd's data.
- 2) A column for your 1998 IRM goals.
- 3) Data bank averages.
- 4) Minimum data bank value for that specific line item.
- 5) Maximum data bank value for that specific line item.

The National Beef SPA Guidelines suggest a specific set of reproduction, production and economic Critical Control Points (CCP) be calculated for each IRM herd analyzed. The Critical Control Points for your beef cow herd's economic profits are reported in Table 1. Each line in that table is described below in some detail.

REPRODUCTION

SPA Adjusted Females Exposed is the total number of females exposed to your bulls in 1996 adjusted by all cows culled. The open cows culled, and those culled due to poor fertility, are added back in. Cows that died are not subtracted out. SPA Production measures are then calculated from this SPA Adjusted Females Exposed number.

SPA Adjusted Females Exposed = Exposed Females - all cull cows + culled open cows + poor fertility cows.

The argument for subtracting out some of the cull cows is that these cows were identified as

culls early in the production year but were left to raise their current calf. They just happen to be exposed while raising that calf and management never planned to calve these again on that ranch.

Pregnancy Percentage is the number of females checked pregnant or at least kept back to calve the next spring divided by the *SPA Adjusted Females Exposed*.

Calving Percentage is the number of calves born divided by *SPA Adjusted Females Exposed*.

Calf Death Loss is calves that died divided by number of calves born. (This is the only number that is not based on *SPA Adjusted Females Exposed*.)

Percent Calf Crop is the number of calves weaned divided by the number of *SPA Adjusted Females Exposed*.

Reproduction is based primarily on the *SPA Adjusted Females Exposed*.

SPACALC

Report

TABLE 1. CALCULATED SPA ECONOMIC MEASURES

McKenzie County Demo Herds 1997	Demo-Herd 1997	IRM Team Goals	---- IRM HERDS ----		
			Average	Minimum	Maximum
SPA Adjusted Females Exposed	178	_____	185	62	292
Pregnancy Rate	93%	_____	97%	84%	100%
Calving Rate	87%	_____	95%	41%	100%
Calf Death Loss	5%	_____	8%	2%	96%
Percent Calf Crop	87%	_____	88%	75%	96%
PRODUCTION:					
Average Weaning Weight	565	_____	570	501	643
Steers	579	_____	592	513	685
Heifers	548	_____	546	481	610
Total Pounds of Calf Produced	87058	_____	87200	30880	154740
Average Calf Age in Months	6.00	_____	6.94	6.40	7.67
Weight Per Day of Age	3.14	_____	2.74	2.36	3.25
Lbs of Weaned Calf/Exposed Female	489	_____	501	377	581
ECONOMIC:					
NUMBER OF COWS IN HERD	166	_____	177	61	292
MARKETING:					
Breed	X Bred	_____	N/A	N/A	N/A
Marketing Method	Sale Barn	_____	N/A	N/A	N/A
Pay Weight Dollars For Steer Calves	\$85.00	_____	\$87.00	\$83.00	\$92.00
Heifer Price Differential	\$10.00	_____	\$6.85	\$3.93	\$8.00
Price Slide at Weaning	\$.30	_____	-\$4.61	-\$5.01	-\$4.00
Value of Additional Weight	\$42.01	_____	\$56.82	\$42.12	\$67.29
FINANCIAL POSITION:					
Capital Invested (Cattle, Fac, Eqpt & Pasture Land Only, Cost Value)		_____			
Market Value	\$2,086.00	_____	\$2,177.00	\$1,322.00	\$3,069.00
Debts (Animals, Fac, Eqpt & Pasture)	\$508.00	_____	\$360.00	\$0	\$1,087.00
Percent Ownership (Market Value)	76%	_____	85%	54%	100%
ECONOMIC PERFORMANCE:					
Accrual Income	\$426.00	_____	\$434.00	\$367.00	\$535.00
Market Value of Raised Feeds Fed	\$189.00	_____	\$169.00	\$76.00	\$249.00
Grazing Costs	\$78.00	_____	\$88.00	\$57.00	\$160.00
Non-Feed Costs	\$98.00	_____	\$139.00	\$70.00	\$242.00
Total Production Costs	\$365.00	_____	\$386.00	\$211.00	\$535.00
Financing Interest	\$40.00	_____	\$21.00	\$0	\$61.00
Principal Payment	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Net Pre-Tax Income (P&L)	\$61.00	_____	\$48.00	-\$101.00	\$171.00
Percent Return On Assets:					
Cost Basis		_____			
Market Value Basis	1%	_____	2%	-9%	13%
Labor & Management Wage	\$90.00	_____	\$42.00	\$0	\$233.00
UNIT COSTS OF PRODUCTION:					
Financial		_____			
Economic	\$72.79	_____	\$77.00	\$49.00	\$108.00
Cash Flow	\$81.02	_____	\$88.00	\$37.00	\$210.00

PRODUCTION

Actual Weaning Weight is the unadjusted average weaning weight of the total calf crop. The weights are also broken down into the average for all steers and an average for all heifers.

Total Pounds Of Calf Produced is the combined pounds of all steer and heifer calves weaned.

Pounds Of Weaned Calf Per Exposed Female is the total pounds of calf produced divided by the *SPA Adjusted Females Exposed*.

ECONOMIC

The *Economics Section* is made up of the Marketing, Financial Position, and Unit Cost of Production sections. Economic analysis, *according to the SPA Guidelines*, are based on the business year which normally goes from January 1 through December 31.

Number Of Cows In Herd January 1 is the number of beef cows that are in the inventory on Jan 1 are kept in inventory to have calves the next spring. Once in awhile, a rancher will have his cull cows on hand yet on Jan 1 but they have been tagged to be marketed after the first of the year. These culls are not included in this Jan 1 inventory number.

Marketing

Breed is being activated with the future analysis.

Marketing Method started collecting in 1995. This will be used to sort herds.

Pay Weight Dollars For Steer Calves is the market price of steer calves used in the analysis. If the rancher actually sold his calves at weaning, this is his reported price. If the rancher retained his calves, it is the average North Dakota price received for steer calves during the week that you weaned adjusted for the average steer weaning weight of the herd. That is, price slides are taken into account. This market price was provided by Harlan Hughes, Extension Livestock Economist, NDSU Extension Service.

Heifer Price Differential is the actual average market price differential that the rancher received for his steers and heifers. If the calves were not sold at weaning, it is the price differential supplied by Harlan Hughes based on October 1997 market averages.

Price Slide At Weaning Weight is the actual price slide that was present in North Dakota markets during the week of your weaning. Ranchers should take note of this number as it varies considerably from what direct buyers are currently offering. I believed that price slides, when selling directly to buyers, should also be negotiated just the same as market price is negotiated when selling directly to a buyer.

Value Of Additional Weight is the marginal revenue that should be used to evaluate creep

feeding, pre-conditioning calves, etc. Astute ranchers know that the value of added weight is normally less than the average price. Added weight technologies need to be evaluated with the *value of added weight* and not with *average market price* and is frequently erroneously done.

Financial Position

Capital Invested represents the total capital invested in the beef cow profit center. Investment covers the breeding herd, beef cow facilities, beef cow equipment and investment in the beef cows' portion of the pasture land. Farm land investment for raising crops fed to the beef cows is not included as farm land investment is part of the crop profit center. Facilities and equipment investment is that portion of the facility and equipment investment that is used directly by the beef cow herd. The hay baler and tractor used to pull the baler are not included as they are investments in the forage profit center.

Cost Basis is where assets are valued at their acquisition costs minus depreciation taken to date. While this option is available, it has not yet been activated in North Dakota's IRM program.

Market Value is where the assets are valued at their current market value. Market value is independent of the asset's cost or depreciation taken to-date. Market value, however, is often difficult to establish especially on beef cow facilities.

Debts are only the debts associated with beef herd (replacement cows, heifers, bulls), beef cow facilities, beef cow equipment, cows share of machinery debt pro-rated by percentage used for cow herd and pasture land. Debts on farm land and farm machinery are not included. These beef cow profit center debts are then divided by the number of beef cows in the January 1 inventory to calculate the debt per cow.

Percent ownership is the percent of the beef cow profit center assets that are owned by the manager; i.e., it is the percent of the investment capital that is equity capital. If the ranch family has provided all of the investment capital, the ranch family has 100 percent ownership in the beef cow profit center. The higher this percentage, the better.

Economic Performance

The **SPA Guidelines** suggest that ranch managers should conduct two different analysis of the ranch business. The first is called the *economic* analysis where (1) the beef cow profit center assets are valued at market value and (2) farm raised feeds are charged to the beef cows based market value (opportunity cost) of the feeds. Basically, the beef cows are expected to pay as much for the feeds, as their neighbors would pay on the cash market.

The second analysis is entitled the *financial analysis* where (1) the beef cow profit center assets are valued at acquisition cost minus accumulated depreciation and (2) farm raised feeds, fed are valued at costs of production. To date, North Dakota has only implemented the *economic analysis* which is presented in this section. The IRM-FARMS model, however, has been designed to also calculate the *financial analysis* but IRM Cooperators have not yet been asked to provide the added input data.

Accrual Income is sum of the cash income and capital gains income adjusted for inventory changes. Inventory changes can be either positive or negative depending on management strategies.

Market Value of Feed Fed is the fair market value of the farm raised feeds fed plus the value of all purchased feeds. In this *economic analysis*, farm raised feeds are valued at market value - not costs of production.

Grazing Costs are the costs associated with grass based on current pasture rental rates. In addition, operating costs not normally covered in rental agreements are included. Fence repairs, for example, are frequently covered in rental rates.

Non-Feed Costs include all non-feed costs such as veterinarian and medical costs, fuel, utilities, livestock supplies, fixed asset costs, depreciation on purchased cows, etc.

Total Production Cost is the sum of feed costs, grazing costs, and non-feed costs. It represents all costs except for the three resources provided by the ranch family. The three resources provided by the ranch family are unpaid family and operator labor, management, and equity capital.

Financing Interest is the total interest paid on any borrowed money associated with the beef cow profit center. It does *not* include any opportunity cost on equity capital.

Principal Payment is reported for cash flow purposes but principal payment is not an economic cost. All principal really does is determine who owns the asset — the ranch family or the banker. The asset is the same. Principal payment is, however, a cash flow expense and is taken into account in the cash flow analysis.

Net Pre-Tax Income (P&L) is the bottom line of the economic analysis before income taxes and social security. It is the earned returns to the ranch family's three contributed resources - unpaid family and operator labor, management, and equity capital. I sometimes refer to this as the value

added by the beef cows to the resources consumed by the beef cow herd. If I were asked to provide one number that indicated a rancher's profit from the beef cow herd, it would be this Net Pre-Tax Income.

Percent Return on Assets is the economic return to investment capital invested in the beef cow profit center. It is calculated by adding interest paid to net pre-tax income, subtracting out labor and management wage, dividing by capital investment per cow and multiplying by 100.

Financial is not yet activated.

Economic is the percent return earned on the market value of assets employed in the beef cow profit center. The SPA Guidelines suggest that the ranch family's labor and management wage should be charged in at a value equal to the family living draw.

The percent return is the Net Pre-Tax Income plus interest paid minus family living draw divided by the market value capital investment per cow times 100. This reflects the percentage return on capital assets invested in the beef cow profit center after subtracting out an imputed charge for unpaid labor and management. The residual left over is the dollar return to investment capital. If the percentage return is greater than zero, the beef cow profit center is generating a positive return to investment and if the percentage return is negative, the beef cow profit center is generating a negative rate of return. The SPA Guidelines suggest that percent return on capital investment is the primary measure of economic performance.

Unit Cost of Production

Unit Cost of Production (UCOP) is an index of the total costs per cow and the physical production of the cow herd. This number represents this herds total cost of producing a hundred weight of steer calves. This number can be directly compared to the market price received for steer calves. The ranch manager can immediately calculate his profit per hundred weight of calves produced by subtracting UCOP from market price of his steer calves.

Financial is not yet activated in North Dakota's IRM Program.

Economic is the unit cost of producing a hundred weight of calf when assets are valued at market value and farm raised feeds are charged in at current market price. Interest paid is part of the economic costs while principal payment is not part of economic costs. Asset depreciation is part of the economic cost of production, but labor and management wage is not included.

Cash Costs represent the out-of-pocket cash costs of producing a hundred weight of calf. Interest and principal payments are part of the cash costs of production but depreciation is not a cash cost. Actual labor family living draw is included in the unit cash costs.

Economic Summary Page

TABLE 2. ECONOMIC SUMMARY FOR IRM HERD ANALYSIS

McKenzie County Demo Herds 1997	Demo Herd 1997	IRM Team Goals	-----IRM HERDS-----		
			Average	Minimum	Maximum
Cow Numbers For Beginning Inventory	166	_____	177	61	292
Females Exposed	191	_____	185	67	334
Total Investment Per Cow	\$2,086	_____	\$2,177	\$1,322	\$3,069
Total Debt Per Cow	\$508	_____	\$360	\$0	\$1,082
Average Steer Price (\$/CWT)	\$85	_____	\$87	\$83	\$92
Average Weaning Weight	565	_____	570	501	643
Gross Income Per Cow	\$426	_____	\$434	\$367	\$535
FEED COSTS:					
Summer	\$78	_____	\$88	\$57	\$160
Aftermath	\$0	_____	\$3	\$0	\$16
Winter	\$189	_____	\$156	\$68	\$249
Total Feed Costs	\$267	_____	\$247	\$133	\$369
LIVESTOCK EXPENSES:					
Vet & Medicine	\$21	_____	\$12	\$7	\$21
Trucking	\$0	_____	\$1	\$0	\$4
Misc	\$0	_____	\$0	\$0	\$0
Fuel	\$7	_____	\$12	\$2	\$21
Utilities & General Farm Expense	\$4	_____	\$6	\$2	\$15
AI Expense	\$0	_____	\$3	\$0	\$13
L.S. Supplies & Lease Pymt	\$3	_____	\$19	\$1	\$42
Marketing	\$8	_____	\$2	\$0	\$7
Breeding	\$23	_____	\$11	\$3	\$19
Hired Labor & Management	\$0	_____	\$7	\$0	\$35
Total Livestock Expense	\$65	_____	\$72	\$27	\$120
Interest on Feed & L.S. Expenses	\$0	_____	\$8	\$0	\$21
FIXED EXPENSES:					
Bld, Fac, Cows & Heifers	\$29	_____	\$51	\$21	\$75
Debt Interest	\$4	_____	\$8	\$0	\$28
Debt Principal	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Total Costs	\$365	_____	\$386	\$211	\$535
Net Cash Flow Before Family Living	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Family Living Draw	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Net Cash Income Before Tax/Cow	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Value Added Per Cow (P&L)	\$61	_____	\$48	-\$101	\$171
Unit Costs of Production (\$/CWT)	\$73	_____	\$77	\$49	\$108

ECONOMIC ANALYSIS

The *economic analysis* table comparing your herd and the McKenzie County Data Bank is on the previous page. This is the same summary page that was presented in all of your previous IRM-FARMS reports. It is included here again so that you can compare your herd to the average of all McKenzie County herds.

The top, left hand part of the table summarizes your beef cow profit center. It presents the beginning number of cows in the January 1 inventory and the actual unadjusted number of females exposed to the bulls the previous summer. The beef cow profit center capital invested in the herd and total debt per cow are presented. The market price received for steer calves is also presented. An average cash market price for all hundred weight of calves is also presented. An average cash market price for all hundred weight of calves is reported. Generally, cash market price is less in years of positive inventory change and more in years of negative inventory changes. The average weaning weight of all steer and heifer calves are reported.

The left-hand column of numbers summarizes the cash flow analysis of the herd and the right-hand column summarizes the economic (profitability) analysis of the herd.

Feed Costs

Summer is the summer pasture, mineral and salt cost. Economic pasture costs are based on the going pasture rent in the area plus salt and mineral costs.

Aftermath is the cost of grazing small grain or feed grain stubble in the fall.

Winter is the fair market value of the farm raised feeds plus any purchased feeds. It is not the cost of producing the feeds.

Livestock Expenses

Vet & Medicine is the cost of all veterinarian fees and medicine used on the beef cow herd.

Trucking is the sum of the trucking bills associated with the beef cow profit center.

Miscellaneous is the cow herds share of miscellaneous expenses like a share of farm magazines, a share of farm shop, etc.

Fuel is portion of the total fuel bill that is charged off to the beef cow profit center. It should cover fuel used to check the cows in the pasture and the fuel used to feed the cows in the winter time.

Utilities is the share of the farm utilities that is attributed to the beef cow herd. It should cover pumping water, water heaters used for the cow herd, etc.

Livestock Supplies is the total supply cost that can be attributed to the beef cow herd. If you leased cows, the lease payment is also included here.

Marketing is the market costs associated with calf sales and cull animal sales.

Breeding is the bull depreciation costs pro-rated out on a per cow basis. Interest on bull investment and bull feeding costs are allocated elsewhere.

Hired Labor or Management is all hired labor and management that is directly associated with the beef cow profit center. Hired labor to put up feed is not included as that is part of the feed profit center and is covered in the market price of the feed charged to the cow herd.

Interest On Feed & Livestock Expenses is the interest charge if operating money was borrowed on feed production and/or livestock expenses.

Fixed Expenses

Building, Facilities, Cows & Heifer cost is the depreciation, repairs, taxes and insurance taken on these assets. No breeding herd depreciation is taken; rather it is accounted for through inventory adjustments. Depreciation, repairs, insurance and taxes on assets are estimated by the IRM-FARMS model. IRM-Cooperators can have the internal insurance calculations overridden by providing their actual insurance payments for the cows, cow buildings and cow equipment. Most IRM-Cooperators, however, elected to go with the calculated values rather than spending the time to separate out the cow herd profit center insurance payment.

Debt Interest is the calculated debt interest paid based on the remaining principal and the remaining years of the debts associated with the cows, heifers, bulls, beef cow equipment, beef cow facilities and beef cow pasture debt. Debt interest is based on the mid-year payment of an amortized loan. The years of the loan is based on the remaining years of each loan reported on the input forms.

Debt Principal is a calculated cash payment based on the amortized remaining debt set up to be paid off in the remaining years reported on the input forms. It is the mid years total amortized loan payment minus the mid years interest payment.

Total Costs is the total economic costs associated with the beef cows. No charge is included for the family's three contributed resources - - the unpaid family and operator labor, management or equity capital. These are treated as the residual claimants in the bottom line.

Net Cash Flow Before Family Living is not applicable to the economic analysis.

Family Living Draw is not applicable to the economic analysis.

Net Cash Income Before Tax Per Cow is not applicable to the economic analysis.

Net Value Added Income (P&L) is the net value added to the farms resources by the beef cow herd. It is the bottom line for the beef cow profit center. Another definition is that it is the earned returns to the ranch or farm family's unpaid family and operator labor, management and equity capital.

CASH FLOW ANALYSIS

The *Cash Flow Analysis* table comparing your herd and the McKenzie County Data Bank is on the next page. This is the same summary page that was presented in all of your previous IRM-FARMS reports. It is included here again so that you can compare your herd to the average of all McKenzie County Herds.

The top, left hand part of the table is the same summary as is on the Economic Summary Page. I have elected to not discuss it again here.

Feed Costs

Summer is the cash cost of summer pasture, mineral and salt. It also includes fence costs and fuel costs for checking the cows etc. If pasture is rented, it includes the rental cost. If money is borrowed on the pasture land, it includes the pasture land interest and principal payment on a per cow basis.

Aftermath is the cost of grazing small grain stubble or feed grain stubble at the per cow per day rate entered on the input form.

Winter is the "cash cost" of raising the farm raised feeds plus the value of any purchased feed. Note that farm raised feeds are charged in at the cash cost of raising. Besides including all cash production costs, the interest and principal payments for land and farm machinery are also taken into account.

Land and machinery debt are spread evenly out over all farm land and if a cow eats the raised feed from an acre of land, the beef cow has to pay the interest and principal payment for that acre of land. If the rancher or farmer has a family living draw against farmland and the cow eats the feed from that acre, the cow also has to pay that family living draw.

**CASH FLOW
SUMMARY
PAGE**

TABLE 3. CASH FLOW SUMMARY FOR IRM HERD ANALYSIS

McKenzie County Demo Herds 1997	Demo Herd 1997	IRM Team Goals	-----IRM HERDS-----		
			Average	Minimum	Maximum
Cow Numbers For Beginning Inventory	166	_____	177	61	292
Females Exposed	191	_____	185	67	334
Total Investment Per Cow	\$2,086	_____	\$2,177	\$1,322	\$3,069
Total Debt Per Cow	\$508	_____	\$360	\$0	\$1,082
Average Steer Price (\$/CWT)	\$85	_____	\$87	\$83	\$92
Average Weaning Weight	565	_____	570	501	643
Gross Income Per Cow	\$400	_____	\$511	\$328	\$984
FEED COSTS:					
Summer	\$21	_____	\$67	\$27	\$161
Aftermath	\$0	_____	\$3	\$0	\$16
Winter	\$169	_____	\$135	\$69	\$336
Total Feed Costs	\$190	_____	\$205	\$105	\$378
LIVESTOCK EXPENSES:					
Vet & Medicine	\$21	_____	\$12	\$7	\$21
Trucking	\$0	_____	\$1	\$0	\$4
Misc	\$0	_____	\$0	\$0	\$0
Fuel	\$7	_____	\$12	\$2	\$21
Utilities & General Farm Expense	\$4	_____	\$6	\$2	\$18
AI Expense	\$0	_____	\$3	\$0	\$13
L.S. Supplies & Lease Pymt	\$3	_____	\$19	\$1	\$42
Marketing	\$8	_____	\$2	\$0	\$7
Breeding	\$4	_____	\$23	\$0	\$94
Hired Labor & Management	\$0	_____	\$7	\$0	\$35
Total Livestock Expense	\$45	_____	\$84	\$38	\$170
Interest on Feed & L.S. Expenses	\$0	_____	\$8	\$0	\$21
FIXED EXPENSES:					
Bld, Fac, Cows & Heifers	\$23	_____	\$26	\$15	\$41
Debt Interest	\$40	_____	\$21	\$0	\$61
Debt Principal	\$15	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
Total Costs	\$316	_____	\$387	\$195	\$738
Net Cash Flow Before Family Living	\$84	_____	\$124	-\$281	\$339
Family Living Draw	\$90	_____	\$50	\$0	\$233
Net Cash Income Before Tax/Cow	-\$7	_____	\$74	-\$281	\$339
Value Added Per Cow (P&L)	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
Unit Costs of Production (\$/CWT)	\$81	_____	\$88	\$37	\$210

Typically, the cash cost of raising winter feed is less than the fair market value charged in the economic analysis. There are cases, however, where a rancher has money borrowed on feed land and money borrowed on machinery used to raise and harvest that feed; if so, it is not uncommon for the cash cost of raising that feed to exceed the fair market price. In other words, he could buy the feeds year in an year out cheaper than he is raising the feeds.

I get a lot of comments to the effect that “The cost of iron is dragging this ranch down.” This particularly comes up about the time that the tractor and/or hay baler needs to be replaced. My data shows that, indeed, the debt cost of land and machinery can drag a ranch down. If this is the case, they need to explore purchasing winter feeds rather than raising winter feeds.

Livestock Expenses

The cash livestock costs are the same as the economic livestock costs; therefore, I will not repeat that section here. I refer you to the livestock discussion in the economics section.

Fixed Expenses

Building, Facilities, Cows & Heifer cost is the cash cost of repairs, taxes and insurance taken out on these assets. See discussion under economics section on how these are determined.

Debt Interest is the total interest payment on all money borrowed for beef cow buildings, equipment, facilities and breeding animals. This year’s interest payment on each loan is based on the mid-year of the remaining years of each loan reported on the input forms.

Debt Principal is a calculated cash payment based on the amortized remaining debt set up to be paid off in the remaining years reported on the input form. Specifically, it is the mid-year’s payment minus the mid-year’s interest payment.

Total Cost is the total cash productions costs, total interest costs and total principal payments associated with the beef cows. While it is possible to have cash costs of production to be less than economic, high-debt herds can easily have cash costs of production higher than their economic costs. It does not, however, include any cost for the family’s living, management or equity capital. It is normal for cash costs of production costs to be higher than economic costs. This is primarily due to beef cow profit center debts. Family living draw is taken into account later.

Net Cash Flow Before Family Living is total cash inflow minus total cash outflow associated with the beef cow profit center. This before family living draw.

Family Living Draw is actual family living draw per cow specified on the input form. It is only the beef cow profits center’s share of the total family living draw. Many ranch or farm families also

have a family living draw from the farming profit centers and/or off farm employment. There is no right or wrong number here. The key point here is that IRM-Cooperators need to know from what group of animals or what crop acre does each dollar of family living come from.

Net Cash Income Before Tax Per Cow is net cash income adjusted for the family living draw from beef cows.

Net Value Added (P&L) is the net cash added to the ranch family's resources by the beef cow profit center. It is the bottom line for the beef cow profit center. Another definition is that it is the earned net cash flow to the ranch family's unpaid family and operator labor, management and equity capital.

One Last Caution

There is no hard and fast rule for identifying your herd's strengths and weaknesses. The best procedure, of course, is to have a perpetual inventory of herd performance records that are compared to contemporary herds. North Dakota's Cow Herd Analysis Performance System (CHAPS) is one such perpetual inventory and contemporary system. CHAPS is available in 20 plus states. But short of having your own production records, this comparative analysis is probably your best alternative.

One other caution is that you, as the herd's manager, have to be the final decision maker on what is a strength or what is a weakness in your herd. Unique circumstances can make your herd's performance logically different from the benchmark herds. If so, then ignore the benchmark signal and use your own judgment.

In most cases, however, benchmark comparisons typically identify some strengths and weaknesses. In these tough times, the informed beef cow manager will focus his management energies toward capitalizing on his herd's strengths while trying to reduce his herd's weaknesses. When management energies are focused on "the herd's production and economic facts and the analysis of these facts", rather than focusing on perceptions, profits generally increase.