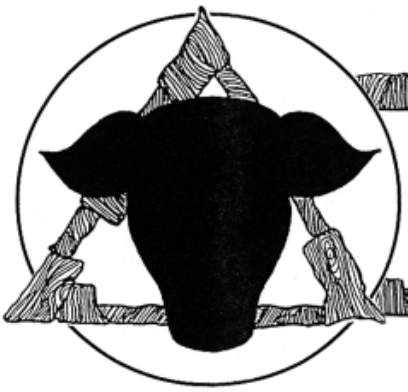

Managing for Today's Cattle Market and Beyond

Conducting A Comparative Analysis of Your Herd's Economic Facts With Other Herds' Economic Facts

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Introduction

A *Comparative Analysis* is the single most powerful farm and ranch management tool available. This tool works especially well as a way of identifying where beef farmers or ranchers should focus their management attention to increase profits in these tough times. This fact sheet takes a beef farmer or rancher through a step by step comparison of his beef cow profit center's *economic facts* with the economic facts of a set of benchmark herds.[1] Economic areas *where the producer beats* the benchmark herds suggest potential strengths in the beef cow herd. Economic areas *where the producer is beat by* the benchmark herds suggest potential weaknesses in his beef cow herd.

Benchmark Herds

The reason that benchmark herds are not used more by farmers and ranches is that they generally do not have access to other beef producers' herd data. The published North Dakota IRM 1994 Database, here after referred to as the Northern Plains Benchmark Herds, will be used as the benchmark herds in this fact sheet.[2]

Two Northern Plains benchmark summaries are used in the economic comparisons described below. The first benchmark summary is the average, along with the high and low values, for each individual benchmark factor. The second comparative benchmark is the average of the low 1/3 herds, middle 1/3 herds and high 1/3 herds grouped according to their unit costs of producing a hundred weight of calves. Even if producer's herd is not located in the Northern Plains, he should still find it useful to compare his beef cow profit center's economic facts to the economic facts of the Benchmark Herds.

There are two key points that any beef farmer or rancher needs to be remember when conducting a comparative analysis of his beef cow profit center. First, his goal should be to use these benchmark herds to identify his herd's *potential production strengths* and *his herd's potential production weaknesses.* He should use these potential strengths and potential weaknesses as a guide for focusing his management attention in these tough times.

Second, benchmark comparisons *do help* producers identify weaknesses but benchmark comparisons *do not tell* producers how to reduce weaknesses. You, as the manager, have to determine *how to reduce* your herd's potential weaknesses. Other fact sheets in this series were written to suggest how beef farmers and ranchers might reduce selected potential herd weaknesses.

Negative Economic Returns Is One Of The Early Red Flags

One of the early "red flags" in the beef cow business is a negative economic return from beef cow herd profit center. Northern Plains Farm Business Management Record Summaries indicates that, on the average, this red flag came up in 1995. The earned net returns to beef farmer's or rancher's bottom line, i.e., earned net return to unpaid family and operator labor, management, and equity capital, was a minus $28 per cow in 1995.[3] This compares to a positive $49 per cow earned return in 1994 and a positive $178 per cow earned return in 1993.

Clearly, this is not the time for management as usual. The time has arrived for beef farmers and ranchers to take specific management action designed to cope with the current down market. Beef farmers and ranchers are strongly encouraged to conduct the comparative economic analysis described in this fact sheet. Use this comparative analysis to find your herd's strengths and then capitalize on these strengths. Use this same comparative analysis to find your herd's weaknesses and then try to minimize these weaknesses.

Economic Facts

Total Capital Invested Per Beef Cow Profit Center.[4]

Capital investment in the beef cow profit center can be an important determinant of overall production costs associated with running a beef cow herd. In this comparative economic analysis of the beef cow profit center, capital investment should be limited to the market value of 1) the breeding herd, 2) beef cow equipment and facilities, and 3) the pasture land used by the cow herd only. The beef cow profit center investment does not include farm land nor farming machinery as these are port of another profit center. Use Table 1 to calculate your total investment in your beef cow herd profit center and then divide by the number of cows in your the January 1 inventory.[5]

Take your capital investment per cow (Item g, Table 1) and post it to the barometers presented in Tables 2a and 2b. Table 2a compares your herd to the total Northern Plains Benchmark herds and Table 2b compares your herd to the same Benchmark Herds grouped by unit costs of producing a hundred weight of calves. Is your capital investment per cow high or low? Table 2b suggests that the average capital investment per cow was not generally much different between cost groups. There is no charge for equity capital as it is treated as one of the residual claimants in the bottom line. This suggests that debt servicing per cow is more important total capital investment in determining unit costs of production.

Table 1. Total Capital Invested In Breeding Herd

a.	Capital Invested in the breeding herd	$_____
b.	Beef Cow Equipment Investment (do not include haying machinery) ..	$_____
c.	Beef Cow Facility Investment	$_____
d.	Pasture Land Investment — Use Only Land Grazed By Beef Cows	$_____
e.	Total Capital Investment In Your Beef Cow Profit Center	$_____
f.	Number of Beef Cows In Beginning Inventory (mature cows + bred hfr)	_____ Head
g.	Capital Investment Per Cow	$_____/Cow

Table 2a. Per Cow Capital Investment Range Of The Benchmark Herds

(Investment In Breeding Herd, Beef Cow Equipment & Facilities & Pasture Land)

$846	$2042	$3182
Low	Average	High

Table 2b. Capital Investment Based On Average of Low cost 1/3, middle cost 1/3 and High Cost 1/3 Of The herds In The Database

$2044	$2127	$1940
Low Cost 1/3	Middle Cost 1/3	High Cost 1/3

Debt Per Cow

This debt per cow measured in this comparative economic analysis should be only that debt directly associated with the beef cow herd profit center. Debt

per cow should be limited to 1) breeding herd debt, 2) beef cow equipment and facility debt, and 3) pasture land debt.[6] Use the top half of Table 3 to calculate your debt per cow and then post your per cow debt on the barometers in Tables 3a and 3b.

Table 3. Total Debt Per Cow For Breeding Herd, Beef Cow Equipment & Facilities, And Pasture Land

a. Beef Cow Debt	$_____/Herd
b. Heifer Debt	$_____/Herd
c. Bull Debt	$_____/Herd
d. Beef Cow Facility And Equipment Debt	$_____/Head
e. Pasture Land Debt	$_____/Head
f. Total Beef Cow Profit Center Debt	$_____/Herd
g. Number of Beef Cows In Beginning Inventory	_____Head
h. Total Beef Cow Debt Per Cow	$_____/Head

Table 3a. Range In Debt Per Cow For Northern Plains Herds

$0.00	$367	$1219
Low	Average	High

Table 3b. Range In Debt Per Cow By Cost Group

$243	$328	$536
Low Cost 1/3	Middle Cost 1/3	High Cost 1/3

Debt Service Per Cow

Your debt service requirement for the next couple of years will be extremely critical. Debt service per cow covers both the interest and principal payment associated with the beef cow profit center debt. Calculate your debt service per cow and post it to the barometers in Tables 4a and 4b. Remember that farm land debt and machinery debt are not to be included. Note from Table 4b that the high cost herds tend to have more debt service per cow than the low cost herds. Since beef prices go in cycles, debts set up in the good times are extremely difficult to service in the tough times. One had to continually keep beef price cycles in mind when establishing debts for the beef cow profit center.

Table 4a. Average Debt Service Per Cow

$0.00	$66	$240
Low	Average	High

Table 4b. Average Debt Service By Cost Group

$47	$66	$84
Low Cost 1/3	Middle Cost 1/3	High Cost 1/3

Gross Income Per Cow

You should have already calculated gross income for your beef cow herd in a previous fact sheet. Post your gross income per cow to the barometers in Table 5a and 5b. The benchmark data presented in tables 5a. and 5b are currently for 1994 calves.[7]

Table 5a. Accrual Adjusted Income Per Cow (1994)

$301	$471	$735
Low	Average	High

Table 5b. Accrual Adjusted Income Per Cow By Cost Group (1994)

$514	$483	$413
Low Cost 1/3	Middle Cost 1/3	High Cost 1/3

Summer Grazing Costs Per Cow

Calculate your total pasture costs and divide by the number of cows in your herd at the beginning of the business year (normally this is Jan 1). Rented and deeded land are charged the same rental rate. Actual public land payments are used for the cost of public lands. Post your herd's total pasture cost per cow on the barometers in Tables 6a and 6b.

Table 6a. Summer Grazing Costs Per Cow

$9[8]	$72	$79
Low	Average	High

Table 6b. Summer Grazing Costs by Cost Group

$66	$72	$79
Low	Average	High

Winter Feed Costs Per Cow

Winter feed costs cover those feed costs from the time that the cows are moved off pasture grazing until grass turnout in the next spring. Producers with extensive winter pastures may want to think of this as the stored feeding program. You should post your winter (stored) feed costs to the barometers in Tables 7a and 7b to see how your winter (stored) feed cost compares to the benchmark herds.

Table 7a. Winter Feed Costs Per Cow (Feeds Value At Market Value)

$59	$152	$261
Low	Average	High

Table 7b. Winter Feed Costs Per Cow By Cost Group (Feeds Value At Market Value)

$146	$142	$170
Low Cost 1/3	Middle Cost 1/3	High Cost 1/3

Total Feed Cost Per Cow

Feed costs account for 50-60 percent of total costs of running beef cows and feed costs should get more management attention than any other single cost category. Take your total feed cost calculated in another fact sheet and enter your total feed costs on the barometers in Tables 8a. and 8b.

Table 8a. Total Feed Cost Per Cow (Feeds Value At Market Value)

$136	$225	$342
Low	Average	High

Table 8b. Total Feed Cost Per Cow (Feeds Value At Market Value)

$213	$215	$248
Low Cost 1/3	Middle Cost 1/3	High Cost 1/3

Vet & Medicine Cost Per Cow

Veterinarian and medicine costs for the benchmark herds range from $2.00 per cow to $51 per cow with an average of $17 per cow. Post your vet and medicine cost to the barometers in Tables 9a and 9b.

Table 9a. Veterinarian And Medicine Costs Per Cow

$2.00	$17	$51
Low	Average	High

Table 9b. Veterinarian and Medicine Cost Per Cow By Cost Group

$21	$16	$13
Low Cost 1/3	Middle Cost 1/3	High Cost 1/3

Total Livestock Costs And Cow Lease Payments

Take your previously calculated livestock's cost and post it to the barometers in Tables 10a and 10b. If you also are running leased cows, you should also include a lease payment here equal to the market value of the calves and cull cow income of the cow owner. There are several leased herds in the Benchmark Herds.

Table 10a. Total Livestock And Lease Payment Costs

$33	$100	$275
Low	Average	High

Table 10b. Total Livestock And Lease Payment Costs

$49	$67	$91
Low Cost	Average Cost	High Cost

Overhead Costs

You should take the overhead costs that you calculated in another fact sheet and post that value to the barometers in Tables 11a and 11b.

Table 11a. Overhead Costs For Buildings, Equipment, And Breeding Herd

$23	$56	$104
Low	Average	High

Table 11b. Overhead Costs for Buildings, Equipment, and Breeding Heard

$49	$67	$91
Low Cost 1/3	Middle Cost 1/3	High Cost 1/3

Total Costs Of Production Per Cow

Take your total cost per cow and post it to the barometers in Table 12a and 12b. Remember that the benchmark costs do not include the costs of backgrounding or finishing calves; nor should your costs include backgrounding or finishing costs. These are separate profit centers. Note the $115 dollar difference between the low cost and high cost herds. Yes, management does make a difference.

Table 12a. Total Production Costs Per Cow (Excluding Unpaid Family & Operator Labor, Management, And Equity Capital) (1994)

$237	$397	$558
Low	Average	High

Table 12b. Total Production Costs Per Cow By Cost Group (Excluding Unpaid Family & Operator Labor, Management, And Equity Capital) (1994)

$347	$384	$462
Low Cost 1/3	Middle Cost 1/3	High Cost 1/3

Unit Cost Of Producing A Hundred Weight Of Calf

You will become a better marketer if you know your actual costs of producing what you are selling. Most producers, however, do not know their break-even price of the calves that they are selling and do not know if current market prices are above or below break-even. Take your unit cost of production that you prepared in a previous fact sheet and post it to the barometers in Tables 13a. and 13b. The most important question that you need to answer in these tough times is: " Are you a high cost or low cost producer?"

Table 13a. Unit Cost Of Producing A Hundred Weight Of Calf

$40	$67	$129
Low	Average	High

Table 13b. Unit Cost Of Producing A Hundred Weight Of Calf

$49	$62	$91
Low Cost 1/3	Middle Cost 1/3	High Cost 1/3

Production Strength and Weakness Summary

Now that you have completed your *Comparative Economic Analysis* comparing your beef cow herd's economic facts to the economic facts of the Northern Plains Benchmark Herds, you are encouraged to complete Table 15 as your Comparative Analysis Summary. Enter in your herd's economic values, the average benchmark values, and calculate your herd's percent of the benchmark values. Those economic items with an index over 100 (i.e., greater than 100%) are prime candidates to be your herd's potential strengths and those items with an index less than 100 are prime candidates to be your herd's weaknesses.

Final Comment

One final comment is that you, the herd manager, have to be the final decision maker on what is a strength and what is a weakness. Unique circumstances can make your herd's performance logically differ from the benchmark herds. If so, then ignore the benchmark signal and use your own judgment. In most cases, however, comparison to benchmark herds does identify some strengths and some weaknesses. The informed beef cow manager, that works from his herd's facts rather than from gut feelings and perceptions, will be better able to weather today's tough times. When perception is replaced with facts and these facts are analyzed, profits typically increase.

[1] It is recommended that you divide your beef farm or ranch business into profit centers. A typical ranch should be divided into a beef cow profit center, a

forage profit center, and a pasture profit center. If calves are backgrounded and or retained, you should also have a backgrounding profit center and a retained ownership profit center. The key, here, is to treat each profit center as a stand alone business. The forage fed is charged to the beef cow profit center at fair market value and the forage profit center is credited with the market value of forage produced.

[2] Harlan Hughes, "IRM-FARMS Databank 1994 Herds," Department Of Agricultural Economics, North Dakota State University, September 1995, 10 pages.

[3] Source: "North Dakota Farm & Ranch Business Management Annual Report 1995", North Dakota State Board For Vocational & Technical Education & Department Of Agricultural Economics, North Dakota State University.

[5] The IRM-SPA Guidelines suggest that an economic analysis should be based on the number of cows in inventory on the first day of the business year —normally January 1st.

[6] Debt for farm land and farming machinery should not be included even in a total ranch situation. When farm feeds are charged into the cow herd profit center at market value, your farm land and farming machinery debt needs to be charged to the feed profit center.

[7] Work is under way to calculate this benchmark for 1995 calves and a new benchmark will be available from this author by the time that you read this.

[8] One IRM Cooperator has converted to a drylot beef cow herd. Only a few acres were used to calve on in the Spring.

Table 15. Strength & Weakness

ECONOMIC ITEM	Your Value	Benchmark Value	% Of Benchmark
1. Number of beef cows in the beginning inventory	_____	_____	_____
2. Total capital invested per beef cow	_____	_____	_____
3. Debt per cow	_____	_____	_____
4. Debt service per cow	_____	_____	_____
5. Accrual adjusted income per cow	_____	_____	_____
6. Summer grazing costs	_____	_____	_____
7. Winter feed costs per cow	_____	_____	_____
8. Total feed cost per cow	_____	_____	_____
9. Vet & Medicine cost per cow	_____	_____	_____
10. Total livestock costs and cow lease payments	_____	_____	_____
11. Overhead costs	_____	_____	_____
12. Interest Payment on borrowed capital	_____	_____	_____
13. Total costs of production per cow	_____	_____	_____
14. Unit cost of producing a hundred weight of calf	_____	_____	_____