



## **Managing for Today's Cattle Market and Beyond**

### *Applying the Assessment Tools to Your Farm/Ranch*

*by*  
*A. Lee Meyer, University of Kentucky*  
*John P. Hewlett, University of Wyoming*

Can you survive this economic crisis in the cattle industry? Not everyone will, but many of those who work hard at identifying their weaknesses and responding with sound management strategies will survive and be positioned to be profitable in the near future. If you are like most of us, economic and financial tools can seem too abstract to be useful. We think we can convince you that these are tools that you can get comfortable with if you'll just follow along with our two case examples. We've pulled together data from two farms - and we think that at least one of them will help show you how to use the financial toolbox on your place.

The materials in this series have suggested and described tools for determining the status of the cattle enterprise on farms and ranches. The authors have developed a broad range of tools focusing on financial and economic measures, as well as production measures. These tools include: liquidity/cash flow, debt:asset ratios; net worth; profitability; unit cost of production; calf death loss; percent calf crop; average weaning weight; pounds of calf weaned per female exposed.

How does your farm stack up by these measures? To help you understand how to apply these tools to your particular situation, we are going to use example farms. One will represent a diversified farm of the Southeast. The other will be representative of a cattle ranch in the West. We think that by showing how these tools help these farms diagnose their strengths and

weaknesses, that you'll get a better understanding how to make these practical tools that fit your situations.

There are two issues which must be addressed first - data and benchmarks. If you really want to be able to analyze your situation, you will need good information about the details of your operation. Many farmers have decided that they need a whole set of records to effectively manage their operations - regardless if times are good or bad. This is the top management situation. These operations will have financial records for their whole farm and enterprise records covering both economic and production measures. Many states have developed specific programs oriented around management based on records. IRM (Integrated Resource Management) teams exist in several states. The CHAPS (Computerized Herd Appraisal Program) is another program, which focuses on production measures.

These programs not only benefit the direct participants, but are also helpful to all producers by establishing standards, benchmarks and averages. The National Standardized Production Analysis (SPA) Guidelines has set standard definitions that are used around the country, so we can finally make comparisons. For example, many are measuring breeding efficiency by the same rules.

Unfortunately, most farms do not have complete sets of economic and production records. However, with a little work, managers of many of these farms can put together some of the records they need for at

least a basic self-appraisal. Everyone must keep tax records. An inventory of land, equipment, facilities and estimated market and book values can be used to develop net worth. Debt (net balances) can be obtained from lenders and should be on loan statements.

Production records may be more difficult to calculate. Sales records will be a starting point for many operations. The number of head sold, by category and average weight is a key figure for production. If you did not keep a record of the number of females exposed to your bulls, now is a good time to start. You may be able to estimate the breeding success by taking an inventory of the number of cows that you have now. Then go back and try to remember what happened between now and the last breeding season. Did you cull three open heifers and sell them as yearlings? If so, they were part of the number of females exposed.

When estimating (or filling in records gaps), remember to be as accurate as possible. A bias - in either the good or bad direction, may lead to a bad management decision. It is better to leave a piece of information out if you can only make a rough (without any data or records) guess. When a critical decision is being made, go back and check the basis for your decision and make sure that you are confident that you can live with the information and the decision.

### *Two Typical Situations*

The western case ranch is assumed to be running 311 cows and is operated by the owner/manager and one full-time employee. Ranch enterprises include native hay, dryland alfalfa hay, antelope and mule deer hunting (trespass fee only), and cow/calf production.

Total AUs (Animal Units) utilized on this ranch equal 369, generating 274 calves - 210 sold (134 steers at 500 lbs. and 67 heifers at 480 lbs.) and 67 retained each year. Total revenues are assumed to be \$123, 768 with calf sales contributing \$98, 091. Total expenses on an accrual basis are \$116, 493.

The southeastern case farm is a diversified, family-based operation with about 300 acres. Part of the farm has been in the family for three generations, but several years ago 85 additional acres were purchased. Last summer 46 females were exposed to the bulls and 33 calves were sold at weaning. The farm has a mix of crop enterprises including hay and grains. The mix of crops changes from year-to-year, according to rotations and market situations.

The cattle enterprise uses 180 acres of pasture/hay land. Cows are bred for spring calving, with calves sold at weaning in the fall at a local auction sale. Last

year, the average weaning weight for steers was 450 pounds. Of the 20 heifer calves, the seven best were kept as replacements and the remaining 13 were sold, at an average weight of 400 pounds. Cows are wintered on hay and grain produced on the farm.

Total revenues for the southeastern farm were \$40,040 last year, with \$8,540 coming from the cattle (calf and cull cow sales). The cattle contributed about 21% of the gross. Total expenses from all the enterprises were \$23, 253.

### *Calculating the Performance Indicators*

The following pages include the calculated financial and performance measures for the two case farms. All of these measures are calculated with normal farm records. Other publications in this series describe these measures in more depth. You may also want to consult with information sources for help - including your accountant or tax preparation specialist. For each of the measures, the calculation is described following the term. Then the calculations are done for the two case situations.

### *Financial Measures:*

#### *Liquidity/Cash Flow:*

Current Ratio: Ending Current Assets @book value/Ending Current Liabilities

West:  $\$259,017/115,921 = 2.23$

Southeast:  $\$128,432/39,640 = 3.24$

#### Net Cash Flow:

West: \$8,073

Southeast: \$16,786

#### *Solvency:*

Debt:Asset Ratio: Ending Total Liabilities/Ending Total Assets @ book value

West:  $\$227,964/1,016,665 = 0.22$

Southeast:  $\$149,302 / 481,620 = 0.31$

Net Worth: Ending Total Assets @ book value - Ending Total Liabilities

West:  $\$1,016,665 - 227,964 = 788,701$

Southeast:  $\$ 481,620 - 149,302 = 332,318$

Change in Net Worth: Ending Net Worth - Beginning Net Worth

West:  $\$788,701 - 781,408 = 7,293$

Southeast:  $\$332,318 - 317,869 = 14,449$

Profitability: Net Income (accrual basis)

West: \$ 7,293  
 Southeast: \$14,449

**Cost of Production:**

Feed Cost per cwt. of calf sold: Total Feed Costs/Total Cwt. of Calf Sold

West: \$15,362/992 = \$15/cwt.  
 Southeast: \$ 5,112/142 = \$36/cwt.

Total Cost per cwt. of calf sold: Total Costs/ Total Cwt. of Calf Sold

West: \$100,166/992 = \$101/cwt.  
 Southeast: \$ 11,786/142 = \$ 83/cwt.

**Production Measures**

Calf Death Loss: (Number of Calves which Died/Number of Calves Born) X 100

West: 6/274 = 2.19%  
 Southeast: 1/41 = 2.4%

Percent Calf Crop: (Number of Calves Born/Number of Exposed Females) X 100

West: 274/311 = 88%  
 Southeast: 40/46 = 87%

Average Weaning Weight: Number of Pounds of Calf Weaned/ Number of Calves

West: 131,320 / 268 = 490 lbs.  
 Southeast: 17,500 / 40 = 425 lbs.

Pounds of Calf Weaned per Exposed Female:  
 Total Number of Pounds of Calf Weaned/Number of Females Exposed

West: 131,320 / 311 = 422 lbs.  
 Southeast: 17,000 / 46 = 370 lbs

**What Does this Mean?**

Liquidity refers to the ability to meet cash expenses and payments as they occur. The most simple situation is when there is plenty of cash in the bank to cover current expenses, such as feed, veterinarian, repairs, etc. Other sources of liquid assets include receivables, certificates of deposit, etc. Based on the two measures of liquidity - the current ratio and net cash flow both of our farms seem to be in good shape. A current ratio greater than 2.0 implies financial strength. Both pass this test. A ratio of less than 1.0 would be a danger sign. That would imply that expenses

would exceed ability to pay easily. Perhaps payments could be made by borrowing, but that would imply that a problem exists.

Based on net cash flow, both farms also appear sound. But, this is where more detail would be helpful. Since the southeastern farm is several diverse enterprises, it is important to identify the farm's strengths and weaknesses. A deeper look (not shown in this example) would show only a \$1,502 net cash flow for the cattle enterprise. Further analysis would show that another drop in cattle prices would push the cow/calf enterprise into a negative cash flow situation.

The purpose of Solvency measures is to focus on the long-run financial stability of the business. If the farm was to be sold, would the total value of the assets cover all of the debt? Most farmers and ranchers are familiar with this term - Net Worth. A related term is 'Debt:Asset Ratio' which focuses on the balance between debt and resources. In simple terms, this is the percentage of the farm/ranch which is debt-financed. Because solvency focuses on the longer run, it is helpful to monitor change in net worth. By keeping track over several years, it is easy to identify positive or negative trends and head off problems before they get too serious. The last solvency measure is profitability - which means that the operation covers all of its costs, including land, labor and management.

A debt:asset ratio below 40% is considered strong, while one greater than 60% is a danger signal. Both case farms are strong by this measure. Farms and ranches, especially those which have been operating for some years, typically have strong debt:asset ratios because of the land value.

Based on net worth and change in net worth the two case examples are also sound. But it is important to monitor changes and the basis of the net worth. If net worth is increasing because of asset appreciation, there would be cause for concern.

Cost of production is the last measure to be discussed. Here is where some problems are starting to identify themselves. Based on the feed cost, there appears to be no problems. But when total cost per cwt. of calf sold is examined, there is a problem. For both the western ranch and the southeastern diversified farm, cost of production exceeds market price. The reason that this indicator shows a problem, while the others do not, is that this indicator focuses specifically on the cattle enterprise. Under conditions of high feed costs and low sale prices, the cow/calf enterprise is faltering.

There are other measures which could be used to diagnose the health or illness of these farms. An

investor might want to examine the rate of return on equity. There are also production indicators which are important. Four of those have been calculated for these farms to be used with other publications in this series, but will not be directly discussed here.

### *Summing Up*

If you were now to inherit the management of these two operations, would you be content with the situation that you inherited? Both operations are not facing liquidity problems, they can pay their bills on time without going to the banker for a loan. But there are hints that the cattle enterprises may be a problem. A red flag has been identified which should be examined closely. Given the strong equity positions of both operations, there is no reason to believe that they can't survive. But, unless the cattle situation can be improved through better management or revitalized markets, the net financial status of these farms may slowly deteriorate.