

Targeting Critical Performance

Key performance indicators for cow-calf operations

by **Stan Bevers**

Cattle prices are positioned to increase sharply when the nation's cow-calf producers can begin rebuilding the national herd. This provides an excellent opportunity for you to review performance measurements that are critical to your operation. These measurements are known as Key Performance Indicators (KPIs) and are based on production and financial data. You can use these KPIs to evaluate different factors that are crucial to the success of your cow-calf operation. They can help any rancher evaluate whether the operation is fulfilling his or her goals. In a sense, they are a report card that can be used to identify weaknesses in a given operation. Below are 13 KPIs that every rancher should consider as they bring their ranch to full capacity.

It is important that you calculate KPIs correctly and base them on good data. Be honest with yourself. In some instances, ranchers find that their financial recordkeeping isn't as good as it should be. The most accurate KPIs are calculated from financial accrual-adjusted records. Remember that no single KPI assures success. As with a ranch's resources, the ranch manager must balance the use of these indicators. To focus on one KPI, at the expense of another, will not improve the overall performance of the ranch. As an example, increasing the pounds weaned per exposed female does no good if the nutritional base expense indicator is too high. KPIs have to be in balance for overall performance to be excellent. Finally, most ranches are involved in multiple enterprises. The KPIs discussed below are strictly for the cow-calf segment of a ranch.

Target Levels

Target levels for the various KPIs have been identified through analysis of herd data from several sources including hundreds of herds in the Beef Cow-calf Standardized Performance Analysis (SPA) program and the author's research and experience working with individual ranch owners and managers.

1: Pounds weaned per exposed female – greater than 460 pounds per exposed female

The primary objective for owning breeding beef females is to wean calves. While every rancher has this goal, how they accomplish it varies over time. However, the number of calves weaned and how heavy those calves are serve as indicators of ranch productivity.

From a production standpoint, the pounds of weaned calf per exposed female remains the most important production KPI. To calculate this KPI, divide the total pounds of weaned calves by the total number of exposed breeding females that were intended to be bred. This KPI is a function of weaning percentage and weaning weights. A high weaning percentage begins with a high pregnancy rate followed by a high calving percentage. While weaning weights are certainly a function of genetics and management, weather and days of age are the most important determinants. To solve low pounds weaned per exposed female, a rancher should first look at reproduction rates, not at increasing weaning weights.

2: Revenue per breeding female – greater than \$950 per breeding female

For a ranch to record net income, it must sell products and generate revenue. In its simplest form, this KPI is a product of pounds weaned being sold for a competitive price. However, revenue per breeding female also includes other items. First, this KPI would include the gains or losses associated with the sales of culled breeding stock. Second, it should include the annual value change (accrual adjustment) of the weaned calves that are kept in the herd as replacement heifers or replacement bulls. Ideally, this value would be the accumulated expenses of the calves; however, many ranchers may choose to use market value. The target figure of \$950 per breeding female is based on accumulated expenses, not market value. If you use the market value approach, the KPI should be higher than \$950.

3: Nutrition base expense as a percent of total expenses – between 30.0% and 45.0%

Because reproduction is the most important factor in ranch productivity, proper herd nutrition is imperative. Yet, no two ranches have exactly the same resources to grow, purchase and maintain the nutritional base required by the breeding herd. Thus, we need to identify three groups of nutritional expenses: 1) expenditures for purchasing forage, protein supplement, salt and minerals; 2) expenses for producing raised feed, such as hay production; 3) costs to maintain and improve grazing for the herd. Those familiar with the Beef Cow-calf SPA analysis

will recognize these as the Raised/Purchased Feed Expense and the Grazing Expense. To calculate this KPI, start with the total expense of the ranch including owner labor and depreciation. Then, identify the nutritional costs. Most successful ranchers keep nutritional expenses at 30% to 45% of total expenses.

4: Labor and management expense as a percent of total revenue – less than 25%

Labor and management expense can be the most variable cost across beef herds. To calculate this KPI, determine the total labor and management expense. If the ranch uses only hired labor and management, this figure is relatively easy to determine. If an owner operates the ranch, he must establish a figure for his labor for this KPI to be comparable. In either case, items such as payroll taxes and employee benefits need to be included. Labor and management costs are higher than most people realize due to the benefits that hired managers receive. To interpret this KPI, the ranch owner should target spending less than \$0.25 for labor and management per one dollar of revenue generated.

5: Operating expense as a percentage of total revenue – less than 70%

Controlling expenses can be one of the most important exercises for ranch owners and managers. Managers should target operating expenses at less than 70% of total revenue. Operating expenses include all expenses except interest paid and depreciation. If operating expenses are less than 70% of the ranch's total revenue, the ranch can use the remaining 30% to: 1) pay interest; 2) hold in escrow to cover depreciation expense; 3) retain as net income. Clearly, a ranch will suffer a net loss if operating expenses plus interest expense and depreciation is greater than total revenue.

6: Net income ratio – greater than 5%

This ratio corresponds with the fifth KPI. Net Income is calculated as total revenue minus total expenses. This KPI represents the portion of total revenue that is retained as net income. Put another way, a ranch can do four things with total revenue: 1) pay operating expenses; 2) pay interest expenses; 3) place in escrow to account for depreciation expenses; 4) retain as net income. This KPI records each of the four as a

percent of total revenue. The target is to retain greater than 5% of the total ranch revenue as net income, while the remaining 95% can be used to pay for operating, interest or depreciation costs.

7: Cost per hundredweight (cwt.) of weaned calf – less than \$175.00 per cwt.

For a ranch manager, the best number to know is what it takes to produce a pound of weaned calf, or in this case, 100 pounds of weaned calf. This KPI incorporates the productivity of the ranch and the total expenses it took to create that productivity. Every ranch has a different set of resources that it uses to create calves. This KPI illustrates how efficiently that manager is using those resources. When calculated correctly, you can compare this figure to other ranchers across the country regardless of the resources that the manager is using.

Industry wide, this bottom-line KPI is where ranchers compete with one another. Further, it is known that the cattle industry is cyclical and calf prices move between high (resulting in financial profits) and low (generating financial losses). This cyclical movement of prices relative to each ranch's cost of production is what encourages specific ranchers, and the cow-calf industry in general, to expand or contract. Given current fundamentals, a cost of less than \$175 per cwt. is a target ranchers should shoot for.

8: Current ratio – greater than 2.0

Most ranchers have only one significant payday per year. That makes it imperative to have enough liquid assets to combat unforeseen events such as prolonged dry periods. The current ratio KPI reflects a ranch's ability to pay short-term liabilities, but also provides an estimate of its ability to quickly mitigate the impact of short-term unknown events. This indicator is calculated by dividing the ranch's current assets by the liabilities that have to be paid within the year. Current assets can be cash, savings or any other asset that can be quickly turned into cash. Ranchers should strive to maintain a current ratio greater than 2.0.

9: Total investment (market basis) per breeding female – between \$7,500 and \$15,000

On most ranches, owned land is the major asset on the balance sheet. Currently, external factors have driven land prices higher.

In today's real estate market, ranchers are finding it hard for breeding cows to pay for any land purchase. Furthermore, potential ranch heirs look at the large investment, labor required and low rate of return and have to wonder whether it would be better to invest elsewhere. The ranch manager's job is to generate the greatest return on the lowest investment possible. This KPI target range of \$7,500 to \$15,000 takes into account that some land has already been purchased (or inherited) or that some portion of land the ranch used is leased. To calculate this KPI, divide the total asset investment from the balance sheet by the beginning fiscal year inventory of breeding females.

10: Debt per breeding female – less than \$500 per breeding female

Given the low rate of return on assets, most ranches cannot pay for much debt. To illustrate, a target Rate of Return on Assets KPI (see No. 13) is greater than 1.5%. With interest rates greater than 6.0%, it is impractical to purchase assets that will only return 1.5% when interest is costing the ranch 6.0%. This example does not take into account cases where the asset improves the ranch efficiency enough to overcome the interest cost. This KPI can vary with some herds able to handle more debt than others. To calculate this KPI, divide the total debt of the ranch from the balance sheet by the beginning fiscal year inventory of breeding females. In general, successful ranch managers keep the debt per breeding female under \$500 each.

11: Equity to asset ratio (market basis) – greater than 50%

The equity to asset ratio is the percentage of a ranch the owner owns. To calculate this KPI, divide the net equity by the total assets. Both figures come from a ranch's balance sheet. The opposite image of this KPI is the debt to asset ratio that shows the percentage of the ranch owned by others, such as a lender. Few lenders will want to finance a ranch if they already own more than 50% of it. This being the case, you should strive to own more than half of the assets. The type of ranch assets you own will influence whether you can get financing. For example, if your share is made up of land you own, a lender may find it easier to lend money against an equity to asset ratio of less than half.

12: Asset turnover ratio (cost basis) – greater than 22%

Because ranching is such a highly capitalized business, it is vital that the manager generate the greatest possible net income from those assets. The asset turnover ratio illustrates how much those assets are generating (turning). To achieve

a KPI target of 22%, every dollar of asset making up a particular ranch must generate \$0.22. This figure may seem quite low, but it demonstrates the nature of the ranching business. To calculate this KPI, divide the net income by the value of assets from the balance sheet.

13: Rate of return on assets (market basis) – Greater than 1.5%

Managers depend on the rate of return on assets (ROA) to evaluate their performance. The manager's charge is to use the ranch's assets to generate positive net income. In this way, ranch managers are like fund managers on Wall Street. The difference, however, is the expected ROA. While the long-term return from Wall Street may be greater than 6.0%, the long-term return from breeding beef cows is closer to 0.5%. When calculated correctly, the ROA can be compared to any other asset management business including your savings account at the local bank. To calculate this KPI, start with the net income and add to it the interest expenses for the year. Then, divide this figure by the average value of the assets from the balance sheet. In this case, we use the market value basis as opposed to the cost basis of the assets. Successful ranches have an ROA greater than 1.5% over time.

The 13 KPIs presented here are not the only measures that a ranch should consider. However, these KPIs provide an excellent starting point for evaluating the financial targets a ranching operation should strive for. Remember, each ranch is unique and possibly involved in multiple enterprises that contribute to the financial wellbeing of the operation. These variations may alter how certain KPIs are viewed. **HW**

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