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Seven Management Techniques

That Move Cow-Calf Producers Toward Profitability

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Profitability is defined as net return to owner's equity; retained earnings (or profits) increase owner's equity.[1] Simply put

Assets – Liabilities = Producer's Equity

If profit is defined as a net return, several methods can be used to reach such a goal: (1) increase revenues, while maintaining the same expense level; (2) decrease expenses, while maintaining the same revenue stream; (3) do both, maximizing revenues and decreasing expenses.

But most cow-calf producers don't generate a positive return to equity for the efforts they put forth. The cow-calf sector of the cattle industry is among the most heavily subsidized in agriculture – it is subsidized by "off-the-farm" income. This sector has limited sources of "on the ranch" revenue: the selling of weaned offspring and the selling of culled animals (bulls, cows and replacement heifers). However, adopting management techniques for better reproductive efficiency, increasing production and reducing production costs can significantly improve a producer's profit margin.

Reproductive Efficiency

Reproductive efficiency is an important issue for cow-calf producers. If expressed in economic terms, reproductive efficiency is 10 times more important than production (defined by weaning weights). Reproductive efficiency is 20 times more important economically than product (defined as carcass characteristics).[10]

A herd that produces more calves per exposed female will increase revenues by selling more calves. The average cow-calf producer has a calving rate of 88 to 91.5 percent.[8] The first goal of all producers should be to maximize the reproductive efficiency of their herds.

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Four important management techniques that can improve reproductive efficiency are

1) Conduct breeding soundness examinations on all bulls every year.
2) Palpate and remove all non-producers.
3) Maintain cows in moderate body condition score at calving.
4) Appreciate the hidden values of vaccinations against reproductive diseases.

Examine Bulls

As the first step toward improving reproductive efficiency, make sure to use a fertile bull. The bull is responsible for every calf born in the herd, so it is important for him to be healthy and fertile. All bulls should be examined for breeding soundness every year prior to breeding season. However, only 14 percent of producers examine their bulls for breeding soundness every year. A bull that is evaluated for breeding soundness has a 6 percent or greater fertility advantage over unevaluated bulls.[1] Although this doesn't sound like a large percentage advantage, in production it is huge.

The 90:90 rule of thumb assumes that 90 percent of all cows calve and 90 percent of these calves wean, so the average producer can expect a weaned calf crop of 81 percent. If the weaned calf crop were to be reduced by another 6 percent because the bull was not fertility tested, the producer now has a 75 percent weaned calf crop. Using a bull that has been examined for breeding soundness could add 6 percent to the average weaned-calf crop of 81 percent, resulting in a weaning percentage of approximately 87 percent.

Bull fertility drives reproductive efficiency. Based on spring 2000 calf prices, a 6 percent increase in calf crop would represent a return of approximately $17 for every $1 invested in a breeding soundness exam.[1] Every bull should be critically evaluated every year for breeding soundness.

Palpate Cows

A second management technique to improve reproductive efficiency is removal of cows and heifers that for various reasons do not get pregnant or wean a calf. The best way to eliminate non-producers is to evaluate each individual cow critically as to health and physical soundness and to palpate each cow in your herd.

Producers should evaluate culling strategies to choose the most economically effective decision procedures. As a general rule, all cattle with health or soundness problems should be culled, as well as all cows that fail to conceive. By removing non-producers from your herd, you select those females that thrive in your management system and environment.

Because most productive cows calve during the spring due to availability of forage, herds are traditionally palpated in the fall. There are several reasons for this timing:

- Pregnancy status can be determined easily.
- Scheduling is made easier for other management techniques like deworming, vaccinating, health evaluations and culling due to failure to reproduce that also must be accomplished.
- Fall palpation allows removal of non-producers from the herd before the most expensive time of the year. (Winter feeding comprises up to 40 percent of the total annual maintenance costs for a cow, so it is economically important to remove "freeloaders" from your herd before winter sets in.)

Palpation is a valuable management tool for increasing the herd's reproductive efficiency by selecting for the more fertile females that thrive in your management system.

Maintain Body Condition

The third step toward improving reproductive efficiency involves maintaining your herd in moderate body condition at calving. A cow should calve at a body condition score (BCS) of 5 of higher, while a heifer should calve at a BCS of 6. Problems associated with low body condition at calving may surface as follows:[5]

- Cows don't cycle post-calving.
- Cows require an increased number of bull services for conception.
- Cows experience longer intervals between calvings.
- The herd has more open cattle.
- Cows are more susceptible to disease.
- Calves have decreased weaning weights due to poor milking ability.

There is direct correlation between BCS at calving and subsequent pregnancy rate. When BCS at calving moves from 4 to 6, the pregnancy rate in the subsequent breeding season can increase from 50 percent to 88 percent.[3]

Body condition scores also can help guide nutritional management, an important economic issue for all cow-calf operations. Sixty percent of a cow's annual maintenance is associated with feed costs. Every producer should evaluate his or her nutritional management practices and make appropriate adjustments to forage management, protein supplementation and mineral programs. Using body conditions scores can help producers make nutrition decisions by identifying cattle that need attention.

Conditioning can be added to your herd most efficiently during the period between weaning and calving. It is almost impossible to add condition during the suckling phase, especially during the first 8 weeks of lactation because of high nutritional demands.

Maintaining moderate body condition at calving is critical to reproductive efficiency. Cows should calve at BCS 5 or higher, and heifers should calve at BCS 6.

Vaccinate

A fourth management technique to improve reproductive efficiency is to instill in producers an appreciation for the hidden value of vaccinations. Help producers understand that routinely vaccinating herds protects them from immunological wrecks. Most herds are immunologically challenged frequently from a variety of sources: commingling with a neighbor's herd, runoff from nearby water sources, purchased animals, and carrier animals within a herd.

Producers should protect all herds with a good herd health program, including a customized vaccination regimen, a biosecurity protocol and a disease surveillance system. Each herd has its own immunological needs–one size does not fit all. Producers should design an immunological program for each individual herd.

Increasing Production

Increasing production also can move producers toward profitability. But remember, techniques that increase production without knowing their cost can negatively impact a ranch's financial performance. Producers can increase production with two cost-effective strategies for increasing weaning weights: deworming of suckling calves and growth implant application.

Deworming and using growth implants will increase weaning weights of calves. Increasing herd immunity through the appropriate use of vaccines will improve weaning percentage. Weaning percentage per exposed female probably is the single most important measure of production performance.[2]

Three important management techniques can improve production:

1) Deworming of suckling calves
2) Growth implant application
3) Appreciation of the hidden impact of vaccinations on weaning percentage.

Deworming

Deworm suckling calves at 2 to 4 months of age. Such timely and strategic deworming leads to conservative estimates of an additional 19 to 37 pounds of extra weaning weight.[9] Type of dewormer used does not make a significant difference in such weight gains, which are associated with removal of parasites. If it costs $2 to deworm a suckling calf, return on investment will be $5 for every $1 invested, even based on a low calf market of $50/cwt. This estimate does not take into account added benefits of stress reduction and calf health.

Growth Implants

Use growth implants at the same time you deworm suckling calves, 2 to 4 months of age, so you can take full advantage of implants' growth effects. (Calves must be at least 45 days of age to be implanted.)

Implants can be used safely in steers and heifers to improve weight gain during the suckling phase. Implantation does not interfere with conception rates for heifers, but it decreases days to first heat cycle and increases pelvic size. If replacement heifers can be identified prior to implant time, they should not be implanted, although it is safe to implant them once with some types of growth implants.

The average calf will gain a conservative estimate of 37 to 50 pounds of extra weaning weight.[4] Implants cost between $1 to $2 each, returning $18 to $25, even based on a low calf market of $50/cwt. This is a phenomenal rate of return for a management technique.

Deworming and implanting of calves have moderate additive effects on each other.

Vaccines

A good vaccination program can increase weaning percentage by decreasing illness and death. The highest proportion of calf losses occurs at nor near birth.[10] Using easy-calving bulls and eliminating cows and heifers with small pelvic sizes will impact greatly the number of calves born alive and so will increase the percentage of calves weaned.

The next highest proportion of calf losses occurs during the first two weeks of a calf's life. Vaccinating a cow or heifer prior to calving increases the chances of her producing higher quality colostrum. Colostrum should be nursed for the first 6 hours after birth to pass antibodies that will protect calves for their first 2 to 4 months of life, so colostral management with vaccines is key to calves' surviving the neonatal period. When calves receive their first vaccinations at 2 to 4 months of age, they become immunologically independent.

Cost Reduction

The key to ranching longevity is reducing production costs to survive cattle-market bad times and take advantage of market good times. Cost reduction can move individual producers toward profitability and ensure sustainability of the cow-calf sector.

The last 5 years have seen a trend toward teaching producers how to market their cattle. Discussions have centered around issues like carcass traits, niche-marketing, genetic selection and value-added products. But cost reduction assumes even greater importance than marketing, because it allows producers to survive market bad times, then take advantage of good times. Because cattle markets are dynamic, producers must proactively set market strategies by determining unit cost of production (UCP). Once unit cost of production is known, a cost reduction plan can be formalized.

To determine UCP, producers should adopt standardized performance analysis (SPA), used by Texas producers for more than 10 years. The SPA process organizes production and financial information into a standard format for analysis.

Remember the Seven Management Techniques That Move Cow/Calf Producers toward Profitability

1) Conduct breeding soundness examinations on all bulls every year.
2) Palpate cows and heifers and remove all non-producers.
3) Maintain cows in moderate body condition at calving.
4) Appreciate the hidden value of vaccinations.
5) Deworm suckling calves.
6) Use growth implants.
7) Reduce cost by determining your production unit-cost

Producers can use SPA to reduce production costs in these areas:

- Change attitudes: Handle a ranch like a business.
- Minimize investment in depreciable assets: Rent, lease or limit purchased machinery and vehicles.
- Avoid hay production: Buy hay.
- Monitor and control feed-purchase expense: Get sound nutritional advice.
- Buy replacement heifers: Don't raise them.
- Use terminal bulls.
- Stay away from seed stock production.
- Minimize investment in horses (if cows have to pay for them).
- Don't over graze.
- Take a holistic view of ranching: Implement total resource management, including wildlife management.
- Use a controlled breeding season: Match calving to forage availability and optimize grazing.
- Practice proper herd health management.
- Avoid industry fads.
- Don't spend money to reduce taxes, especially if investments do not lead to equity.
- Separate ranch and personal checking accounts.[7]

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