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# Extension Extra

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Economics

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## Economics of Managing a Livestock Enterprise During Drought

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On average, producers are good managers of things they can control. In ranching and farming, however, there are an infinite number of items beyond control, drought being just one of the more serious ones. Through no fault of their own, producers can sometimes find themselves in a tight economic squeeze.

Unfortunately, there is no one-answer-fits-all relief from drought. The response to drought must be personal. Some producers who have tight cashflows and larger-than-average debt loads may find their options extremely limited, even facing decisions that can result in losing a lifetime's work and a way of life—the herd must be reduced and, when that doesn't work, eliminated.

If you haven't come to that final step, drought becomes an economic question of supply and demand in which the demand for forage and/or water exceeds the supply. You have the painful choice of either increasing the supply of forage and/or water or decreasing the demand through the reduction of the number of livestock dependent upon those resources.

Given these supply and demand constraints, there are alternatives that will let you keep up normal operations, at least for a time. Some of these alternatives include:

- Truck water to livestock.
- Connect to rural water for livestock use.
- Dig a well.
- Provide for better water distribution within pastures through pipelines, etc.
- Truck livestock out of the region or state to find additional pasture.
- Graze alternative forage such as crop stubble, corn stocks, etc.
- Purchase hay or supplemental feed such as range cake or pellets.
- Graze Conservation Reserve Program land or other government allowed reserves.
- Place livestock out on shares with someone who has pasture available.
- Place livestock in feedlot.
- Sell the livestock.

The one thing all these options have in common is that they “cost” money, either through increased expenses or decreased income.

To pay for these options, it may be necessary to take out loans or reallocate resources within and between farming enterprises. Income available for family living expenses, debt reduction, and/or capital purchases may also need to be reduced.

In a drought situation, the management goal usually is to minimize losses rather than maximize income.

For example, long-term income-producing potential may be reduced, especially in a cow/calf operation, if the producer decides to sell cows. There will not only be loss of income that could have been derived from future calf sales. There also may be the loss of genetics and other specific traits the producer had worked to incorporate into the herd.

In this case, some producers may decide to eat the loss and hold on to the cows if the genetics built into the herd results in premium prices for the calves at sale time and if they expect that premium to continue in the future.

Each producer has to answer: Will the costs of keeping the mother herd intact be more or less than the loss of income derived from lower sale prices in the future if part of the mother herd is sold? Can those genetics be purchased back in the future?

But will keeping the herd intact overuse the range-land resource? Pastures that are overutilized during and after drought can take years to recover. They can only support a reduced number of livestock; obviously, fewer cows mean fewer calves to sell and less income for the next several years.

### **Steps in evaluating which options to use during and after a drought**

Deciding upon the option that is the best for a given situation is similar to making management decisions during normal weather years. The decision should be based on the pros and cons of each available option. Below are some steps that may be helpful in analyzing your situation.

- 1. Understand your current situation.** Every ranch operation is unique. Inventory your resources. Before you can arrive at a goal, you have to know where you are—in land, labor, capital, and management. What you have will often dictate what you can do.
- 2. Look for ways to economize in the short run.** You may put off capital improvements. Use your more fuel-efficient tractors and trucks. Work longer hours and forgo hiring additional help.

Drought conditions may dictate that the family vacation be put off or reduced in scope, although, for the sake of relieving family stress, do plan some kind of family recreation. Improvements to the farm home may be put off or scaled down. Perhaps you or another family member will have the option of off-farm employment. If this isn't available in your area, perhaps you can earn additional income by hiring out to neighbors to do welding, trucking, etc.

**3. Determine what is more feasible,** increasing the supply of forage and/or water or decreasing the demand of livestock. This decision will be based on your goals and the operation's available resources, including additional financing. In the end, a combination of acquiring additional forage and/or water along with a partial reduction in herd size will probably be required.

**4. Select a couple of options** you feel have the greatest potential. Estimate how long they will be needed and/or quantities required. For example, how many months will you need additional pasture, or how many tons of hay will be required to feed livestock until the expected end of the drought? Least-cost ration decision aids are available in analyzing the possible use of alternative forages.

**5. Estimate initial costs** that will be required, and include both direct and indirect costs. Direct costs could be acquisition and transportation costs of bringing in additional feed or taking the livestock to the feed. Indirect costs could include the interest charges on any additional financing needed.

If you are reducing herd size, don't forget to determine the potential loss of income from livestock sales in the future as well as the reduced costs incurred for the care of fewer livestock. Consider budgeting or developing cash flows to analyze these alternatives.

**6. Estimate expected income** from the alternative(s) such as the income from the sale of cows culled or calves sold early.

**7. Employ a decision criterion** such as partial budgeting, Net Present Value (NPV), or Internal Rate

of Return (IRR), while remembering that in drought recovery the management goal usually is minimizing losses, not maximizing income.

Don't forget to consider short-range changes—contracting feedstuffs during early to mid summer to avoid price increases in the fall and winter, for example. Or consider selling livestock when markets tend to go up, avoiding October and November when prices traditionally are lower.

Partial budgeting may be the easiest and fastest way to make a decision. It allows for a quick “eyeball” look at the situation. Partial budgeting can be a first step to a more in-depth analysis. Sample livestock budgets can be found at your local county Extension office and on the web at:

<http://econ.sdstate.edu/Extension/Tools/budgets.htm>

NPV and IRR usually require the assistance of an outside consultant. NPV and IRR are commonly used by financial planners to evaluate investment opportunities.

NPV computes today's value of net gains or losses in the future. Gains or losses in the future are discounted to today's values by the use of a discount rate (normally the interest rate that a bank may charge you for a loan). Assistance with NPV calculations can be obtained through a local financial advisor or your Extension office. In a NPV analysis, the alternative with the greatest positive NPV (or smallest negative NPV if the goal is to minimize losses) is selected.

IRR works in a similar manner and usually requires the use of a financial calculator. Contact an accountant, local banker, or county Extension educator for assistance. They also may have ideas that you can incorporate into your individual situation. They can help you find sample pasture leases, livestock share arrangements, livestock facilities leases, and cash rental arrangement forms.

As important as these steps are in decision making during a drought, they are equally important in non-

drought years in putting together a business plan for your operation.

## Communications

Communication is key in building and implementing your plan. Not keeping those around you informed can cause your best-thought-out plans to fail. There is another reason to communicate with your spouse—keeping your problems bottled up and not sharing can lead to other problems in your home and increased levels of stress for all.

Your banker, Extension educators and specialists, input suppliers, paid consultants, and others may be able to look at your situation from different angles and offer suggestions that may not be apparent to you. They can provide a “support team” that you may find useful in other situations over time.

For example, producers who regularly keep their bankers informed, letting them know how things are going and sharing plans to improve their operations in the future, find that the bankers will be more likely to allow them the latitude to follow through with their plans.

Producers who only talk to the banker after the problems have piled up and compounded will likely find their plans for the future rejected, loan requests denied, and the business failing.

When working through the consequences of drought it is difficult to remember that drought is a cyclical phenomenon. Drought has occurred before and will happen again.

The objective is to survive the current situation and be in a position to bring the operation back to pre-drought levels. With a well developed drought management plan and with the support and assistance of others the likelihood of successfully coming through a drought will be improved.