

Livestock Management

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Droughts are common in Texas, and in West Texas there's a good chance that a given drought will last for consecutive years. Because droughts are inevitable, livestock managers need to plan for them.

When forming a drought-survival strategy, you will need to determine how much forage you have and how long it will last. Then establish a livestock management plan and develop culling strategies. Consider using stocker animals to assist this process.

The plans must be flexible because it is difficult to predict when, or how long, a drought will last.

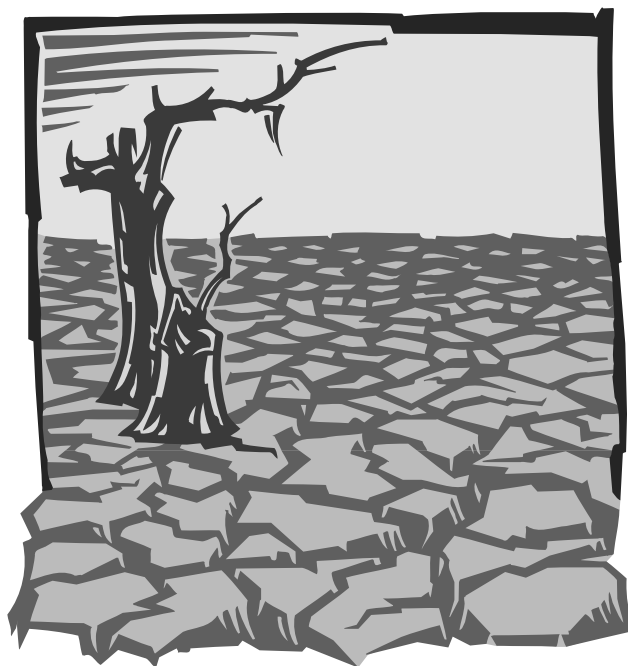
Take a forage inventory

The key to survival lies in balancing forage supplies with the animals' daily demand for dry matter, as well as their ever-changing requirements for diet quality. A forage inventory can assist managers in budgeting forage and in making culling decisions.

For detailed information on the process, see Extension publication B-1646, *How Much Forage Do You Have?* It is available on the Extension Web site (<http://texaserc.tamu.edu/catalog/index.html>) under the Grazing section of Rangelands.

Step 1: Determine the number of acres in major range sites in specific pastures (for example, bottom lands, uplands, etc.). Most U.S. Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) offices have soil maps that can assist you in this process.

Remember to deduct acreage that may be unsuitable for grazing.



Step 2: Estimate or directly measure the pounds of forage per acre by using small frame plots. Make enough estimates to determine an average. If this average is at or below those recommended in Table 1, you are out of forage—meaning that you should sell or relocate livestock immediately.

You must keep minimal residual levels to protect fragile soil resources and to effectively harvest rainfall, which is vital during a drought. If you have more than the minimal residual levels of forage, then proceed to Step 3.

Table 1. Optimal amounts of ungrazed forage for different types of rangeland¹

Desert	Shortgrass	Midgrass	Tallgrass
250 lb / A	300-500 lb / A	750-1,000 lb / A	1,200-1,500 lb / A

Adapted from Extension publication, L-5141, *Do You Have Enough Forage?* by Larry White

Step 3: Determine how much total forage (pounds) is available for livestock. This formula may be used:

Number of pounds = (Average pounds per acre - Minimal residual levels) x (0.5) x (Total grazeable acres)

Step 4: Determine how long that forage will last.

Livestock require 2 to 3 percent of body weight per day in dry forage. For a 1,000-pound dry cow, this would be 20 to 25 pounds per day.

This formula can help you determine how long forage will last:

Number of days = Pounds of livestock forage ÷ (Daily forage intake per head x Total number of head)

Information from a forage inventory can be used to determine whether you have enough forage to support current or future numbers of livestock. Early stocking rate adjustments are crucial during drought, and timely action often means that culling will be less severe in the future. Taking a forage inventory helps you take steps that are *proactive* rather than *reactive*.

Use stocker animals

Proper stocking rates often differ greatly from average carrying capacity. The stocking rate needs to be flexible so that you can adjust animal numbers as circumstances dictate.

One way to achieve flexibility is to use “stocker animals” as a percentage of the ranch’s normal carrying capacity (such as 70 percent breeding animals, 30 percent stockers). This allows “put and take” in both good and bad years.

Stocker animals might be weanlings, purchased yearlings or old females—anything that is easily dispatched and is not part of a core breeding herd. Prices for stocker animals often vary by season. Therefore, risk management in marketing may be important.

Be sure to implement a good herd health program for stocker animals, especially if they originate from off the ranch or have unknown health histories.

Establish a livestock management strategy

For rebreeding success, it is important that cows be in good condition before and after calving. Cows should have a minimum body condition score (BCS) of 5, with no ribs visible. Similarly, ewes and nannies should have no backbone or transverse spinal process (between the ribs and pelvis) evident when they are handled with firm finger pressure.

The critical periods for nutrition and body condition occur before and after lambing or kidding, and again just before breeding.

Remember: It is easier to maintain or improve condition on a nonlactating, or dry animal, than to try to “feed-up” a thin animal that is also lactating.

Sort the herd when feeding supplements

To help you direct scarce supplemental feed dollars to where they will be most effective, and to prevent over- or under-feeding because of the age of the animal or production status, sort the herd by:

- Dry vs. lactating animals
- Growing replacement females
- First-calf heifers
- Second-calf heifers
- Mature females

Once sorted, place those classes of animals with the highest nutrient requirements in the better pastures. Controlled calving seasons will greatly aid management objectives. They reduce the age variability in calves and allow cows or growing replacements to be in similar stages of production (for example, early-lactation vs. late-lactation; open growing vs. pregnant growing; etc.).

Reducing variability means that supplemental nutrients can be “targeted” for specific types of animals and for specific periods of time.

Short calving seasons also make it easier to expedite practices such as 48-hour calf removal, which has been used successfully to improve rebreeding success on cows that are in marginal body condition. Plan to separate calves from cows for 48 hours and provide clean feed and water. After this period, allow them to pair back up.

This practice requires little cash outlay. However, it does not work on cows that score less than 4 in BCS; nor should it be used on cows with calves less than 40 days old.

For cows, ewes or nannies, another option for improving body condition before the next breeding season may be to wean early and feed supplements. Offspring as young as 2 months old can be weaned early.

Provide clean water and creep feed, possibly including milk replacer for young lambs or kids. Select a clean pen or trap where dust is minimized. Your success with early-weaning programs will depend on how well the dams gain weight after their offspring are weaned.

Note that in cattle, if the objective of early weaning is to help maintain or protect a 12-month calving interval, it must be done when the calf is between 2 and 3 months old. This is simply because a cow is pregnant for about 9 months, leaving her only 90 days to resume an estrous cycle and conceive next year's calf.

Other objectives of early weaning older calves may be to improve body condition in pregnant cows, or to improve chances of just getting cows rebred for sale or other purposes.

Because early-weaned animals may need special care and feedstuffs, a planning budget is useful for determining the cost-effectiveness of this practice. Use a planning budget that includes labor, feed costs, projected weanling value, and open vs. pregnant female value.

Cull livestock expediently

Don't wait too long to de-stock. Early culling means that remaining forage can be allocated to more valuable animals.

First, cull the least valuable and /or higher risk animals: those that will not raise an offspring in the current year, or that will not raise one next year, or that are at high risk for rebreeding failure.

Try to sell cull cows before they become truly thin and emaciated. There are usually price discounts for these kinds of cows (canner grade; BCS 1-3).

Make systematic culling decisions. Consider culling animals in this order:

1. Dry, open cows not raising offspring
2. Cows palpated open (not pregnant)
3. Animals with structural or production defects
4. Young replacement females (heifers, ewe-lambs, nanny-kids)
5. Cows palpated with short-term pregnancies (short-bred)
6. Older animals with offspring at side, but with worn teeth
7. Older animals with offspring at side
8. Thin, quality females, with offspring at side
9. Good condition, mid-aged females (4- to 8-year-old cows, 3- to 5-year-old ewes or nannies)

Summary

Some ranchers have dealt with drought in initial and worsening conditions by using this process:

1. Move yearlings or replacement females to lease grass, or sell them.
2. Wean calves, lambs, or kids at lighter weights.
3. Supplement only as designated cash reserves will allow, because borrowing money to buy feed only increases risk.
4. Cull livestock.
5. Liquidate all livestock.

It is critical that de-stocking is done in a timely fashion. If some culling begins early, total livestock reductions will likely be less severe.

Other publications in this series include:

- E-61, *Rangeland Drought Management for Texans: Planning: The Key to Surviving Drought*
- E-63, *Rangeland Drought Management for Texans: Supplemental Feeding*
- E-64, *Rangeland Drought Management for Texans: Stocking Rate and Grazing Management*
- E-65, *Rangeland Drought Management for Texans: Toxic Range Plants*

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Issued in furtherance of Cooperative Extension Work in Agriculture and Home Economics, Acts of Congress of May 8, 1914, as amended, and June 30, 1914, in cooperation with the United States Department of Agriculture. Chester P. Fehlis, Deputy Director, Texas Agricultural Extension Service, The Texas A&M University System.