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://texascert.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 rangeland

<table>
<thead>
<tr>
<th>Desert</th>
<th>Shortgrass</th>
<th>Midgrass</th>
<th>Tallgrass</th>
</tr>
</thead>
<tbody>
<tr>
<td>250 lb/A</td>
<td>300-500 lb/A</td>
<td>750-1,000 lb/A</td>
<td>1,200-1,500 lb/A</td>
</tr>
</tbody>
</table>

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.

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.

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 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.
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 improv-
ing 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 includ-
ing milk replacer for young lambs or kids. Select a
clean pen or trap where dust is minimized. Your suc-
cess 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 inter-
val, 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 rebreed for sale
or other purposes.

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

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 fash-
ion. If some culling begins early, total livestock reduc-
tions 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