



# Planning, The Key to Surviving Current and Future Drought Situations

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Drought management is often really just a survival strategy. However, even survival will require planning which is flexible enough to deal with individual circumstances of each drought as it comes.

## **Droughts Defined**

Droughts are a part of all environments, and as such, have plagued agriculturalists for centuries. At any one time there are likely several ongoing severe droughts anywhere in the world. Depending on your business you'll probably define a drought in different ways. If you are a rancher, you'll probably be in tune

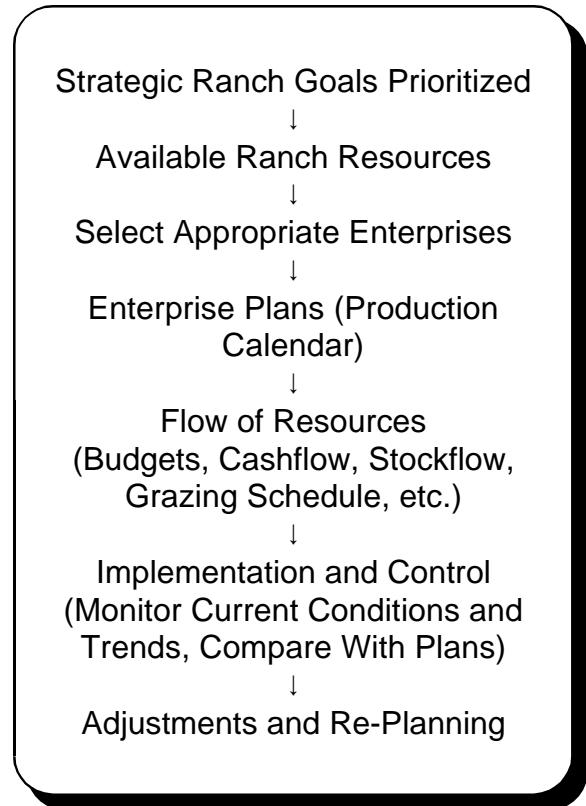
to forage growing conditions, and not just mere precipitation totals. Nevertheless, precipitation is usually the most commonly used means of defining drought.

"True drought" has been defined as 75% or less of the average yearly rainfall. Moving from East to Far-West Texas, this occurs from 16 to 45% of the time. In most of Texas, droughts so classified last only for one year; except in the Trans-Pecos, where chances are higher for consecutive years of drought. Even if you don't use the 75% criterion, in the Trans-Pecos 2 of every 5 years falls somewhere below average rainfall.

## Surviving a Drought

Surviving drought requires planning for drought. This should include grazing management, a stock reduction strategy, and financial plans for survival, as well as a vegetation response plan for recovery once the drought ends. For example, if warm season grasses have been extremely stressed by successive years of low moisture, eventual rains will provide some level of green growth. This new growth needs to be properly managed to allow tender new leaves a chance to mature in order to use sunlight to replenish depleted nutrient reserves in the roots. Therefore, a grazing plan that promotes recovery is desirable. Individual droughts are unpredictable as to their severity and duration, so there is probably no such thing as a perfect plan. However, any plan can and will help.

Webster's New Collegiate Dictionary defines recovery as "to bring back to normal position or condition". Drought recovery implies a return to a previous condition. Unfortunately droughts are often considered as only temporary events, after which conditions will return to "normal." Some ecologists suggest that this may not be true in arid and semi-arid rangelands. They suggest that these ecosystems may not automatically return to the same pre-disturbance "steady state" (Some cases of brush encroachment within the last 100 years might be examples of this). Nevertheless, when rains do eventually come, sound grazing management practices will help the soil capture what rain does fall and optimize forage growth.



**Figure 1** Decision process for selecting the right things to do (from TRM program).

Planning to survive a drought involves selecting the right things to do. The Total Ranch Management (TRM) program in Texas focuses on a process that helps ranchers select the right things to do. An eight-step approach to selecting the right things to do is taught from a total ranch perspective (Fig.1). This approach can also be effective in forming drought survival plans. This process is outlined in the remainder of the paper.

### **Strategic Drought Management Goals Prioritized**

Before any plan can be effective, an end point must be determined. Specific, measurable, attainable, and trackable goals must be devel-

oped. Such goals for drought management might include just simply keeping the ranch. Other strategic goals might include maintaining ranch value and equity should land sales become necessary, Preventing long-term damage to the forage resource, maintaining livestock financial equity, or keeping the integrity of a breeding herd intact.

### **Available Resources During a Drought**

Managers should have a general listing of resources available or where to look for resources during a drought. Resources needed during a drought might include hay or other feed sources, grazing pasture to send livestock to, or potential buyers and/or marketing options for livestock reductions. Having sources for locating these resources identified ahead of time can assure quick action when needed.

### **Select Appropriate Enterprises**

Not all enterprises available to ranch managers are affected by drought in the same way. Wildlife and livestock are forage-based enterprises that compete somewhat for existing vegetation. However, wildlife may be better able to utilize browse species which are less affected than herbaceous plants by short-term droughts. The appropriate mix of livestock classes should also be considered in relation to drought frequencies. In more arid areas such as West or South Texas, where droughts are more common, "stocker animals" should be considered as part of the herd mix to accommodate flexible stocking techniques. Often, in less severe droughts, these animals can be sold

without sacrificing the integrity of the breeding herd.

### **Enterprise Drought Plans**

A drought strategy plan is needed for each enterprise (e.g. cattle, sheep, hay, etc.) of the ranch operation. This may be the most critical part of planning for drought. Production calendars should be developed for each enterprise to determine **when** critical decisions, such as stock reductions, should be made. For example, ranchers should know when the majority of forage is grown on the ranch and what months are the critical rainfall months. When rainfall records are kept, managers should have systematic stock reductions planned when a critical level of rainfall is not received by a certain date. Stock reductions made as early during a drought as possible can reduce the severity of the reductions. In all situations, forage supply must meet or exceed forage demand, and thus a yearly forage inventory should be conducted. Strategies for dealing with poisonous plant problems should also be incorporated.

### **Flow of Resources**

Resource flow plans use a budgeting approach to identify expected resource availability and use by the entire ranch. This planning allows a rancher to ration seasonal surpluses for periods when resource inflow will be inadequate to meet demand. From a pure financial standpoint, ranchers must know what minimum level of production is needed to cover variable costs, overhead expenses, and cash-flow needs. When these levels can no longer

be met, decisions must be made that reduce costs or an adequate financial reserve must be available. Plans should be made to develop cash reserves before a crisis situation occurs.

### **Implementation and Control**

Implementation of drought strategies is easier and more effective with good plans and current information. Periodic inventory of resources, the most limiting during drought being forage production, allows a manager to monitor the supply-demand situation. As drought conditions worsen, more frequent monitoring and decisions are required to maintain control for goal achievement. Rain-fall cannot be forecasted with 100% accuracy, but a rancher can hedge through a conservative plan with flexibility identified for likely fluctuations in ranch resources such as drought situations.

Implementation of stock reductions should be a systematic process. Stock reduction strategies should be in place long before the drought begins. Remember, early weaning by itself may do very little to extend forage supplies because suckling animals eat very little forage compared to their mothers. Accurate records of decisions made and consequences realized should be kept for adjustments and refinements in plans.

### **Adjustments and Re-planning When the Drought is Over**

Experience is often the best teacher. After a drought is over, strategies that worked and strategies that didn't work should be noted and evaluated. Finally, the plan should be re-evaluated for long-term Strategic Ranch Goals. Remember, you can survive a drought. Plan on it!

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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 State Department of Agriculture. Chester P. Fehlis, Deputy Director, Texas Agricultural Extension Service, The Texas A&M University System.