

## Total Resource Management

C. Wayne Hanselka, William Fox, III and Larry D. White\*

\*Extension Range Specialist; Research Scientist, Texas Water Resources Institute; and Former Extension Range Specialist; The Texas A&M University System.

Many ranchers have difficulty making a good living. The U.S. Department of Agriculture reports that of the nation's 2.2 million farms and ranches, nearly 70,000 are technically insolvent and another 73,000 have debts equaling 70 to 100 percent of their assets. The nation's 679,000 family-run farms and ranches (annual sales of \$50,000 to \$500,000) face particular risk. Nearly one-third of them have significant financial problems.

Why are some firms doing well while others are barely surviving from one crisis to the next? Successful managers understand that they manage entire ecosystems of interrelated factors and resources and that success depends on determining the right things to do. Total Resource Management (TRM) is an approach that can help a manager determine the right things to do to improve management and achieve realistic goals.

The TRM approach balances the use of resources for the best and highest benefits at an acceptable level of risk. TRM recognizes that managers must:

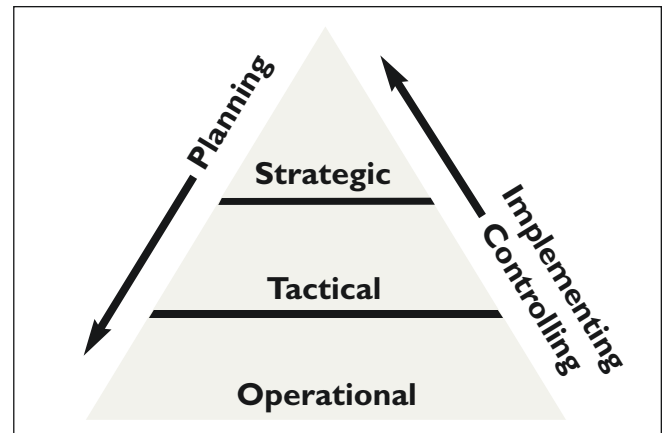
- 1) understand the relationships among all resources (people, finances, land, vegetation, climate, animals, time, etc.), activities and external influences;
- 2) think about the effect each decision may have;
- 3) carry out all activities correctly; and
- 4) make changes as needed to achieve the best outcome and reduce risk.

This is an impossible task if a manager has not developed a logical, practical approach to analyzing information, evaluating plans and directing daily operations. TRM is a way of doing that.

### Organizational Structure

To be successful, an organization must be structured in such a way that all decisions point toward the achievement of stated goals. This is especially important with resource management operations because the interrelationships of resources are complex. Resource allocation must be reviewed continually and changed if necessary. To do this, managers need to keep good records that allow them to compare planned and actual performance and take corrective actions when necessary.

There are three levels to organizational structure (Fig. 1)—strategic, tactical and operational. Each level requires careful thought and planning.



**Figure 1.** Levels of organizational structure.

Strategic decisions set the direction for reaching long-term goals. Long-term goals might include bequeathing the land to one's children, developing resources to the fullest extent possible, generating income for outside investment in order to fund a retirement plan, or conserving and diversifying one's resources. Strategic decisions reflect the policies and objectives in effect for the entire operation. Strategic decisions/policies should be reviewed annually to be sure they are leading toward the achievement of long-term goals.

At the tactical level of planning and decision making, the manager identifies alternatives for reaching long-term goals. Rarely is there just one way to proceed. Rather, when making tactical plans a manager will consider which mix of enterprises will likely yield the best results with the resources available. It is important that everyone who is directly associated with the operation be involved in this decision-making process.

Finally, operational decisions are those that govern daily activities. In order to fulfill tactical plans, operational decisions must be adjusted constantly as the market and other conditions change. Each operational decision (activity) must have a specific objective and a necessary level of accomplishment that, when combined with other activities, results in the best tactical outcome.

Examples of operational planning in livestock and wildlife enterprises include deciding:

- when and how to adjust stocking rate;
- which pasture(s) to graze;
- when to rotate grazing;
- whether to put out supplemental feed and, if so, how much;
- the number of does and bucks to harvest;
- what controls on hunting to establish;
- what supplies to purchase;
- which calves to sell; etc.

As each activity is considered, the question to ask is: Will it produce the desired result in terms of tactical and strategic plans? If the answer is no, the activity should not be carried out. Too many managers simply do those things they've always done in the hope that financial problems will be solved. A better approach is to make operational decisions on the basis of one's long-term goals and with the aid of sound enterprise records.

Operational activities must be prioritized and then carried out correctly at the proper time and location. No activity should be carried out when it has little chance of working or the risk is unacceptable. For example, a prescribed burn could burn out of control or waste the fuel without having the desired effect on the landscape, so it must be done correctly and at the right time.

Strategic goals naturally fade into tactical level plans, and tactical plans into operational decisions. There is no definite division between them. Likewise, it is important to move fluidly from carrying out day-to-day operations to meeting tactical plans and, ultimately, strategic goals. Figure 2 illustrates the three levels of planning and is an example natural resource managers can use in building their own plans.

## Steps in Developing a TRM Plan

TRM is based on the idea that what management achieves is more important than what management does. The starting point is deciding what outcome you want. Then you identify the actions that are most likely to help you achieve that outcome.

TRM is much like planning a trip. You must decide where you are, where you want to go, how you want to travel, when you wish to arrive, who is going to drive, and how much you will have to pay for the trip.

There are six steps in strategic planning (Fig. 3).

### Step 1: Develop strategic goals and prioritize them.

Strategic goals define the reasons a person is ranching. Most Texas ranchers would prioritize their long-term goals in this way:

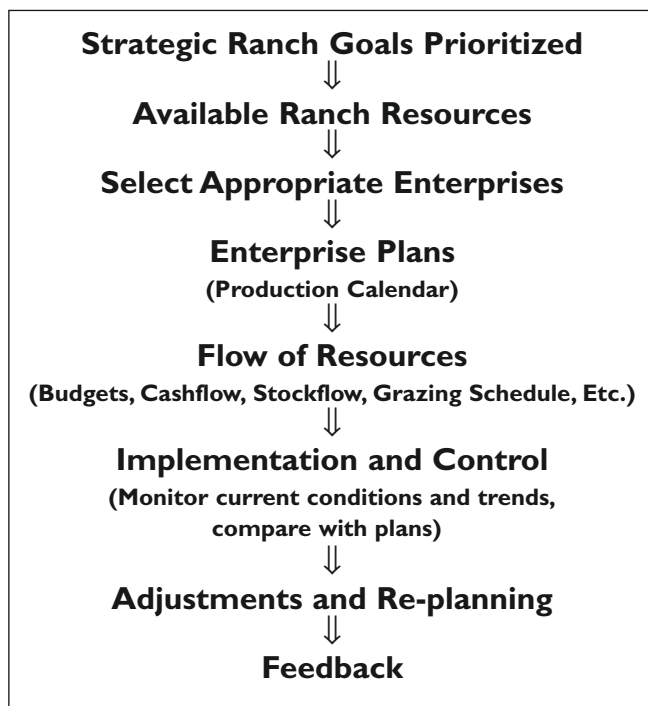
- Maintain ownership of the ranch so it can be bequeathed to children;
- Cover family living expenses;
- Be protected from catastrophic losses;
- Make a profit that can be used for ranch improvements or invested in other ways.

Most landowners/managers are not interested in maximizing profit; rather, they want to achieve the first three goals, make some improvements, and enjoy ranching as a life style.

This explains why many do not adopt new methods and technologies until a crisis forces them to do so. Most new technologies require additional investment, new skills and more intensive management, and have greater initial risk.

<b>Strategic Plan</b>	<b>Tactical Plan</b>	<b>Operational Plan</b>
Sustain natural resource base so that it maintains 1,200 AU/year productivity over the owner's lifetime	Develop a drought policy	Monitor pasture condition
Maintain ownership of the property over the owner's lifetime	Implement a grazing system	Monitor rainfall
	Determine a grazing threshold policy	Adjust stocking rates seasonally
	Implement the optimum enterprise mix	Care for livestock and wildlife
	Develop a brush management plan for wildlife and livestock	Implement brush sculpting, using the most cost-effective practices, in appropriate pastures/sites

Figure 2. Interaction among levels of planning.



**Figure 3.** Decision tree for selecting the right things to do.

Effective strategic goals are SMART:

- S** = specific about what is to be accomplished;
- M** = measurable, so that progress or lack of progress can be seen;
- A** = attainable;
- R** = related to (not conflicting with) other goals of the operation;
- T** = traceable so that records can be monitored and actions adjusted if necessary.

#### Step 2: Analyze ranch resources.

List all available resources and their capacity to support different enterprises. A typical list would include:

- basic resources (soil, water, vegetation);
- animal resources (livestock, wildlife);
- financial resources;
- personnel resources;
- physical resources (buildings, pens, water wells).

Then develop more specific inventories of resources that would support individual enterprises.

#### Step 3. Select appropriate enterprises.

Select enterprises that use resources effectively to produce the most progress toward strategic goals. When resources are allocated correctly, competition among enterprises is minimized and resources are converted to salable products and other benefits. Selecting enterprises can be difficult because the manager must be willing to re-direct resources from areas producing poor results to areas with more potential for success. Diversification is less risky than using all one's resources in a single

enterprise. Diversification also can distribute overhead costs more widely and reduce the effect of extreme environmental conditions.

When selecting an enterprise, it is important to be realistic about its economic potential, especially when budgets are tight. For each enterprise you consider, determine the number of production units you will have, the likely production per unit, the probable value per unit, and the expected costs of production. This information will help you develop a realistic budget for the enterprise, determine what resources are required, and set performance standards.

#### Step 4. Create enterprise production plans.

For each enterprise selected, develop a plan that identifies the specific activities to be carried out and the resources that will be needed. Effectively managed enterprises produce the highest returns on investments of time, money, labor and natural resources. The more successful an enterprise becomes, the more it merits further investment. For example, range improvement practices usually cost the same whether or not an enterprise is profitable, so they could be either a very good or a very poor investment depending on the effectiveness of the enterprise.

#### Step 5. Determine the proper flow of resources.

Enterprises require different kinds and amounts of resources over time. Resource flow plans use a budgeting approach to identify what resources will be available and how they will be used by all the enterprises on a ranch. This kind of plan allows the manager to avoid crises by holding seasonal surpluses until they are needed.

It is important to keep accurate records of the way resources actually flow to individual enterprises so that any problem that occurs can be tracked to its source. In this way, ranchers can monitor progress and trends periodically, evaluate alternatives, and adjust resource allocation to prevent problems or take advantage of opportunities. Ranchers who do not have good records know only the end-of-year results and are not able to make improvements when they would be most effective.

#### Step 6. Implement and control the plan.

With good plans and current information, managers can carry out the actions they have determined to be best and control the effect of those actions. Without planning, the many daily chores of the ranch begin to run the business rather than the business plan determining what chores will be done. There is always more work to be done than time and personnel available. Hiring more workers is expensive and not necessarily the answer. Personnel should be achieving the manager's goals rather than just working hard.

It is important to do a periodic inventory of resources so that supply and demand can be monitored. If a crisis develops, more frequent monitoring will help a manager remain in control. No one can predict the future all the time, but a manager can reduce risk by having a conservative plan that is flexible and then monitoring fluctuations in ranch resources or market conditions that might warrant a change in direction.

## Summary

Through the TRM planning process, a rancher can select the right things to do and then do them correctly while monitoring progress and making adjustments as needed. Because monitoring is expensive, it is important to select specific indicators that will accurately measure progress or reveal the need for change. Success usually depends on being able to interpret information accurately. The systematic TRM approach helps ranchers learn to do this better. Ranchers must be willing to dedicate enough time weekly and monthly to review, forecast and evaluate what has happened and what is likely to happen. Then they can develop alternative plans when necessary and take advantage of opportunities that arise.

Without well defined goals, a manager is likely to dilute resources trying to do a little of everything. The TRM process, while it can not ensure success, does help a rancher maintain better control of the ranch and its future.

## Information Sources

"Rangeland Resource Management for Texans: Strategic Planning for Success," E-141, Texas Cooperative Extension.

"Rangeland Resource Management for Texans: Why Are Goals Important for Natural Resource Management," E-147, Texas Cooperative Extension.

Drucker, P. F. 1974. Management. Harper and Row: New York, N.Y.

Steiner, G. A. 1979. Strategic planning: what every manager must know. Free Press Paperbacks: New York, N.Y.

For additional range management information see: <http://cubes.tamu.edu/rlem> and <http://texnat.tamu.edu>

For additional risk management information see: <http://trmep.tamu.edu>

Support for this publication series was provided by the USDA Southern Region Sustainable Agriculture Research and Education Professional Development Program, and the Texas Cooperative Extension Risk Management Initiative.



Produced by Agricultural Communications, The Texas A&M University System  
Extension publications can be found on the Web at: <http://texaserc.tamu.edu>

*Educational programs of the Texas Agricultural Extension Service are open to all people without regard to race, color, sex, disability, religion, age or national origin.*

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 Cooperative Extension, The Texas A&M University System.

1.5M, New