Benefits of a
Ranch Conservation Plan

By Robert Fears

Profitable ranches usually have a management plan which includes a complete resource inventory, estimated production capabilities and annual management goals. The most important resource to evaluate is your land and its production potential. Help to accomplish this task is readily available from the USDA Natural Resources Conservation Service (NRCS).

NRCS provides free technical assistance for conservation planning to landowners. While landowners can apply for financial assistance through the Farm Bill programs, administered by NRCS, to pay for range and pasture improvements, they don't have to apply for financial assistance to access the technical services NRCS offers.

The landowner's ranching skills are combined with an NRCS conservation specialist's science-based knowledge and tools to develop the plan. The planning process will provide the landowner with recommendations to meet the natural resource conservation needs and the rancher's management goals.

A conservation plan includes an aerial photo or diagram of the ranch, soil maps and descriptions, resource inventory data, a list of the rancher's conservation practice decisions, locations where the practices will be applied and a schedule of conservation systems application and maintenance.

The resource inventory data section of the plan contains possible forage or crop production yields or potential livestock carrying capacity.

Step 1 – Identify the goals of the landowner

"When asked by a producer for assistance, the

The NRCS Nine-Step Planning Process

1. Identify the goals of the landowner.
2. Identify the limitations and opportunities.
3. Inventory the resources.
4. Analyze the resource data.
5. Formulate alternatives.
6. Evaluate alternatives.
7. Make decisions.
8. Implement the plan.
9. Evaluation and follow-up.

Contents of a Conservation Plan

- Aerial photo or diagram of the ranch
- Soil map and soil descriptions
- Resource inventory data – forage or crop production potential or potential carrying capacity
- List of the landowner's objectives
- Locations and schedules for application and maintenance of conservation practices and systems

From left are Jason Holht, NRCS, Kingsville; Dusty Crowe, NRCS, Carrizo Springs; and Bruce Barker, Asherton, evaluating the results of a prescribed burn.

The Bruce Barker Ranch at Asherton is under an NRCS conservation plan. Pastures have been crossed-fence for prescribed grazing, brush has been sculpted for wildlife cover and buffelgrass has been planted for cattle.

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NRCS field office applies a nine-step planning process," explains Jason Hohlt, NRCS rangeland management specialist at Kingsville. "First, we identify the goals of the landowner because clear, attainable goals are essential for a successful management plan."

Selected goals should support the mission and vision for the ranch. A mission statement defines the overall purpose of the ranch. An example of a mission statement is: Build and maintain a profitable ranching operation with a diversified income from beef cattle, white-tailed deer and quail.

A vision statement describes the ideal results of management plan execution and creates a mental picture of the ultimate target. Good vision statements describe results that will occur in five to 10 years — maybe longer. An example of a vision statement is: A ranch business with continued growth that is financially profitable and environmentally sound while providing a comfortable lifestyle for the family.

Objectives and goals are planned strategies to move a ranch operation forward under the mission toward the vision. Objectives normally take more than a year to complete. Goals are usually completed on an annual basis.

Accomplishing an objective may require completing several goals. In developing a conservation plan, NRCS uses the words "goals" and "objectives" synonymously and often the goals take more than one year to complete.

"It is not uncommon for a goal to be achievable only at the expense of another," says Hohlt. A goal to plant 10 to 15 percent of the ranch acreage in wildlife food plots conflicts with a goal of establishing a perennial grass cover in all open spaces.

"On the flip side, goals may complement each other," continues Hohlt. "A goal to leave strips of brush for wildlife cover is in sync with a goal to leave islands of brush to protect livestock from weather."

Step 2 – Identify the limitations and opportunities

"To complete Step 2, NRCS personnel visit the ranch and look at the land with the rancher," explains Dusty Crowe, NRCS rangeland management specialist at Carrizo Springs.

"Any limitations to accomplishment of the mission statement are identified and additional opportunities are evaluated. A pasture in South Texas with 15 percent brush cover and a solid stand of buffelgrass and regrowth mesquite is a serious limitation to using white-tailed deer to produce income.

"A possible alternate opportunity is to plant food plots and initiate dove hunting as a revenue source. When changes are made in the management system, it is important to rewrite the mission, objectives and goals."

Step 3 – Inventory the resources

"During this stage NRCS reviews and identifies soils, forages, wildlife habitat, water availability and other natural resources on the property," adds Crowe. "Soils are the most basic resource unit; therefore, productivity of any land-based agriculture is governed by soil type and condition.

"We use maps in our computerized database to identify soil types on a ranch and this information helps us determine how areas should be managed and the species of plants that will grow on these sites."

"We use a number of measurements to inventory forage," says Hohlt. "Inventory methods are selected that give the most accurate measurement of available, useable forage on a particular ranch. Selected measurements may vary from ranch to ranch and from area to area. The end result is an estimate of the number of pounds of palatable forage available for grazing and browsing animals. Plants that cattle won't eat, such as threeawn, are heavily discounted in the forage inventory.

"In inventorying resources, we walk through the entire property with the rancher," continues Hohlt. "We look at range and wildlife habitat conditions, evaluate water availability and note other resources that are present. As we walk, we discuss what we see."

Step 4 – Analyze the resource data

"Step 4 is completed in the office and involves fitting the pieces of data together," Crowe says. "This is where we decide what will work. We use the collected data to calculate stocking rates, determine wildlife habitat quality and identify problem soil areas such as highly erodible soils or saline conditions.

"An engineering survey is often included in the resource inventory and is used to answer questions such as, 'Will water gravity-flow from a central source to a pasture or will a lift pump be needed? If an earthen tank is built in Pasture A, will it hold water?' "

"Human factors pertaining to the operation are also examined," adds Hohlt. "An absentee rancher who visits the ranch only twice a month requires different management criteria than a person who lives on the land and ranching is his sole occupation. For the absentee rancher, the number of ranch hands and their skill levels are important factors in writing a management plan."

Step 5 – Formulate alternatives

"Using the analyzed data, management strategies are developed that fit the resource inventory and meet the rancher's goals," Crowe explains. "Often, a suggested management strategy is to control brush and initiate a prescribed grazing system so that stocking rates are increased while maintaining good range condition. An alternate strategy is to reduce stocking rates to compensate for areas covered by brush."

"There is usually more than one mean available to accomplish the end," explains Hohlt. "If brush control is desired or needed, options include mechanical removal, chemical treatments or prescribed burning. The desired control and desired appearance of the land often determine which brush control method is used. Do you want to kill everything or do you want to leave brush mottes?"

Step 6 – Evaluate alternatives

"Alternatives listed in Step 5 are evaluated to see how well they fit a producer's situation," says Crowe. "Lifestyle, economics and chances of success are carefully considered in addition to the resource inventory. Cost/benefit ratios are used to evaluate the economic aspects of each alternative. Budgets and available capital are big factors in choosing management practices."

"Climatic conditions also play a role in evaluation of alternatives," adds Hohlt. "Planting annual food plots or

forages in the drought-prone regions of the state is often risky. Established perennial plants are often much more reliable. Prescribed burning is not a good management tool selection if there is enough forage produced only one year out of every five years to carry a fire. Risk assessments and cost/benefit ratios are used to evaluate each suggested management alternative."

Step 7 – Make decisions

Step 7 is where the producer makes the decisions on how to proceed based on all the provided information. Both Hohlt and Crowe emphasize that the producer makes these decisions, not NRCS personnel. The producer may adjust and tailor management recommendations to best fit the specific situation.

Data and suggestions provided by NRCS are added to the overall ranch management plan so good implementation decisions are made. Analyze the entire ranch operation to determine the impact of range improvement on working capital, income and profit. Will feed and labor costs be reduced through range improvement? If wildlife habitat is improved, can you increase hunting fees? Can increased pounds of forage and stocking rates pay for the range improvements? Answers to these cost/benefit questions will not only help determine if a practice will pay for itself, but they can show which range improvement practice will more positively impact profits.

Once the decisions are made, objectives and goals are added to the ranch management plan. It might make sense to accomplish a portion of the range improvement practices over a period of two to five years, while some are accomplished in one year.

Step 8 – Implement the plan

"Actions are taken at this point and management is put on the ground," states Hohlt. "In many instances, this is the stage where conservation program financial assistance is obtained. These cost share programs may ease the expense of range and pasture improvement."

Examples of planned actions are to initiate a prescribed grazing plan, improve upland wildlife habitat management with census data collection and proper harvest, prescribed burning and controlling brush by aerial spraying of herbicides. Prescribed grazing may require cross-fencing and installation of water lines and troughs.

When designing and implementing grazing systems, include drought and destocking plans. As beef cattle Extension specialists often say, "Texas is under continual drought with intermittent floods." NRCS helps design conservation plans with built-in drought contingencies.

Step 9 – Evaluation and follow-up

"The final and ninth step is evaluation and follow-up," Crowe explains. "All good plans have one thing in common — they are updated and revised to fit changing circumstances. In many cases, different practices yield different results due to varying growing conditions. Monitor the success of applied management, learn from those experiences, and use that experience to better manage the land."

Conservation plans are not contracts. They are recorded objectives formulated by the landowner after reviewing the data gathered by NRCS. A conservation plan is a confidential document and does not provide public access to your property.

For additional information on land resource inventories and conservation planning, contact NRCS at your local USDA Service Center. NRCS offices are also listed in phone directories under U.S. Government and on the Texas NRCS Web site at tx.nrcs.usda.gov. ■

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