Hugh Hammond Bennett (right), first Chief of the Soil Conservation Service.

natural resources REPORTER

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Campaign Urges New Mexicans to be Smarter Farmers-Wiser Ranchers

The notion of smarter farmers and wiser ranchers using the latest technology to make operation decisions is an admirable goal. The creators of a new conservation planning campaign hope it will also be a practical aim, and have broad appeal.

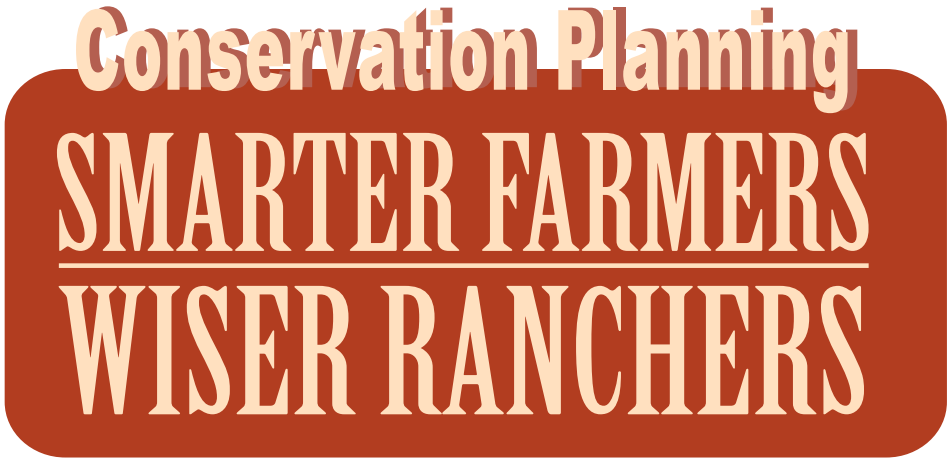
Titled "Conservation Planning: Smarter Farmers – Wiser Ranchers," the campaign is designed to educate farmers and ranchers and other New Mexicans about the value of utilizing U.S. Department of Agriculture-Natural Resources Conservation Service (NRCS) as a partner in planning farm and ranch conservation improvements. Throughout the campaign NRCS is offering a free packet of information about conservation planning and the kinds of data that can be incorporated in making those farm and ranch decisions.

"While the campaign may be a little light-hearted, we hope to help New Mexico farmers and ranchers enhance their soil and water resources and improve their production through practical, sound conservation," said Rosendo Treviño III, NRCS state conservationist.

The Natural Resources Conservation Service is the federal agency charged with bringing conservation to private land. Because it works with private landowners, all relationships with the private landowners are entirely voluntary.

"Increasing the awareness of conservation planning among New Mexico's farmers, ranchers, and others is the first step in the process of bringing the latest conservation technology to the farm and ranch," Treviño said. "We hope this campaign using radio spots and public appearances will help farmers and ranchers understand some of the resources available to them. Conservation planning can give them a fresh look at their operations, and help them make their management decisions."

Anyone interested in receiving a free conservation planning packet can call 1-800-410-2067.



NRCS Natural Resources Conservation Service

Northwest Area Conservationist: "Oh! How Important Records Are!"

Norman Vigil
Northwest Area Conservationist

Have you ever heard of anyone being rewarded for the great job in managing the natural resources? How about all the work that you have done for the past 10 to 20 years or the work that was done by your parents that is still effective today? If you give me a minute or two, I'd like to share with you that possibility - and what you need to do to make it happen.

Several years ago Congress funded the Conservation Security Program to "Reward the Best and Motivate the Rest." Simply stated, the program rewards producers financially for managing their lands such as cropland and rangeland to a prescribed standard. If you feel that your lands have been managed to minimize soil erosion and provide adequate cover to control water runoff without creating erosion or water quality problems, you might be eligible for the rewards.

The key to participation is sound record keeping of the type of work done in the past and the management currently taking place. Records such as soil tests, fertilizer application, type of crops, and rotation of crops along with irrigation cycles and amount of water applied are essential. On rangeland, grazing plan with entry dates, number of pastures, number and kind of animals, and monitoring program are essential.

I know that is a lot of information is kept in memory or small notebooks that are rained on, dropped in the mud (or piles), and stomped by stock. If I can make any suggestions at this point, it would be to write down the information as far back as you can remember as a legible and permanent record. If you start now the process could proceed much smoother and quicker if you choose to participate in the Conservation Security Program.

NRCS has a vast network of knowledgeable, experienced staff and volumes of technical resources that farmers and ranchers can tap into to improve the production of their operation, and at the same time protect natural resources for future generations. If there is one question you might think about it could be … "If you were to leave the land to your children, what would it look like?"

Get in contact with your local NRCS office and learn more about the program. Reward your family and yourself for the great work that has been done. The clock is ticking!

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For more information about NRCS conservation services and programs contract your local NRCS Service Center or go to www.nm.nrcs.usda.gov

Soil Surveys on Web: Powerful System Now a Keystroke Away

In August 2005, the USDA-Natural Resources Conservation Service (NRCS) implemented a new delivery system for soil survey information and data. This new system called Web Soil Survey is an Internet browser based application that delivers soil maps, tabular data, text, and interpretative maps to users for all lands having a modern soil survey available.

With the development of Web Soil Survey, users of soil survey data do not need to have sophisticated Geographic Information Systems and specialized staff to manipulate data, produce maps and conduct analyses of soil data. Development of a simple method for people to access soils data has many advantages.

The number of people who access the data can be endless, where prior to Web Soil Survey demand for soil survey information resulted in the published reports going out-of-print in many locations. Web Soil Survey gives NRCS and cooperators the ability to update and modernize the soil descriptions, tabular data, and interpretations without incurring the production costs of an entire new printing. In fact, the data can be updated overnight and any errors or omissions corrected immediately.

Navigation of the Web Soil Survey pages for producing maps, tables, text, and other reports can be mastered with a minimum of experience. Help screens and prompts are readily available on each screen. Help is turned on and off by clicking on the question mark (?) in the sections it is available.

Basically, discovering soil survey information at http://websoilsurvey.nrcs.usda.gov consists of three simple steps. These are (1) define your area of interest, (2) view the soil map, and (3) explore the data for information.

So after connecting to the Internet and Web Soil Survey at http://websoilsurvey.nrcs.usda.gov click the green button that says "Start WSS" to begin a session. You will be taken to the "Area of Interest Screen". You have several options on navigating to your area of interest. You can type in an address, select a county, select a hydrologic unit area, or select a soil survey area. You can also select your area by drawing a rectangular area or other shape on the interactive map of the United States using the selection action buttons and your mouse. You can continue to draw smaller and smaller areas until your area of interest is viewed in the window.

Once you have located the area in which you want soils information, you will need to designate an "Area of Interest" (AOI) for the soil survey data. Selection of your AOI is accomplished by selecting either of the two radio buttons at the top of the interactive map. Click on the left one to draw a rectangle or the right button to draw a line around specific features for which you want soil maps and tabular data. The area will be highlighted by a blue cross-hatched pattern.

You can now click on the table labeled soil map. This will provide a line drawing of the soil map for your "Area of Interest". You have several features available to you after the AOI is set. You can view the soil map and identify the soil types, download soils data from the Soil Data Mart or use the Soil Data Explorer that provides options to learn about soils.

When the map is complete, you can save or print the results.

Web Soil Survey provides NRCS customers with tremendous access to soil information, the basis for so much of NRCS's conservation work. It is hoped it can help you make better and easier conservation decisions.

Gathering Your Records:
Jump Starting Conservation Planning

Gathering your records together in anticipation of conservation planning or another decision-making process can be time consuming – yet it is vital to good decisions and your bottomline. Understanding how they can help you will give you a jump start in the process, and help you make sound decisions.

If you are farming ...

If you are farming the first piece of information you may look at are your crop rotations. A three year rotation may mean you are planting wheat one year, sorghum the next, and leaving the land fallow the third year. Or you may be cropping with alfalfa for seven years, and planting row crops such as corn or sorghum on the eighth and ninth year to clean up weeds that have invaded the hay crop.

Recording crop rotations is important because it influences how much tillage you do which in turn affects soil quality. Tillage speeds decomposition of residue and decreased the organic matter that builds in the soil. The less tillage you do the more organic matter the soil will generally have.

This brings us to the next piece of information needed for conservation planning, and that is till-

age records. Describing the kind of equipment used is important such as a plow or harrow, because generally the more the soil is disturbed the less organic matter it will ultimately have. Dates are important. When tillage occurred, planting dates, and harvesting dates are needed. These are indicators of how much growth had occurred which relates to how much residue will be left on the ground or how much biomass is incorporated.

When livestock are used for gleaning of crop residues or grazed on cover crops, the grazing dates and details for numbers and kinds of animals are needed because gleaning reduces residue.

And, of course, irrigation records are important. The kind of system, such as drip or flood, influences efficiency. How you monitor moisture is important. You may be monitoring by appearance and feel or using tensiometers. They will be your guide as you are managing your irrigation water. And, application dates and rate information is needed. Given this information you can better judge whether your crops are getting the moisture they need, and you are using your irrigation water efficiently.

Finally for cropping, soil testing is vital to your operation. Soil testing relates to nutrient management and ensuring nutrients applied meet crop needs. The proper balance is all-important, because too few nutrients will affect your yield and can lead to erosion while over-applied nutrients can mean degradation of water quality.

Then, there is the issue of pesticides. Again a balance is important because there is an economic threshold where the cost of applying the pesticide can exceed the loss of the crop that the pests may cause. Producers also do not want to aid in the development of pesticide resistant bugs by overuse of pesticides.

Ranchers want to look at that feed-forage balance ...

Ranchers, also, want to utilize the best information available to them when they make those critical stocking and range management decisions. They want to look at the feed-forage balance and ensure each animal is getting enough of a grazing and supplement combination. To do this the rancher will look at the types of animal and the kind and quantity of forage and supplemental feed available.

Watering sources are important because the cattle will only graze so far away from their watering source, so it is easy to overgraze near the water source and undergraze further away. This can be controlled by properly locating of water sources.

The number of pastures and their size affect the rest rotation possible during the growing season and how long the pasture is allowed to recover.

While much of what has been mentioned here may seem obvious, the process of record gathering and analysis while engaging in conservation planning can give a producer a fresh look at his or her operation.

Today's operations take smarter farmers and wiser ranchers. And, conservation planning is basic to today's and tomorrow's success as a farmer or rancher in New Mexico.

PMC Studies Deep Planting Methodology

Unusual Method Works in Riparian Environment

The Los Lunas Plant Materials Center (PMC) is experiencing success with a new deep planting methodology for planting native shrub transplants on a 33-acre riparian site on the Rio Grande in Bosque, New Mexico south of Belen . They are using shrubs grown in the one gallon, 14 inch deep tree pots. What is unusual is these shrubs are being planted into 6 foot holes where the plants root crowns are buried. Typically, this practice would kill most transplants.

"Riparian shrub species have evolved over thousands of years in association to flooding and seem to be tolerant to being buried in sediments, or in this case, being planted deep in the soil," said Greg Fenchel, PMC manager. "The roots of the transplants are placed to the depth of the capillary fringe of the water table. Because the root system is in moist soil, it will not be necessary to irrigate these plants unless the capillary fringe of the water table drops below the root zone."

The Bosque, New Mexico location being used in the study had an adequate stands of cottonwoods and herbaceous understory, but only a few native understory shrubs. Subsequently, only native understory shrubs were planted here.

These transplant shrubs were grown to have shoot systems (biomass above the root crown) that can be up to seven feet tall even though their root systems are generally 12 inches in length due to the restriction imposed by the pot. Typically one would conclude that the shoot system is not in balance with the root system.

"With this new deep planting methodology that is exactly what you need for success", says Fenchel. "We bury these plants four to five feet deep and try to have at least the top three feet of the shoot above the soil surface so they are not shaded by other low growing plants."

Prior to the PMC planting this site, it was cleared of exotic phreatophytes using the cut stump method with 'Garlon 4' and vegetable oil and was done with only minimal surface disturbance. This method involves felling the trees by hand with chain saws, painting the stumps with herbicide, and then cutting the mainstem and branches for firewood, and finally chipping the 6 inch diameter or less into surface mulch. Continued monitoring and spot treating sprouts of the exotic species with herbicide is necessary for control. With only limited surface disturbance, very few weeds emerged which provided for favorable planting conditions. Dense stands of weeds can be more competitive than the desired plants for water, light and nutrients.

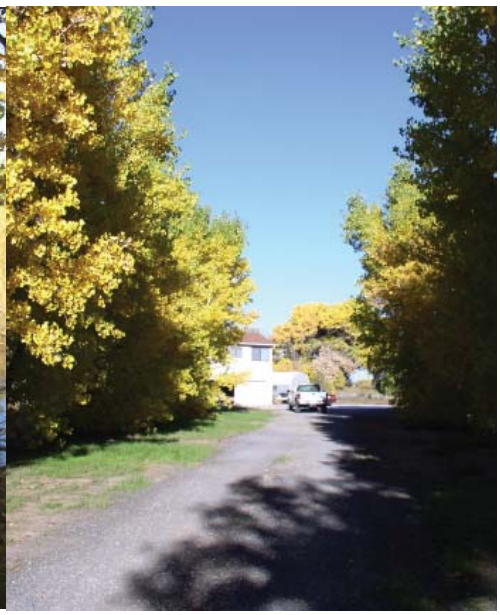
The PMC planted 1,000 transplants using the deep planting methodology in 2004, and they recently planted 800 more in 2005. The plants are watered once after planting to provide for good root to soil contact. Those planted in 2004 were not irrigated during the 2005 growing season, and as of November 2005, show a 95 % survival rate.

For further information about the deep planting methodology call the PMC at 865-4684.

Auger used for deep lanting.

Farmer Maximizes Wildlife Resources:

Site in a Fly-Zone South of Tome Just Got Better



Andrew Hautzinger's small farm south of Tome and east of Los Lunas, New Mexico is in a major fly-zone for many migratory birds. On his farmstead he has observed a variety of water fowl including wood ducks and mallards – and ferruginous hawks, Cooper hawks, and Western tanagers. In his decision making process regarding the utilization of his resources, Hautzinger ultimately determined the conservation of the native and wildlife resources on his land could be enhanced - and bring value to him and those he wished to educate about the land.

Utilizing USDA-Natural Resources Conservation Service program and his own ingenuity in developing backyard conservation, Hautzinger has created an oasis for wildlife, and is looking forward to opportunities in propagation of native plants. With funding through the Wildlife Habitat Incentives Program, Hautzinger has installed drip irrigation that is used for tree and shrub establishment and creation of a pond.

Hautzinger knows that good conservation also means good planning and monitoring. He keeps a diary of tree and shrub survival growth and wildlife sittings. He monitors which food-source species grow best.

The information Hautzinger has been gathering goes beyond personal help in his own decision-making. The NRCS office in Los Lunas is using the knowledge Hautzinger is communicating to make recommendations to others in the county who are seeking to enhance their resources. In addition he is using his farm for educational tours and any conservation tours that may benefit from such a visit.

Hautzinger has worked closely with the NRCS Los Lunas Plant Materials Center in planting 35 species of trees and shrubs on his property, and he is considering growing a variety of native grasses.

From the bathouse he has built for his property to over 600 trees, the Hautzinger farm truly exemplifies the kind of special place some of New Mexico's finest conservationists have created. Like Hautzinger, more New Mexicans are understanding the value of their wildlife resources and incorporating this value into their conservation planning.

NRCS Natural Resources Conservation Service

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