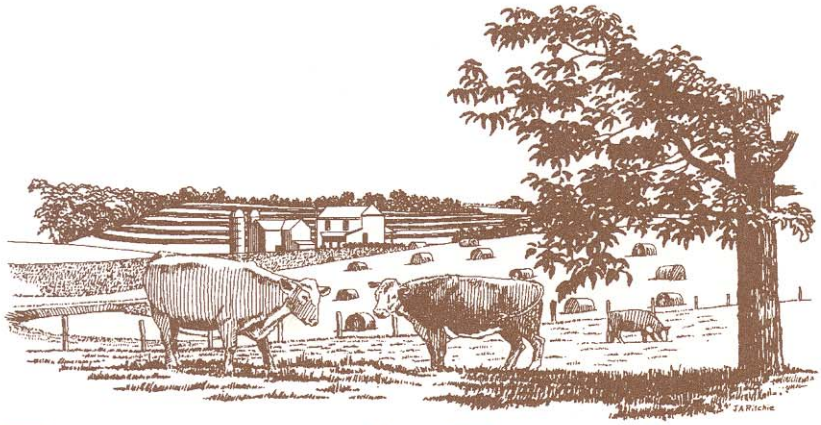
SOIL SURVEYS
can help you...



Farmers & Ranchers

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Farmers and Ranchers

As a farmer or rancher, you don't have the time or capital to spend on elaborate agricultural research and experiments or mapping and studying soils. But you are interested in the results of such studies if they can help you manage your operation more profitably.

The **Natural Resources Conservation Service (NRCS)** publishes soil surveys of counties throughout the United States. Each survey contains detailed maps and descriptions of soils in the area surveyed. This pamphlet explains how the soil survey for your area can contribute to the management of your farm or ranch.

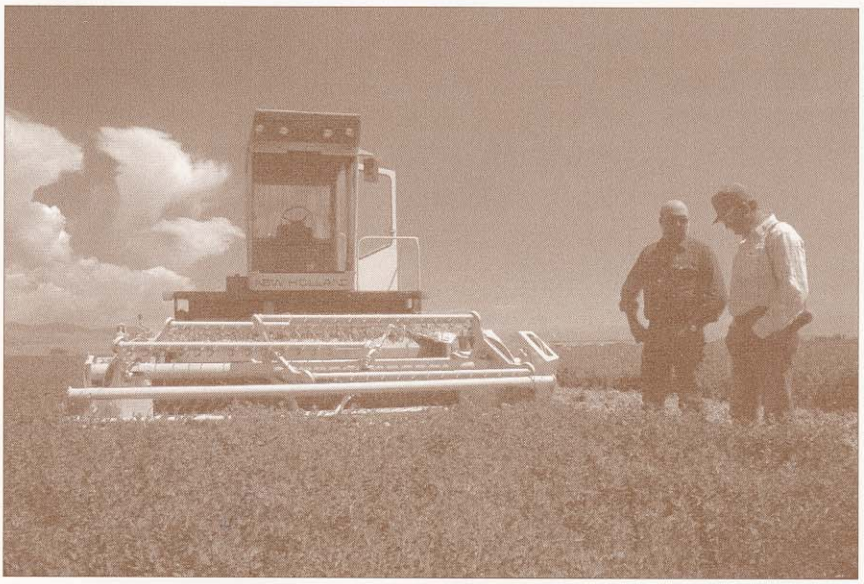
How can soil surveys help farmers?

To stay in business, farmers have to evaluate important developments in agricultural management. A soil survey can play a major part in this aspect of managing a farm.

Management practices—Farm production depends largely on fitting soil management practices to the soil properties as accurately as possible. It is the right combination of a number of practices that gets optimum results. Researchers try various combinations of fertilizers, tillage methods, water management and conservation measures. Combinations that produce the greatest yields on soils, at the least cost, at experiment stations can be expected to give equally good results on similar soils elsewhere. Soil descriptions presented in the soil survey for your area can help you evaluate prospective changes in management of your soils. New practices also are constantly on trial at state and other agricultural experiment stations. By comparing soils at such stations with those described in the soil survey for your area, you can estimate the likely success of new practices on your farm.

Special crops—You may want to know if new or special crops will work for you. The soil survey for your area describes soil properties that affect crop growth and provides information that could save you costly experiments in determining the best way to manage your land for unfamiliar crops.

Farmers can use soil surveys to plan conservation on their land.

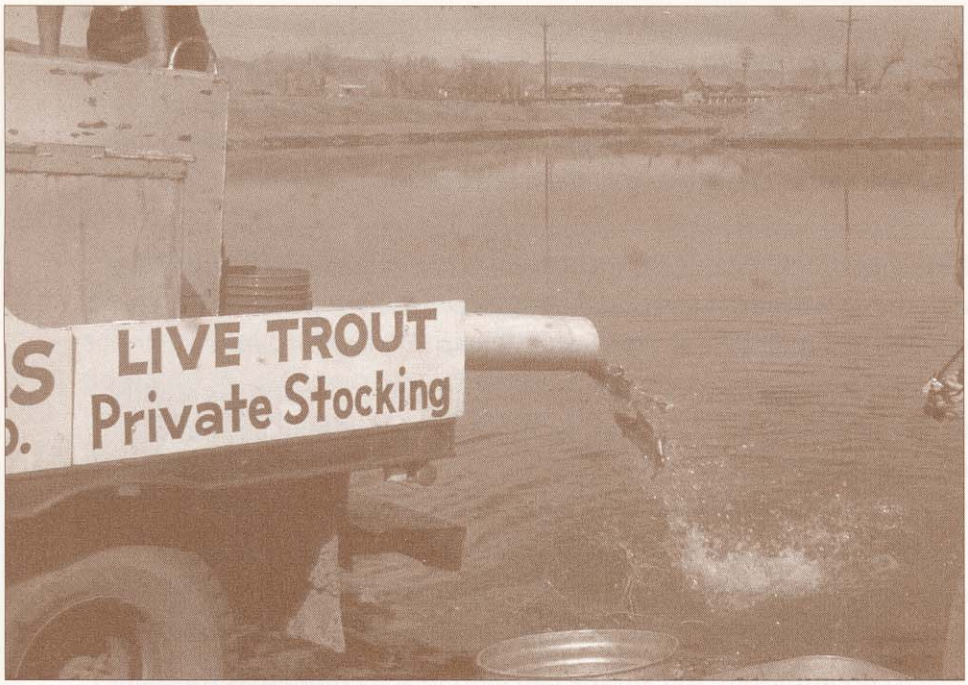


A soil survey can help ranchers determine the potential forage production of soil.

Farmers and ranchers can use soil surveys to select areas suitable for man-made ponds, wildlife habitat and recreation development.

Soil characteristics that affect the growth of trees for cash crops, windbreaks or beautification can be determined through use of a soil survey.

Soil surveys can help ranchers plan the layout of stock ponds, fences and other range conservation measures.


LIVE TROUT
Private Stocking

Crop yields—Estimated yields of major crops under a high level of management are included in published soil surveys. This can help you calculate approximately the returns to expect on your soil and whether a high level of management would increase yields enough to pay the extra cost.

Conservation plan—A soil survey can help you determine how intensively you can use your soil without damage. It also helps determine what conservation measures are needed to control erosion and maintain or increase productivity on your farm.

Reclaiming land—Some severely eroded soil responds readily to soil treatment such as fertilizer, lime and green manure; but other soil responds very poorly. A soil survey can help you decide whether added treatment to reclaim soil is likely to succeed.

Waste disposal—Feedlots, poultry plants and dairy farms dispose of manure and other waste into soil. A soil survey helps determine how much waste the soil can absorb and in what form.

Recreation—A soil survey can help in selecting areas for man-made ponds and planning development of land for fee fishing, hunting, camping and other facilities to supplement income.

How can soil surveys help ranchers?

As a rancher, you want the greatest amount of high-quality forage from your range. Because forage yields depend in large part on soil properties, detailed knowledge of the soils on your ranch can help you manage your range more effectively.

Range potential—A soil survey provides detailed soil descriptions that can help relate the kinds of soil to the distinctive kind and amount of vegetation each soil can support. Soil texture, depth, wetness, available water, slope and topographic position are among important soil properties that affect range potential. Deep loamy soils on bottom lands may produce the most desirable range plants.

On uplands where rainfall is moderate, medium-textured soils that take in water readily may produce desirable plants if grazing is controlled. In some dry areas, sandy soils are more productive than clayey soils. Grouping the soil on your range according to potential productivity helps you plan management that will increase forage yields.

Range management—A soil survey can help you estimate the likely benefits of management practices. For example, the soil in an area of brush or mesquite may have such low potential productivity that the cost of chaining or chemical removal may not be worth the ultimate yield in forage. On the other hand, there may be rocky areas or hillsides where the soil is capable of producing more forage if properly managed. A soil survey can help you determine such natural differences in productivity.

Grazing management—If range is over-grazed, desirable plants decrease and less desirable plants may take over the site. A soil survey can help you identify soil that is producing at less than its potential. Each soil survey names the main species of desirable and undesirable range plants that grow on the soil, and provides estimates of forage yields than can be expected under favorable and unfavorable conditions.

Pasture, hay and silage—You may need to grow more winter feed or establish more pasture. A soil survey rates soil suitability for hay and pasture plants so that you can determine which areas will be most productive for this use.

Wildlife and recreation—To supplement income, ranchers may use their land for hunting or other kinds of recreation. A soil survey provides information that can help you manage your land for wildlife habitat or identify areas for recreation development.

Conservation plan—A soil survey can help you plan conservation management of your range. Soil maps and soil descriptions help you identify problem areas, select suitable areas for stock ponds, and establish schedules for grazing and proper use of the soil on your range.

What soil data are available?

Soil surveys contain detailed maps and descriptions of soil and they provide interpretations of soil properties for farming and ranching where such land use is practiced. Among the soil properties that affect use of soil for farming and ranching are the content of sand, silt, and clay, acidity and alkalinity, flood hazard, depth to water table, natural drainage, erodibility, organic matter content, and fertility. These and many other properties described in soil surveys provide basic information for managing soil on a farm or ranch.

How can you get a soil survey?

Call the local **NRCS** office of the to determine whether a soil survey of the area that interests you is available. If the survey has not yet been published, you can arrange to examine soil maps and data available in preliminary form.

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