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Delno Knudsen

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HOW TO GET GOOD SOIL SAMPLES

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and why it saves you money

EXTENSION SERVICE UNIVERSITY OF
NEBRASKA COLLEGE OF AGRICULTURE
& U.S. DEPARTMENT OF AGRICULTURE
co-operating W. V. LAMBERT, director

How To Get Good Soil Samples

Delno Knudsen

Each year Nebraska farmers send several thousand soil samples to the University of Nebraska Soil Testing Service in Lincoln. The soil test results—and the accompanying letter of recommendation—tell you several facts about your soil.

The tests show whether your soil needs (a) lime, (b) phosphorus, or (c) potassium. The recommendations tell you how much of each you should apply, when to apply it, and for which crops. Recommendations are also made for nitrogen fertilizer use. Special tests are made, when necessary, for excess lime and soluble salts. Information on how these effect your yields is included in the recommendation.

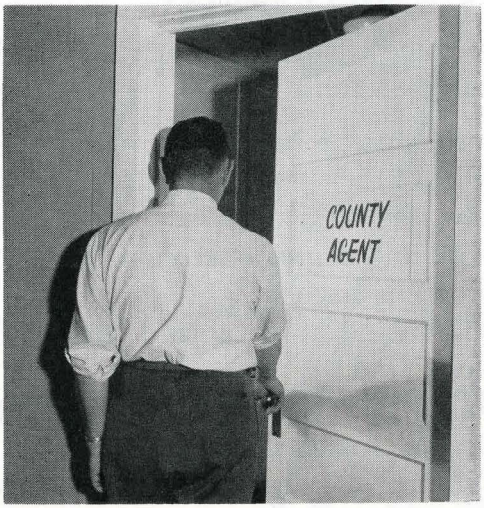
Now, a soil test can't be any more accurate than the sample from which it is made. Poor samples can result in tests which are misleading. This in turn can lead to inaccurate recommendations which can cause you to lose money through (1) low yields, (2) using the wrong fertilizer, or (3) using fertilizer you don't need.

Good samples yield good tests and good recommendations which can make you money. This circular tells you how to get good soil samples on your farm.

Follow these steps to get good soil samples...

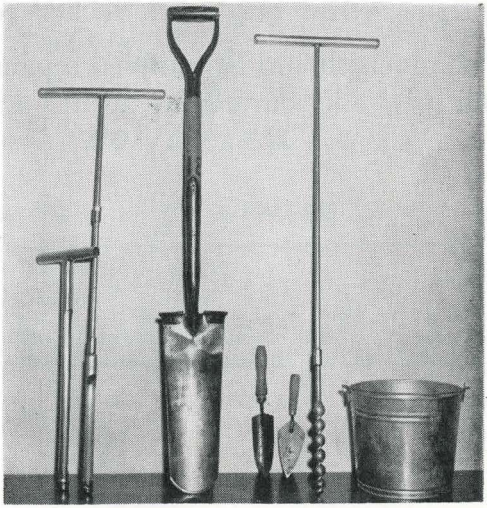
1 SEE YOUR COUNTY AGENT

He has information sheets and mailing boxes. He can answer your questions about soil testing.



2 SELECT THE TOOLS YOU NEED

A clean bucket, spade, and knife or a soil probe or auger.



3 DIVIDE YOUR FIELD

Different soil conditions exist on your farm. Some of them are illustrated in the map on the right. Remember—don't mix different soils.

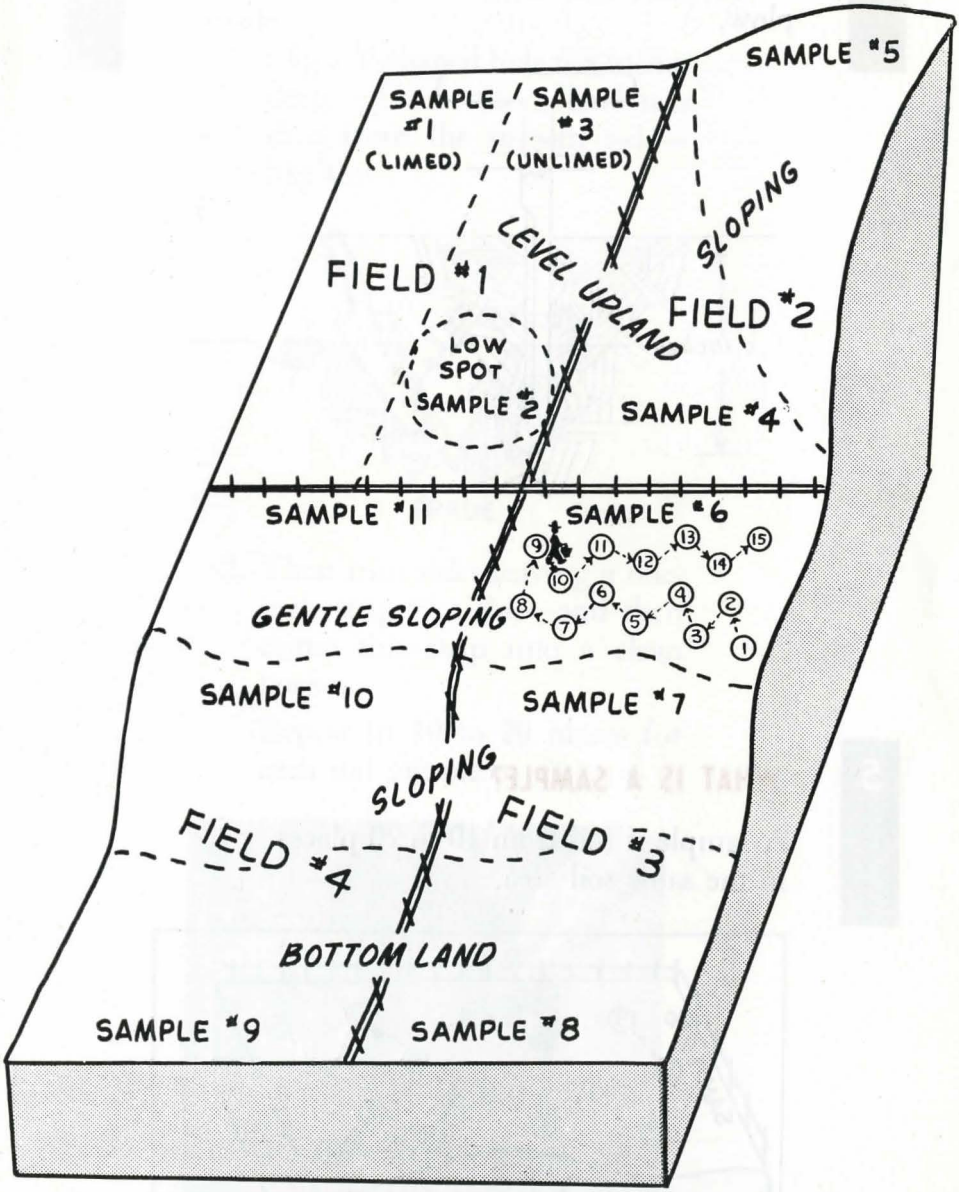
Here are some conditions which may result in different soil test results.

1. Past lime, fertilizer or manure treatment. (Field 1)
2. Low spot. (Field 1)
3. Slope and degree of erosion.
4. Cropping history.
5. Bottomland and upland differ. (Sample Nos. 7 and 8)
6. Soil texture (sandy, loamy, or heavy).
7. Organic matter content.
8. Different colors mean different soils.

Here are some places to avoid

1. Unusual areas. If sampled, do them separately.
2. Turn rows, dead furrows, snow fences, stack bottoms, strips near trees, rocked roads, etc.

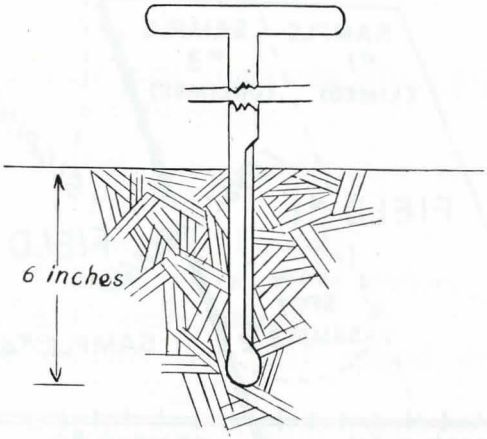
Terrace channels should be sampled separately.
For alkali spots ask your county agent's advice.


SAMPLE #5
SAMPLE #1 (LIMED)
SAMPLE #3 (UNLIMED)
SLOPING
LEVEL UPLAND
FIELD #1
FIELD #2
LOW SPOT SAMPLE #2
SAMPLE #4
SAMPLE #11
SAMPLE #6
GENTLE SLOPING
SAMPLE #10
SAMPLE #7
SLOPING
FIELD #4
FIELD #3
BOTTOM LAND
SAMPLE #9
SAMPLE #8

4

DEPTH OF SAMPLE

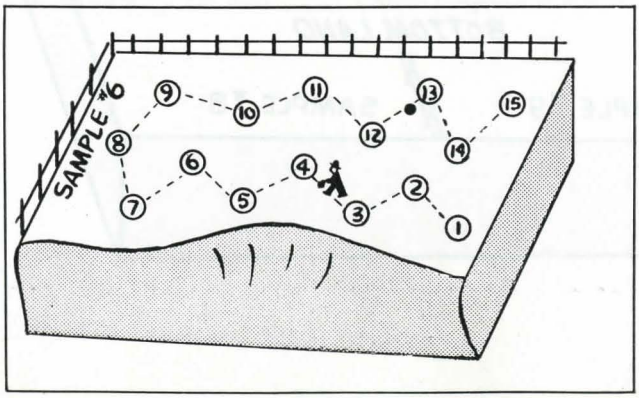
Only 6 to 7 inches—the same as you plow.



5

WHAT IS A SAMPLE?

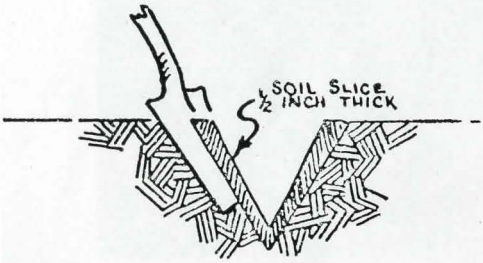
A sample is soil from 10 to 20 places in the same soil area.



USING A SPADE

If you don't have a probe or auger, use a spade.

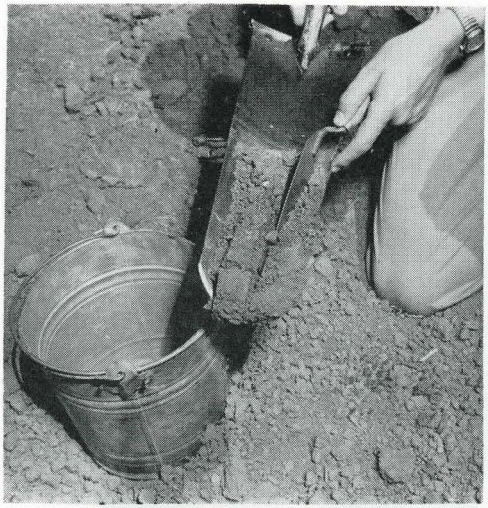
1. Dig a V-shaped hole 6-8 inches deep. Then take a half-inch slice from the smooth side—like this



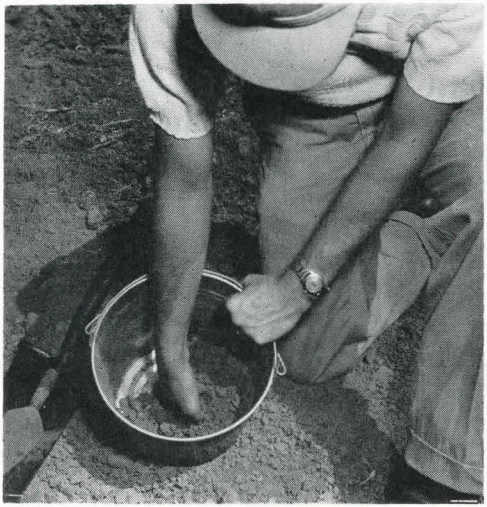
SPADE

2. Then trim sides leaving a one-inch strip like this—and then dump this strip into a clean bucket.

   Repeat in 10 to 20 places for each soil sample.



7 BREAK CLODS-MIX THOROUGHLY

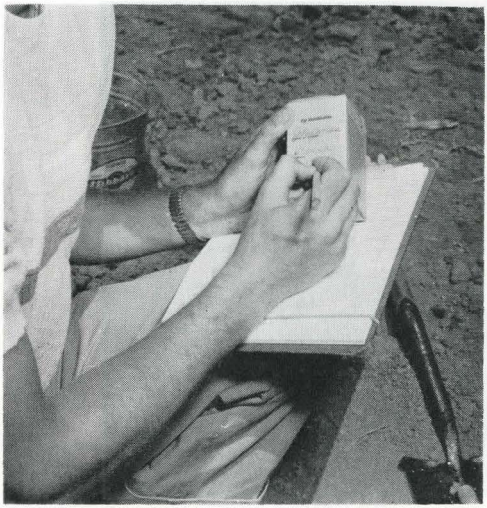


8 POUR IN MAILING CARTON

9

LABEL THE CARTON

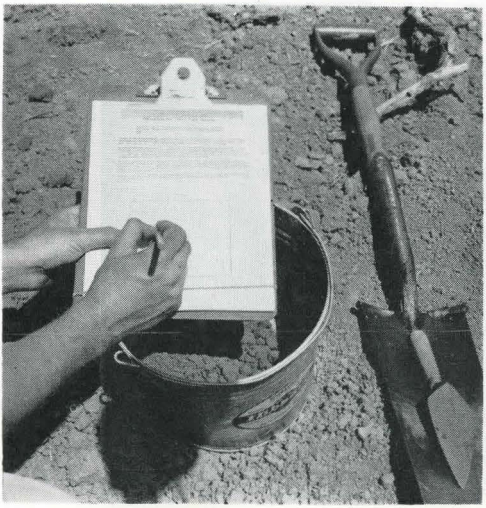
With your name, address and the sample number.



10

SKETCH YOUR FIELD

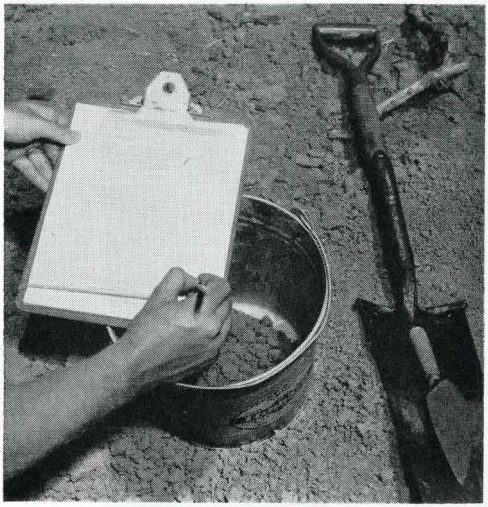
Diagram it the way you sampled it. Be sure sampled areas are labeled the same as soil sample cartons.



11

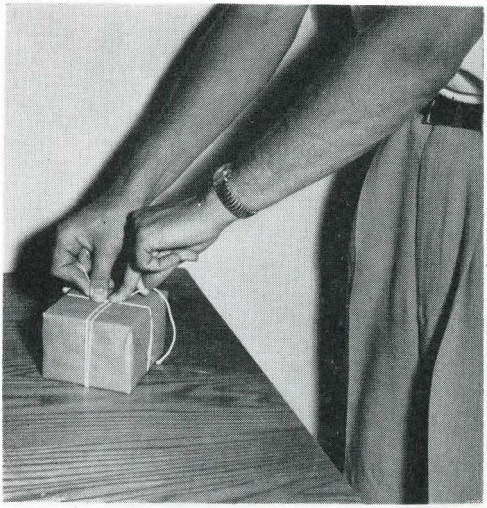
FILL OUT INFORMATION SHEET

The more information you give the better your recommendation will be.



12

WRAP SAMPLES SECURELY



13 TAKE IT TO THE COUNTY AGENT

Who will be glad to mail it for you

OR

Mail it yourself to: Soil Testing Service, College of Agriculture, Lincoln, Neb.

14 DEPENDABLE AND ACCURATE

If you have done your part well, you can be sure that the University of Nebraska soil tests are accurate and dependable.

The tests are backed up by many years of field and laboratory research in Nebraska soils.

The recommendations for lime and fertilizer use are based on thorough and extensive field experiments throughout the state, including your area.

FOR FURTHER READING

When you receive your soil sample test results from the University these publications may help you understand the condition of your soil and what you can do about it. Ask your County Agent for:

1. Extension Circular 132
   Soil Tests and Fertilizer Use
2. Current Outstate Testing Circular
   Commercial Fertilizer Results with Spring Small Grains
3. Current Outstate Testing Circular
   Fertilizer Experiments on Native Sub-Irrigated Meadows in Nebraska
4. Current Outstate Testing Circular
   Fertilizer Experiments with Corn and Grain Sorghums in Nebraska
5. Current Outstate Testing Circular
   Commercial Fertilizer Results with Winter Wheat and Rye
6. Campaign Circular 124
   Use Top Quality Lime on Your Farm
7. U.S.D.A. Farmers' Bulletin 2032
   Liming Soils for Better Farming

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