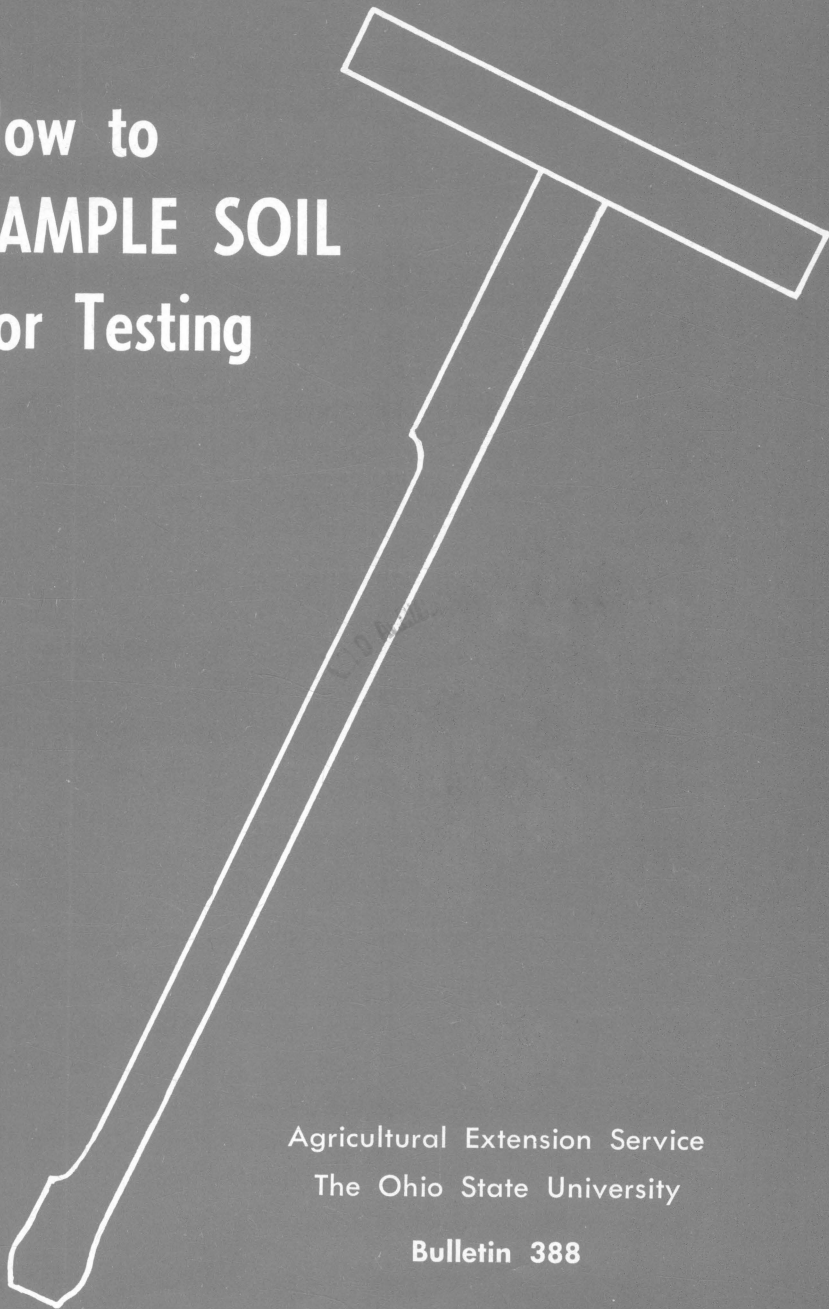


How to SAMPLE SOIL For Testing



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How to SAMPLE SOIL For Testing

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High crop yields and efficient production bring the highest farm incomes. However, high yielding crops require large amounts of plant nutrients which must be supplied, in proper balance, from the soil or from soil ammendents.

Soils constantly undergo physical and chemical changes. Some plant nutrients are removed in harvested crops or are lost by leaching and erosion; others become available from the soil or are added from manure and fertilizer. Soil tests measure the relative nutrient status in the soil and serve as the best guide to profitable use of commercial liming and fertilizing materials.

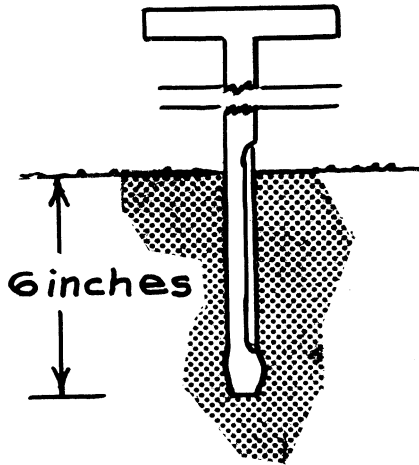
One of the most important steps in a soil testing program is collecting a soil sample that represents the area to be tested. If the sample is not representative of an area, the test results and recommendations can be misleading. Thus, it is essential to obtain a representative sample in order for the soil test and recommendations to be reliable for the area tested. The following procedure will help insure collecting representative soil samples.

1.

SELECTING TOOLS



A clean bucket, spade and knife, a soil probe or an auger. A soil probe or an auger is best because it helps to secure equal amounts of soil to a definite depth at the sampling sites.

2.**HOW TO USE THE TOOLS****3.****SOIL SAMPLING TECHNIQUES**

- (A) Scrape off top debris or residue before sampling.
- (B) Sample cropland to a six-inch depth.
- (C) Sample permanent pasture and lawn to a three-inch depth.
- (D) Sample a row crop field between the rows, thus avoiding fertilizer band areas.
- (E) Sampling is best done when soil moisture conditions are suitable for plowing.
- (F) In same field, sample separately light and dark colored soils and/or recently limed or unlimed areas. (see map under No. 5)
- (G) Do not sample in dead furrows, turn rows, strips near trees, old fence rows, fertilizer or lime spill areas, or any other freak spots.

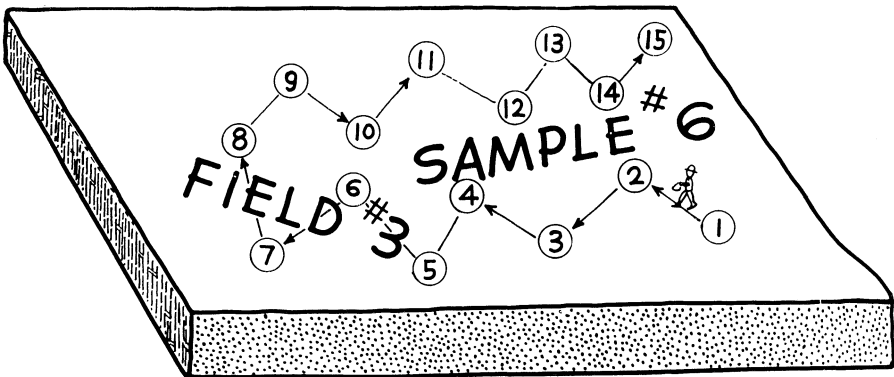
4.

HOW TO GET A COMPOSITE SOIL SAMPLE

Think of a "soil sample" as meaning the composite of several borings or spade slices from one distinct area. The word "area" here means the field or part of a field that represents each distinct kind of topography (upland as compared to bottomland), soil texture (silt loam as compared to sandy), soil organic matter (light colored as compared to dark colored), fertility status (as indicated by crop growth) and management unit (field or portion of field).

To get a representative soil sample gather at least 15 cores and preferably 20 to 30 cores, if the soil has been recently limed and/or fertilized. Take each core to the same depth. Take the same volume of soil at each site. Take cores at random in a "zig-zag" pattern over the area involved.

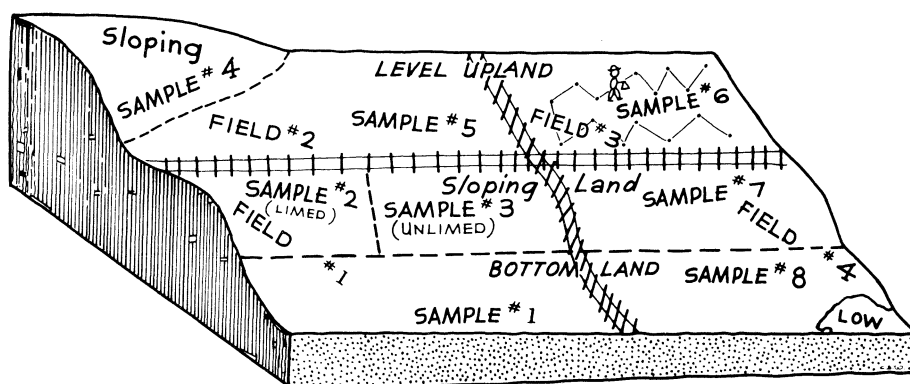
This procedure will minimize the effect of any one boring. For example, if 20 equal-size borings were taken in an area and one of them was, by chance, taken in an old fertilizer spill area, it would have very little effect on the results of the composite sample. However, if more soil had been taken at the fertilizer spill area than at any one of the other sites, then the larger volume of soil would influence the results of the composite sample.



5.

DIVIDE FIELD INTO UNIFORM AREAS AND SAMPLE

Examples of field situations are illustrated on the map. Judge for yourself if an area is large enough for special lime or fertilizer treatment. For example, Field 4's low spot may be too small, while the sloping area in Field 2 is definitely large enough for special lime or fertilizer treatment.



6.

PROCESSING THE SOIL SAMPLE

- (A) Break up clods or lumps, spread out and dry at room temperature. *Caution*—Apply no artificial heating by stove or furnace for this can alter the sample for analysis.
- (B) When dry, THOROUGHLY MIX the soil sample, mildly crush, do not pulverize, (an old rolling pin works nicely) reducing the coarser granules to about the size of wheat grains or smaller.
- (C) Retain one pint from the original sample; place in a clean paper bag or other suitable container.

- (D) Label carefully to insure identification. Example — Field 1, Area A. It is a good plan to prepare a map or sketch of your farm-field layout, showing areas sampled. This will help keep an accurate record of your soil test reports.
- (E) Take the dry soil sample and pay the fee to your county Agricultural Extension office. The sample will be packaged and mailed to the Ohio Agricultural Extension Service Soil Testing Laboratories in a special coded bag supplied by the laboratories. Do not send the soil sample directly to the Soil Testing Laboratory. Be prepared to supply the county Agricultural Extension office with the following information about each sample:
1. Soil type name or number, if known.
 2. Position of soil (upland, 1st bottom, terrace, etc.).
 3. Natural drainage (before tiling) (normal, sluggish, excessive, etc.).
 4. Slope (flat, nearly flat, rolling, etc.).
 5. Intended use (cropland rotation, permanent pasture, lawn, garden, greenhouse, commercial, etc.).
 6. Liming history (when applied, amount, kind of material).
 7. Crops (in the order to be grown in the rotation, beginning with the last crop grown).
 8. List any specific problems you've had with this soil.
 9. Tests desired.

7.

HOW OFTEN AND WHEN TO TEST SOIL

- (A) Test each field once every 3 to 5 years or once a crop rotation.
- (B) Try to avoid having your soil tested in March and/or April, as these are the laboratory's peak load months. Approximately 35 per cent of the year's total volume of testing is handled in these two months. Soil samples may be collected anytime during the year that soil conditions are suitable for sampling. It is not necessary to wait until just prior to planting to get your soil tested.

8.

TESTS AVAILABLE AND THEIR COSTS

The following groups of tests are offered by the Ohio Agricultural Extension Service Soil Testing Laboratory: Any 1, 2, or all 3 groups may be chosen.

Standard Group.....Fee \$1.25 per sample

pH
Lime Deficit
Phosphorus
Potassium
Organic matter
Color and texture

Minor Element Group.....Fee \$2.00 per sample

Magnesium
Manganese
Boron

Greenhouse Group.....Fee \$2.00 per sample
(for greenhouse soils only)

Nitrates
Soluble salts
One minor element (chosen from Minor Element Group)

DON'T GUESS . . . SOIL TEST!!!

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