



RECOMMENDATIONS FOR TAKING A GOOD SOIL SAMPLE

MATERIALS NEEDED:

- 1) Soil Sample Bags
- 2) Soil Survey Map (available from the county SCS office)
- 3) A sample plan
- 4) A soil probe or shovel
- 5) A clean pail (plastic or Teflon-coated if sampling for zinc)

WHEN TO SAMPLE:

It is best to sample after harvest and before fall or spring fertilization. It is best not to sample when the soil is excessively wet, or shortly after a lime fertilizer, or manure application.

SELECTING A SAMPLING AREA:

The sample area should represent a uniform soil area with similar past management. Although there can be widely different soil fertility results, the organic matter level should be fairly similar within a soil mapping unit. If you are not using a soil survey you should differentiate soils by color and slope.

SAMPLING RULES:

- 1) Do not sample odd areas: old livestock lots, old lanes, old fence lines, spill areas, small field depressions.
- 2) Do not mix dissimilarly treated areas. If you have the same soil type but part of it was limed or part of it was spread with manure, these areas should be sampled separately.

COLLECT A SAMPLE THAT REPRESENTS THE AREA YOU WANT TESTED

Take between 15 and 20 subsamples from the sampling area following a zig-zag pattern through the field. If the area is variable and location of fertilizer bands is unknown then the number of subsamples should be increased to between 35 and 50 subsamples to lessen the effect of the possibility of including a subsample taken from a fertilizer band. Take equal amounts of sample to an equal depth at each subsampling site. The depth should be the same as the plow depth. If the field is usually not plowed, (such as a pasture) sample to a 6 inch depth. Place all the subsamples in a clean pail and mix thoroughly. Fill the bag one-half to two-thirds full, then close bag securely and have it tested.

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RECOMMENDATIONS FOR TAKING A GOOD SOIL SAMPLE - continued

NO-TILL OR RIDGE-TILL SAMPLING:

No-till sampling should include both a sample taken at the regular 6 inch depth and a sample taken from the 0 - 2 inch depth. Due to the rapid reduction of soil pH in the top 2 inches by the continuous use of broadcast nitrogen fertilizers, the soil test will not accurately reflect the pH when mixed with the higher pH soils in the lower 2 - 6 inches. Soil pH is often necessary to know for certain herbicides. Phosphorus and potassium should be determined using the 0 - 6 inch sample. Chisel plowed or disked fields should be treated as no-till fields due to the ineffective incorporation of surface applied fertilizers.

Ridge-till presents another problem. The suggested way to sample is to take the sample one-half the distance between the center of the row and between the row or in the shoulder of the ridge. If fertilizer materials are being injected then it is suggested that you use the same procedure as above.

KEEP GOOD RECORDS:

This is the best tool to determine how your fertility program is helping your soil. If yields are consistent and soil nutrient levels are increasing, lower levels of fertilizer may be recommended. If yields are decreasing, increased fertilizer rates may be needed. Only long term trends should be used since seasonal variability can account for differences in yields.

ACCURACY:

Finally, it has been scientifically determined that the greatest percentage of error in a soil test is made at the soil sampling level. A soil test will only be as accurate as the soil sample.

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