

# A FIELD GUIDE TO SOIL SAMPLING

Adapted from Darryl D. Warncke's *Sampling Soils for Fertilizer and Lime Recommendations* (2000)  
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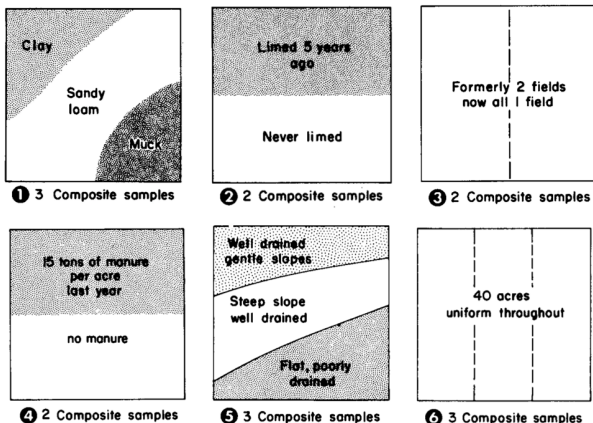
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**Soil sampling is a foundational step to make effective farm management and soil fertility decisions. Evaluating changes in soil pH and available nutrient levels over time requires that the collection of soil samples accurately represents field conditions. Reliable soil analysis and proper interpretation of the results can only occur when appropriate soil sampling practices are used. This step-by-step field guide is a summary of best practices and recommendations for composite soil sampling to help you do just that.**

## 1 Plan on where to sample

Develop a map of uniform areas within the field based on soil type (1), past management or cropping history (2,3,4), topography (5) and/or field size (6).

Make use of soil survey maps, topography and management history. Each area will represent one composite sample. Samples should not represent more than 40 acres.



## 2 Decide on a sampling depth

Surface samples are generally considered to be of the first 6". However, differing management styles and goals for the soil sample information may lead you to consider using different soil sample depths. Whatever depth chosen for taking the soil probes, it should be taken consistently across the field and be indicated in your records. Mark your collection tool to maintain consistent depth. Other depth considerations:

System Consideration	Sampling Depth Suggestion
Plowed soils	Should be sampled to the depth of plowing
Reduced-tillage systems and no-till systems	Sample to 8 inches
Field has annually surface applied nitrogen without incorporation	Collect a second sample to a depth of 3 inches for determination of soil pH. This is important for determining the proper lime rate and efficacy of herbicides
Coarse texture soils	Sample from 6"-24". In these soils, nutrients may accumulate in the subsoil where they can still be utilized by growing crops
Sampling for mobile nutrients such as nitrate, sulfur, and chloride	Collect a separate 6" to 24" sample (minimum 10 cores per 20 surface cores)



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Mark probes at the desired depth to maintain consistent sampling

