

## **Soil Sampling—A Review**

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Soil sampling is reviewed from the perspective of rationalizing data acquisition using statistical methodology. Various practical, statistical and scientific issues in designing sampling schemes are discussed. It is stressed that a sampling scheme which is appropriate for one purpose may be highly inefficient for others. In other words: different purposes require different types of results, which should be produced by different types of sampling schemes. In designing sampling schemes it is therefore useful to reason backward, from the type of end result requested, via the statistical analysis leading to that result and the sample data needed for that analysis, to the actual sampling in the field. The two main statistical approaches in soil sampling are the design-based and the model-based approach. Their principles, mutual differences and basic techniques are discussed, along with some common misconceptions and possibilities of making a rational choice between them. Finally, some interesting recent developments and research topics in soil sampling are indicated.