Midwest Laboratories®
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FACTORS EFFECTING IRREGULARITIES IN SOIL ANALYSIS

1. Varied depth of sampling (Sample at tillage depth).
2. Combining unlike soil areas into one composite sample.
3. Combining soil areas with different past liming, fertilizer, or cropping histories into one composite sample.
4. Combining an insufficient number of sub-samples into composite from extremely varied or land-leveled fields.
5. Attempting to use single composite sample for too large an acreage.
6. Varying amounts of organic matter or undecomposed organic matter in sample.
7. Soft rocks in sample.
8. Forced drying of soil sample at high heat.
9. Soils that have been sampled, dried, or processed in contaminated containers.
10. Improper packaging of samples, allowing contaminants to become part of sample.
11. Mixing sample identity.
12. Improper sampling equipment (Do not use galvanized or cadmium based equipment. Do not lubricate with other than food oil).
13. Poor distribution of manure applications.

FACTORS EFFECTING CROP RESPONSE TO FERTILIZER

1. Fertilizer or liming materials improperly applied or not thoroughly mixed in soil:

   (a) Material still on top of soil - poor incorporation or drought.
   (b) Coarse materials not dissolved or not extract-soluble.
   (c) Row fertilizer applications not constituting a proper proportion of sample.

2. Leaching of certain elements due to materials used, rates of application, or excessive water.
3. Necessary soil microbes not present for proper release or conversion of fertilizers to available forms.
4. Sheet erosion of material applied.