Soil Sampling the Zones

Directed Sampling

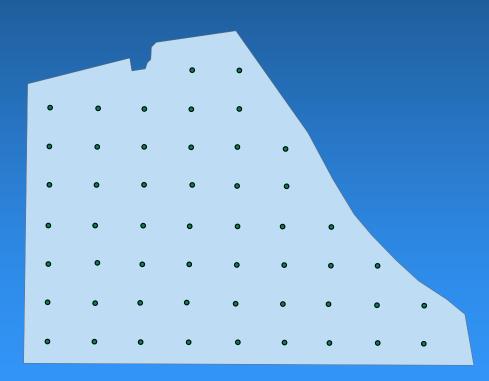
- Sample within zones
- 1 sample/7-10 acres
 - Subsample across the 15 acres
- Advantages
 - Reduce sampling time, cost, labor, etc.
- Disadvantages
 - Loose soil variability information



Sampling the Zones

Grid Sampling

- Sample every X acres (X is judgment call)
- Advangtages
 - With or without management zones
 - Good measure of soil variability
- Disadvantages
 - Time and labor consuming
 - Costly analysis



Developing a Management Zone For The First Time

Start simple

- Use the information that is readily available and balances the cost and yield relationship.
- Good information should be
 - Quantitative
 - Densely or continuously sampled
 - Stable over time
 - Examples
 - Bare soil photos
 - Soil survey maps
 - Topography

Developing a Management Zone For The First Time

- Second step is to refine zones over time
 - Add information that describes yield variations
 - Examples
 - Yield maps (multi-year)
 - Grid or targeted soil sampling
 - Aerial photographs at different crop stages

Developing a Management Zone For The First Time

- Third step is to evaluate zone effectiveness
 - Are management zones responding to treatments?
 - Is maximum economic yield increasing?
- Look for main yield-limiting factors within zones
 - Are factors stable?
 - Are factors variable?

Last Thoughts on Management Zones

 Ways to use management zones are only limited by the imagination

 Management zones are only as good as the decisions and sampling procedures that determined them