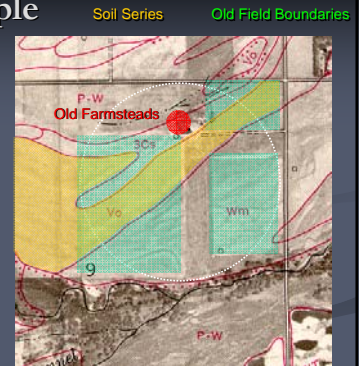


## Issues to Consider Prior to Sampling

- Soil series boundaries
- Cropping history
- Prior field subdivision
- Manure or other biosolid application
- Old farmstead locations
- Previous fertilizer placement
- Irrigation pattern (particularly if furrow-irrigated)

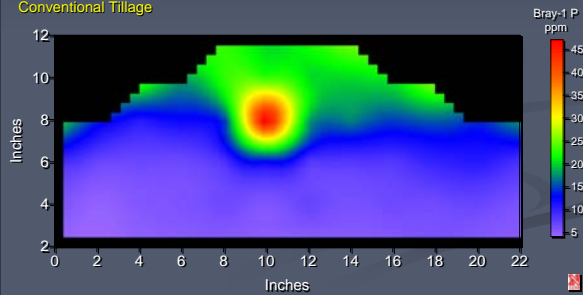
## How to Sample

- Consider variability introduced by soil series, previous field subdivision, presence of old farmsteads with a history of livestock.
- Define areas to sample within according to history.



## Starter Fertilizer Effects on Bray-1 Phosphorus

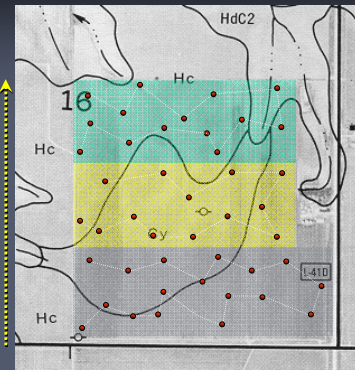
Long-Term Tillage Study  
South Central Ag Lab Research Farm  
Conventional Tillage



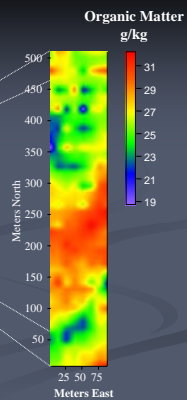
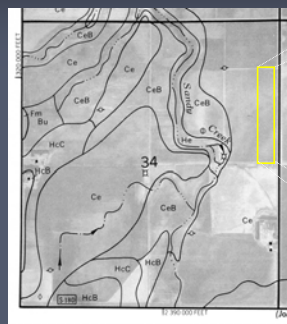
## Sampling Patterns – Furrow-Irrigated Field

Hc – Hastings silt loam  
Cy – Crete silt loam  
HdC2 – Hastings silty clay loam, 3-6% slope, eroded

Furrow-irrigation water flow

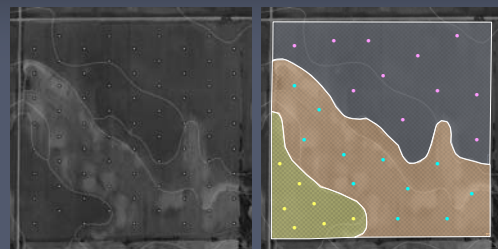


## Deciding Where to Sample – Sources of Spatial Information



## Site-Specific Management

Grid or directed sampling?



Systematic sampling according to a pre-defined pattern.

Sampling within zones pre-determined from other spatial information.