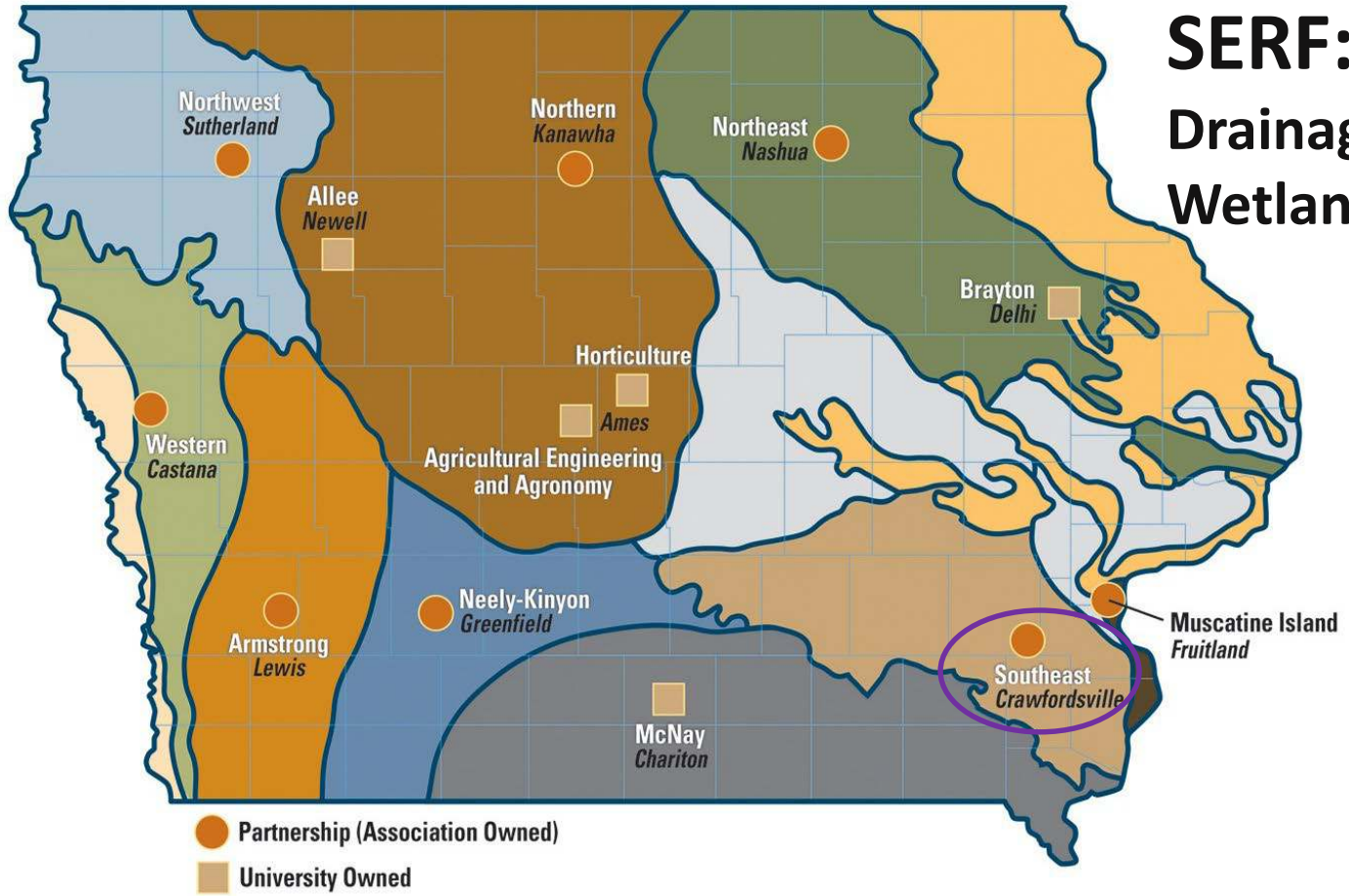




SERF: Drainage Management Wetland





Drainage Water Management

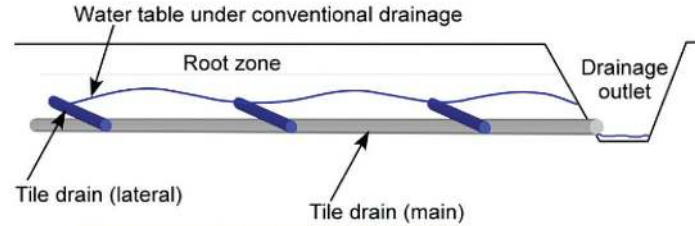


Wetland

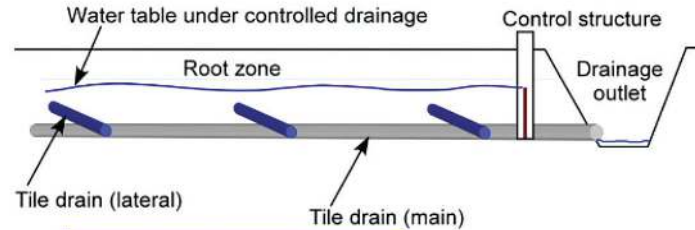
Southeast Research and Demonstration Farm (SERF)

- Located near Crawfordsville, Iowa
- Conventional drainage, controlled drainage and no artificial drainage studied for their impact on tile drainage water quality
- Site includes eight individually drained plots that range from 3-6 acres in size mainly on Kalona and Taintor, both of which are [poorly drained silty clay loams](#).

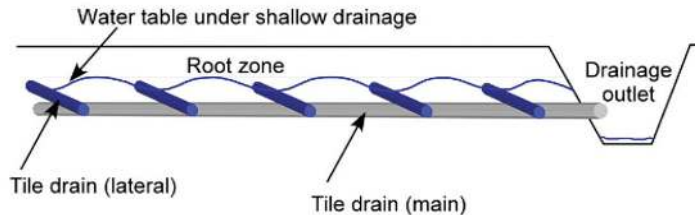
Conventional Drainage



Controlled Drainage

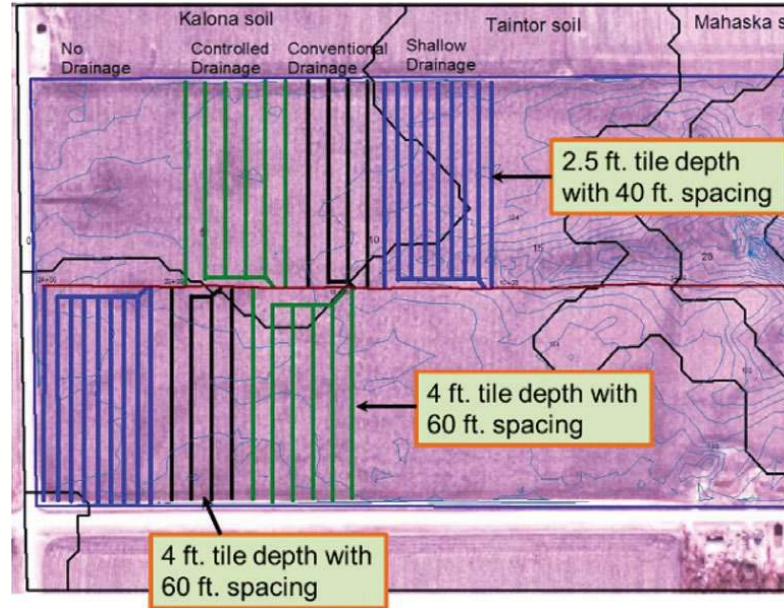


Shallow Drainage

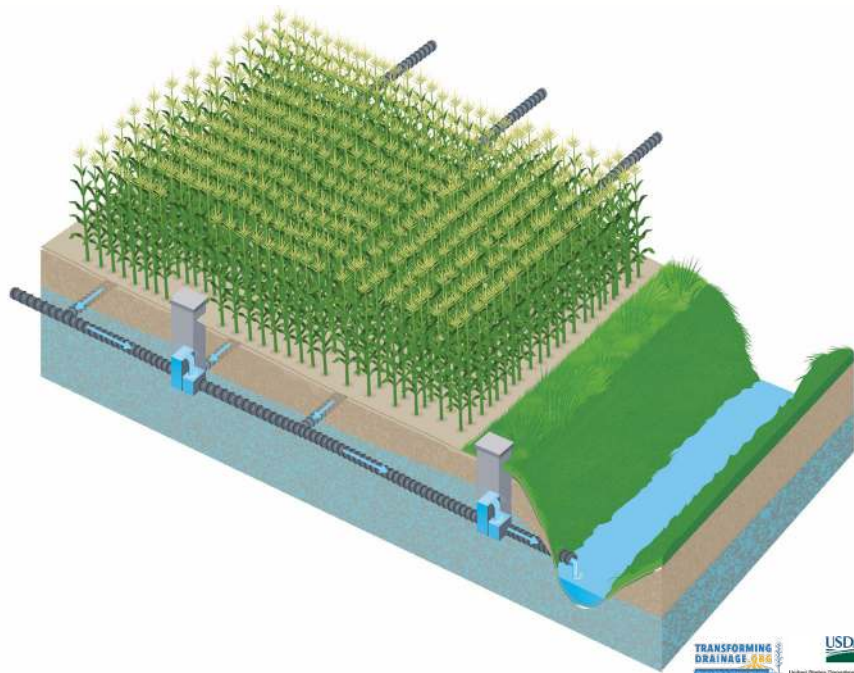


Southeast Research and Demonstration Farm (SERF)

- Shallow drainage tiles at 2.5 feet depth and 40 foot spacing.
- Conventional drainage tiles at 4 feet depth and 60 foot spacing.
- Control boards are set at 2.5 feet below the ground surface and are removed two weeks before planting.
- Grab samples for nitrate-nitrogen (nitrate-N) and total phosphorus (P) analysis are taken weekly when tiles are flowing.
- Flow monitoring equipment measures volume of tile drainage.

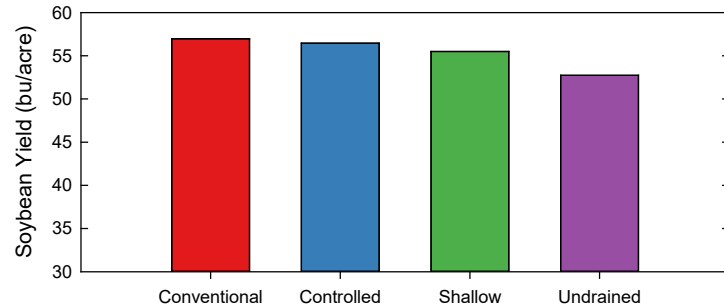
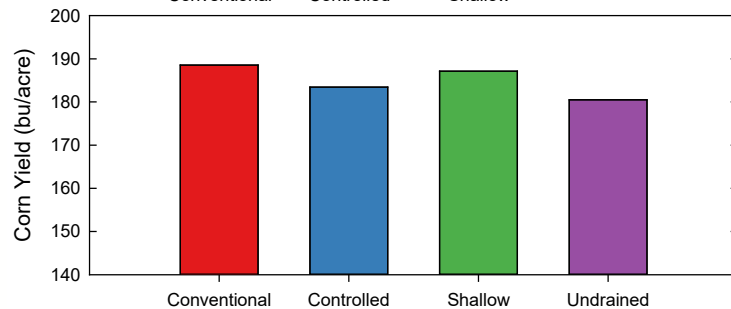
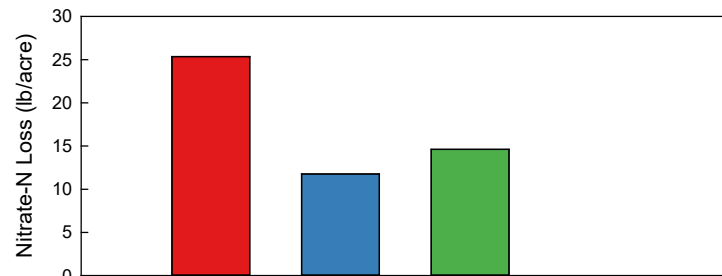


Drainage Water Management

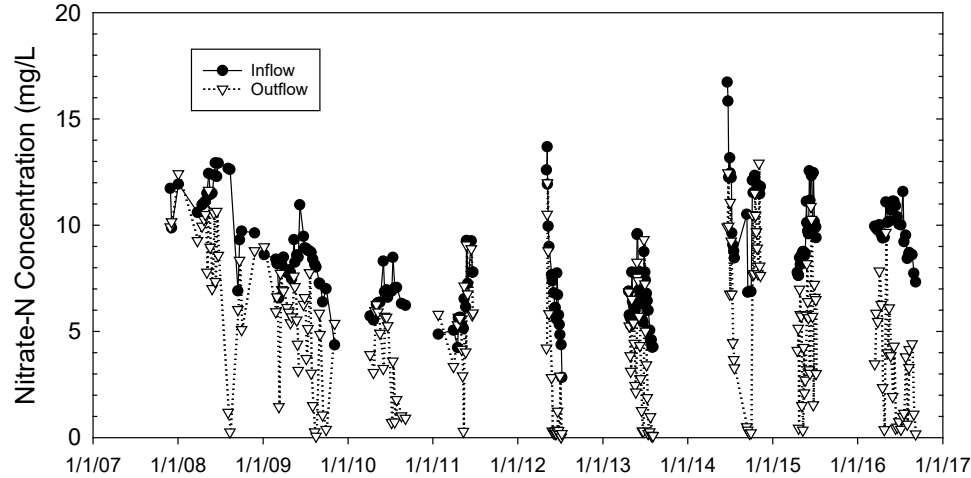




 United States Department of Agriculture
 National Institute of Food and Agriculture



Wetland



2008-2016

Inflow: 7,116 lbs of nitrate-N

Outflow: 4,916 lbs of nitrate-N

Removed by wetlands: 2,200 lbs of nitrate-N