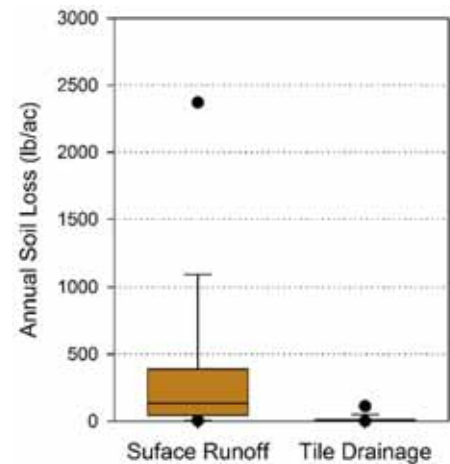


Understanding Soil Loss

Discovery Farms Programs in Minnesota and Wisconsin have collected edge-of-field water quality information from 25+ farms and 50+ fields starting in 2002. A total of 98 site years of surface runoff data collected and 27 site years of tile drainage collected.

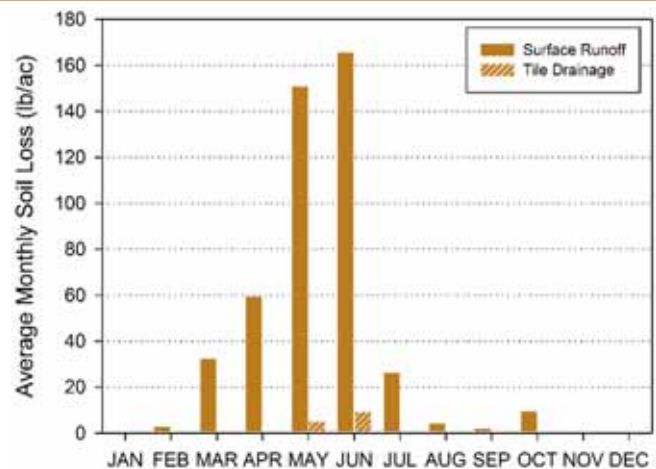
Surface runoff is a more significant driver of soil loss than tile drainage.

- Median annual soil loss is 134 lb/ac
- This low value equates to about 3 five gallon pails full of soil from an area the size of a football field
- High annual soil losses suggest a need to re-evaluate tillage practices to match the landscape
- Fields with high soil losses stand out visually with sedimentation in low areas and rills running down hillsides
- Make sure to check fields annually for these signs and adjust practices if needed



Most soil loss occurs in May and June.

- 69% of the soil loss occurs in May and June
- Fields are most vulnerable to soil loss from planting to crop canopy
- Too little soil cover and too much soil disturbance for the landscape are indicated by large soil losses in May and June.



A small number of events cause the most soil loss.

- There have been 1074 surface runoff events monitored by Discovery Farms
- 10% of the runoff events caused 85% of the total soil loss
- Nearly all of those runoff events were generated by very intense storm events
- The combination of intense storms and time periods where the landscape is most vulnerable, produces the most soil loss

