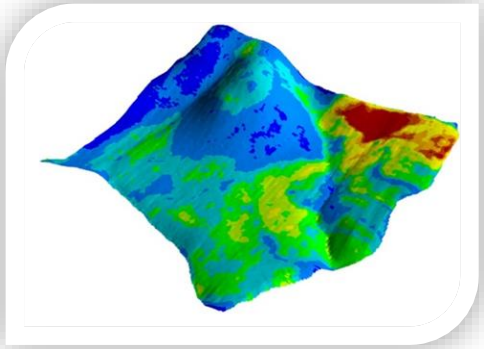
LandStream

Grow Strong Land

Growing Deep-Topsoil Watersheds: Landscape Feedback Infrastructure to Grow Clean Water




Abe Collins

LandStream

(802) 782-1883 abenewsoil@gmail.com

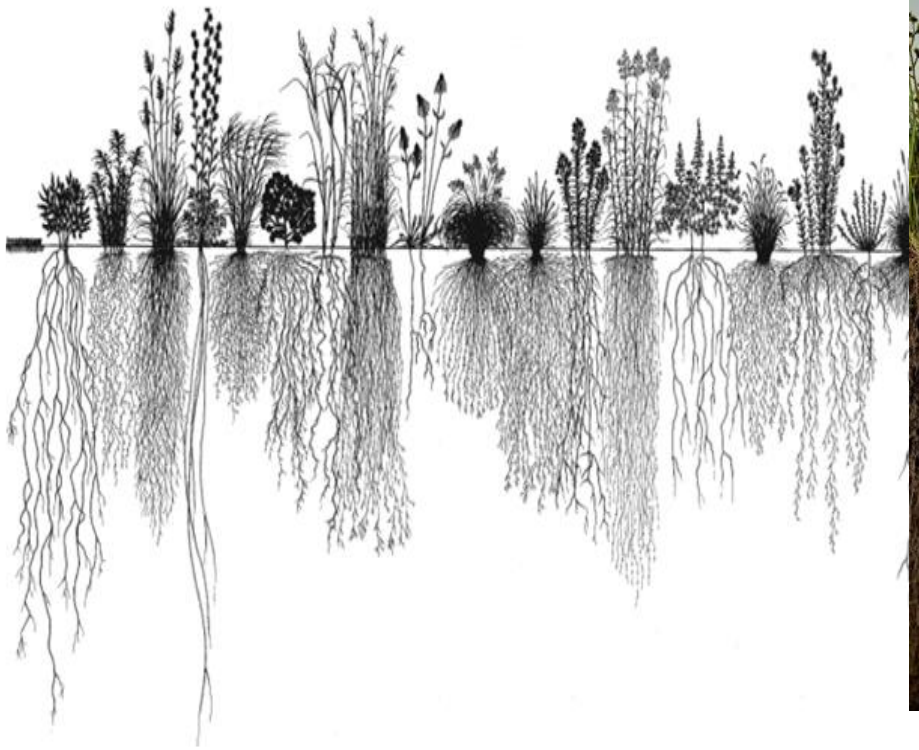
Windmill Vanes for Agriculture, Communities and Governments

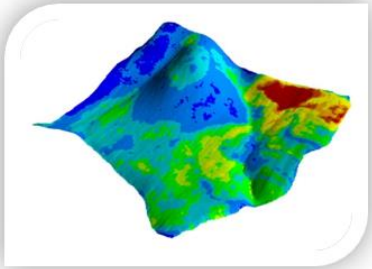
- **Goal**: Distributed landscape feedback infrastructure as a Best Management Practice for achieving soil-formation and watershed health.

Hypothesis:

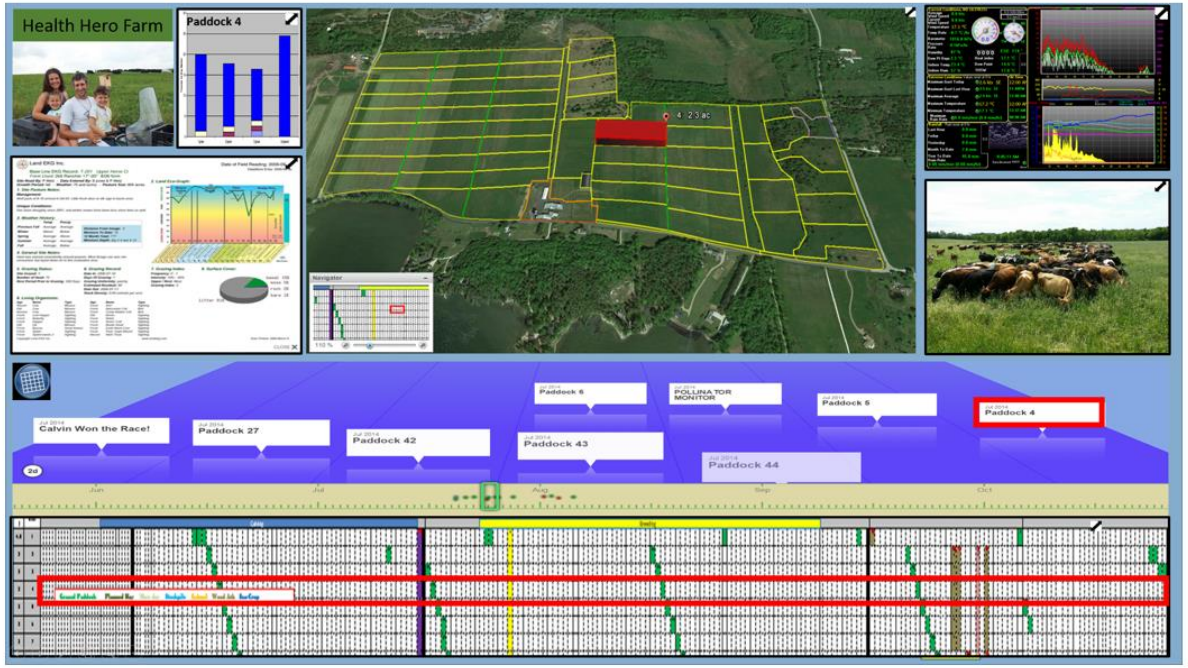
- Farmers with real-time landscape feedback can adaptively manage for:
  - "Harder-working land" - Increased average annual photosynthesis and soil aggregate formation
  - Improved water quality leaving the farm
  - Increased infiltration →reduced flooding
  - More economically efficient production
  - Clean, regulated water as a crop.

Infiltrate, Hold, Purify, Slowly Release



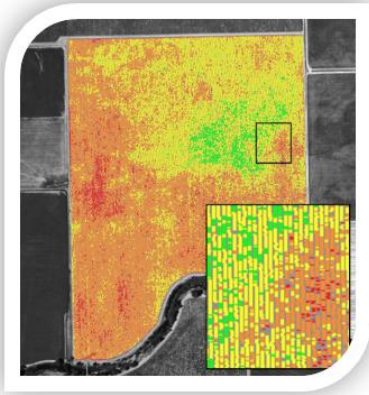


All Soil Properties mapped to 4’



Soil/Water

Weather

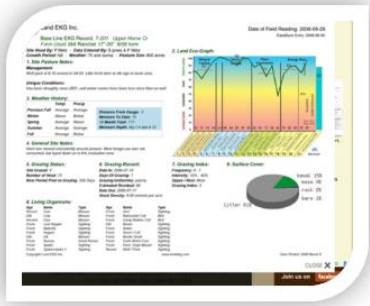


Solar energy flow

Water Flow and Quality

Ag Yield

Aggregate Characterization



Soil Surface, Biodiversity, Forage

Watershed Metrics

Reading Monthly-Yearly Photosynthesis (Energy flow to power working watersheds) and Soil Capacity to Infiltrate, Purify and Slowly Release Water

Correlate Energy Flow, Farmer Dashboards and Stream Monitoring

---

Rock River Watershed

Landsat 8 imagery: Median Normalized Difference Vegetation Index for Calendar Year 2014:

Proxy for average photosynthesis over 2014.