

Farmer: Joe Farmer
Farm: Dads
Field: Home Bottom

Location: Crawford Co., IA
Sampling date: 10/22/2021
Soil Analyses: SURETECH LABORATORIES



Field Area & Sample Locations

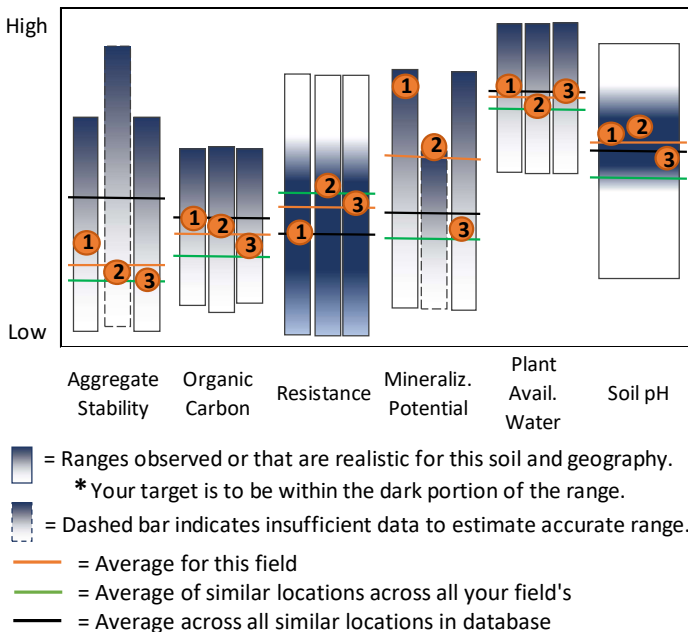
Summary & Recommendations

- Soil Health Rating: MODERATE
- Penetrometer resistance and pH are at ideal levels
- Target improving: aggregate stability and organic carbon
- Practices for improving targets:
 - Optimize plant growth - implement balanced fertility management including secondary and micronutrients
 - Use cover crops – increases aggregate stability, organic carbon, water infiltration, and microbial activity
 - Reduce soil disturbance - maintains residue cover and minimizes loss of existing soil carbon
 - Increase plant residue and root biomass - maximize cover crop duration and growth
- Limitations inherent in this field: occasional flooding and erosion due to slope
 - Occasional flooding can limit soil health by reducing plant growth. Steep slope combined with low aggregate stability can cause soil erosion and crusting
 - Limitation management: flood controls, contour farming, strip cropping, erosion control structures

Soil Health Assessment

The range and position of shaded bars in the soil health assessment chart are dynamic and can vary by field, soil type, and geography. The bars represent realistic ranges and desired levels for your field. Page 4, “Purpose & Measures” describes and explanations the value and implications of each assessment.

Soil Health Assessment Chart:



Laboratory Results:

Measure	Sample Number			Field Average
	1	2	3	
Depth (cm)	0-15	0-15	0-15	0-15
Slope (%)	4	1	14	6
Soil pH	6.1	6.0	6.4	6.2
Ag. Stab. ^a (%)	0.36	0.31	0.29	0.32
SOC ^b (%)	30.61	29.37	25.73	28.57
Resp. ^c (ppm)	210.2	128.9	35.6	124.9
Resistance ^d (PSI)	160	220	200	193
Est. PAW ^e (in/ft soil)	1.98	1.89	1.94	1.94

^a Ag. Stab. = Aggregate Stability ^d Resistance = Penetrometer Resistance
^b SOC = Soil Organic Carbon ^e PAW = Estimated Plant Available Water
^c Resp. = Mineralization Potential based on CO₂ Respiration

Site Characteristics:

Sample	Soil Map Unit	Slope	Parent Material	Drainage Class	Primary Limitations
1	Kennebec silt loam, 0 to 2% slope	4%	Silty Alluvium	Moderately Well	Occasional flooding
2	Kennebec silt loam, 0 to 2% slope	1%	Silty Alluvium	Moderately Well	Occasional flooding
3	Castana silt loam, 5 to 14% slope	14%	Alluvium, Colluvium	Well Drained	Runoff Potential High