

## Management History - Interview

The following questions are offered as examples to guide a conversation with the client and help the planner more thoroughly understand current conditions, the client's management and how these may contribute to existing soil health resource concerns. Answers to these and other similar questions will be helpful in assessing some of the indicators.

1. What is the crop rotation?
2. Describe your tillage system?
3. How long have you been in this management system and are you considering any changes?
4. For how many months per year is the soil surface at least 75 percent (estimated) covered with plants, residue or mulch?
5. Is cropland grazed? List animal type, number and weight.
6. Are cover crops a consistent part of the cropping system? If yes, for how many years has the field been continually cover cropped?
7. How are the cover crops terminated?

## Management History – Interview Cont'd

8. What integrated pest management strategies are used (e.g., crop scouting, selective spraying, treated seeds)?
  
  
  
  
  
  
  
  
  
  
9. What nutrient management strategies are used (e.g., banding, split application, use of the 4Rs, manure/biochar/compost)?
  
  
  
  
  
  
  
  
  
  
10. Is the field irrigated? If yes, what type of irrigation system and how many acre-inches are applied for each crop in the rotation described above?
  
  
  
  
  
  
  
  
  
  
11. Does water pond or run off during or immediately after typical rainfall or irrigation events? Where in the field?
  
  
  
  
  
  
  
  
  
  
12. Are there problems with crop emergence or early crop growth? Where in the field?
  
  
  
  
  
  
  
  
  
  
13. Is water management a concern (i.e., field too wet or too dry at planting)?

Other observations not captured in the assessment including plant condition and recent weather and landscape characteristics that may affect assessment results:

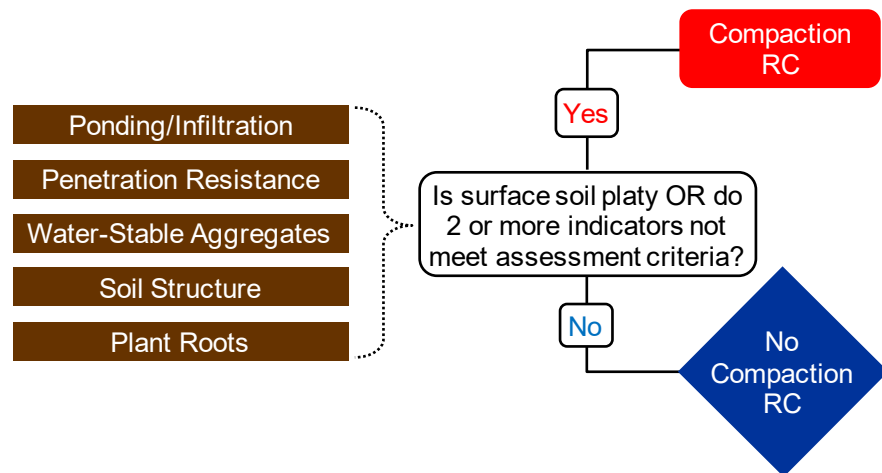
## Cropland In-Field Soil Health Assessment Worksheet

<p><b>Soil Health Resource Concerns</b></p> <p><b>CPT:</b> Compaction</p> <p><b>SOM:</b> Soil Organic Matter Depletion</p> <p><b>AGG:</b> Aggregate Instability</p> <p><b>HAB:</b> Soil Organism Habitat Loss or Degradation</p>	<p><b>Indicator Timing and Use</b></p> <p>Anytime ☀️   After Rain or Irrigation ☁️   With Adequate Moisture 💧   Before a Tillage Event 🚜</p> <p>Primarily No-Till Systems ⚙️   Before Growing Season ♻️   During Growing Season 🌿   Interview 🗣️</p>	<p>Meets Assessment Criteria (Yes/No)</p>
<p>Location</p>	<p><b>Soil Cover</b> ☀️   <b>SOM, AGG, HAB</b></p> <ul style="list-style-type: none"> <li>Surface cover from plants, residue or mulch; cover greater than 75% (estimated)</li> </ul>	<p><input type="checkbox"/> Y <input type="checkbox"/> N</p>
<p>Field/CMU</p>	<p><b>Residue Breakdown</b> ☀️ ⚙️ 🗣️   <b>SOM, HAB</b></p> <ul style="list-style-type: none"> <li>Natural decomposition of crop residues or organic mulch is as expected with crop and conditions</li> </ul>	<p><input type="checkbox"/> Y <input type="checkbox"/> N</p>
<p>Tract #</p>	<p><b>Surface Crusts</b> 🚜 ♻️ 🌿   <b>AGG, HAB</b></p> <ul style="list-style-type: none"> <li>Crusting on no more than 5% (estimated) of the field/CMU</li> </ul>	<p><input type="checkbox"/> Y <input type="checkbox"/> N</p>
<p>Client/Customer</p>	<p><b>Ponding/Infiltration</b> ☀️ ☁️ 🌿 🗣️   <b>CPT, AGG</b></p> <ul style="list-style-type: none"> <li>No ponding on non-hydric soils within 24 hours following typical rainfall or surface irrigation event;</li> <li>OR, no infiltration difference between assessment area and fencerow sample in the same soil type;</li> <li>OR, soil infiltrates 1-inch of water in 30 minutes or less</li> </ul>	<p><input type="checkbox"/> Y <input type="checkbox"/> N</p>
<p>Plan</p>	<p><b>Penetration Resistance</b> 💧 🚜 ♻️ 🌿   <b>CPT</b></p> <ul style="list-style-type: none"> <li>Penetrometer rating &lt;150 psi within top 6-inch depth and &lt;300 psi in the 6 to 18-inch depth;</li> <li>OR, slight or no resistance with wire flag inserted to 12-inches</li> </ul>	<p><input type="checkbox"/> Y <input type="checkbox"/> N</p>
<p>Date</p>	<p><b>Water-Stable Aggregates</b> ☀️   <b>CPT, SOM, AGG, HAB</b></p> <ul style="list-style-type: none"> <li>Strainer: soil structure remains intact with aggregates apparent;</li> <li>OR, Soil Quality Test Kit (SQTK)/Jornada slake box meets stability class 5 to 6;</li> <li>OR, Cylinder: At least 80% (estimated) remains intact after 5 minutes with little cloudy water</li> </ul>	<p><input type="checkbox"/> Y <input type="checkbox"/> N</p>
<p>Soil Map Units</p>	<p><b>Soil Structure</b> ☀️   <b>CPT, SOM, AGG, HAB</b></p> <ul style="list-style-type: none"> <li>Granular surface soil structure and no platy or massive structure in top foot of soil</li> </ul>	<p><input type="checkbox"/> Y <input type="checkbox"/> N</p>
<p>Soil Moisture</p>	<p><b>Soil Color</b> 💧   <b>SOM</b></p> <ul style="list-style-type: none"> <li>No color difference between assessment area and fencerow sample in same soil type;</li> <li>OR, value is on the darker range using color chart and official series description</li> </ul>	<p><input type="checkbox"/> Y <input type="checkbox"/> N</p>
<p>Surface Horizon Texture</p>	<p><b>Plant Roots</b> 🌿   <b>CPT, SOM, AGG, HAB</b></p> <ul style="list-style-type: none"> <li>Roots covered in a soil film (rhizosheaths) or are part of soil aggregates;</li> <li>OR, living roots if present are healthy, fully branched, extended and unrestricted</li> </ul>	<p><input type="checkbox"/> Y <input type="checkbox"/> N</p>
	<p><b>Biological Diversity</b> 💧 🗣️   <b>SOM, AGG, HAB</b></p> <ul style="list-style-type: none"> <li>Evidence of more than 3 different types of organisms observed or biological hotspots present</li> </ul>	<p><input type="checkbox"/> Y <input type="checkbox"/> N</p>
	<p><b>Biopores</b> ☀️ ⚙️   <b>SOM, AGG, HAB</b></p> <ul style="list-style-type: none"> <li>Presence of multiple intact root or earthworm channels that extend vertically through the soil with some connecting to the surface</li> </ul>	<p><input type="checkbox"/> Y <input type="checkbox"/> N</p>

# Cropland In-Field Soil Health Assessment Resource Indicator Decision Trees

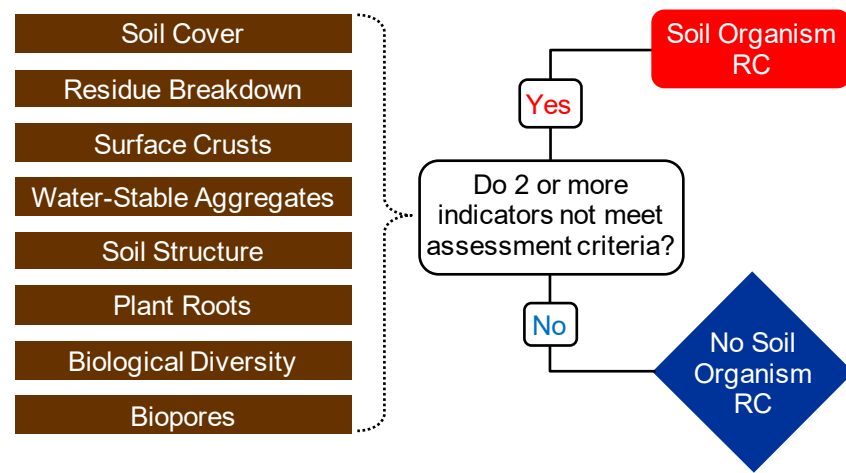
## Compaction

Circle the indicators that do not meet assessment criteria during the evaluation and follow decision tree below to determine if the given resource concern (RC) is present. Document on worksheet.



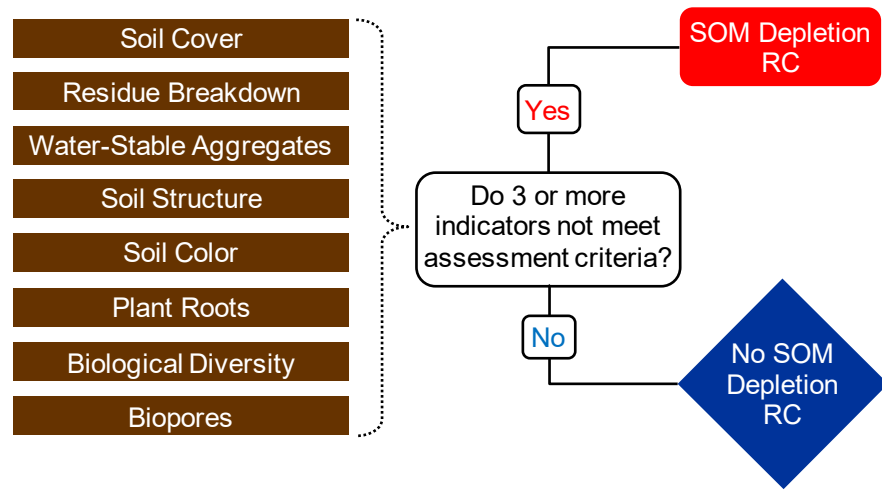
## Soil Organism Habitat Loss or Degradation

Circle the indicators that do not meet assessment criteria during the evaluation and follow decision tree below to determine if the given resource concern (RC) is present. Document on worksheet.



## Soil Organic Matter Depletion

Circle the indicators that do not meet assessment criteria during the evaluation and follow decision tree below to determine if the given resource concern (RC) is present. Document on worksheet.



## Aggregate Instability

Circle the indicators that do not meet assessment criteria during the evaluation and follow decision tree below to determine if the given resource concern (RC) is present. Document on worksheet.

