



12A

SOIL TECH NOTES

Soil Organic Matter (SOM)

PROBLEM: “Didn’t know organic matter was so important. Think I need more?”

LOW SOM PROBLEM CAUSED BY:

- Excessive tillage which can cause SOM present to be oxidized or “burned off” as air is mixed with the soil.
- Low total residue amounts.
- Poor breakdown of surface residues that need to be incorporated into the soil.

WHAT BENEFIT IS GAINED BY ADEQUATE SOM AMOUNT:

- All microbial life, which affects all plant life, is controlled and determined by the organic matter in the soil.
- Organic matter exudates, such as Glomalin, help to stabilize and glue the soil structure together.
- Organic matter holds organic nutrients that can be released into the soil for uptake by all the agronomic plants we grow.
- Organic matter can hold inorganic nutrients and keep them from leaching out of the soil system.
- Organic matter buffers pH levels. Organic matter buffers surface soil temperature.
- Improves soil resilience to negative soil changes.

POSSIBLE WAYS TO INCREASE SOM IN SOIL:

- Add Organic Matter to the soil whenever and however you can!
- Reduce tillage and reduce oxidation of the SOM that is already present.
- Cover crops provide an excellent source of both surface and underground SOM.
- Pay attention to C:N ratios in regard to adding straw and other such relatively stable OM to the soil.

