



## Overview of Lucas SOM Calculator Ver. 1.5x



### What is it?

The Lucas SOM Calculator is a spreadsheet tool that predicts the soil organic matter (SOM) in a field in response to cropping pattern, tillage, manure application, erosion, cover crops and stover removal.

### What does it do?

- Can help farmers evaluate the impact of their future management plan on the SOM
- Can help estimate the economics of stover removal
- Can help optimize stover removal rates, such that the SOM is not adversely affected over a period of time
- Can help choose alternatives that would mitigate/offset the negative effects of stover removal
- Can help design a management plan for a farm in order to reach a certain goal of carbon sequestration
- Can print a detailed report of the scenarios with charts
- Gives an estimate of nutrient status of the soil

### Who can use it?

- Farmers
- Private Industry such as crop consultants, contractors etc.
- Federal/state/local agencies such as the NRCS, Extension agents etc.

### How to use it?

- Field inventory needed: Crop Rotation, yields, tillage type, tillage depth, erosion rate, cover crops, soil organic matter level at the beginning of simulation period (first year).
- Refer to the User's guide (included with the calculator)
- Tutorial on YouTube (upcoming)

### What are the limitations?

- Calculator predicts only long-term trends (10 to 50 years)
- The validity of the calculator is limited to Michigan and neighboring states.
- Limited capability in terms of simulating effects of different types of conservation tillage.
- Allows selection of only one cover crop for entire simulation period

### What are the computer requirements?

- MS Excel 2007 or MS Excel 2010 or later version (File Type: Macro-enabled Excel Worksheet - \*.xlsm)
- A printer or PDF convertor

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