



# Maintaining Soil Quality Gains

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*Maintaining Soil Quality  
gained from years of CRP*  
*Sod*





## **Expired CRP Value:**

- **High “C” Value=Low erosion “T”**
- **No Tillage values captured**
- **Soil OM Content high**
- **Sod protects fragile sites**



# Affecting Erosion through Management “C” Factor

The amount & type of crop canopy and crop residue directly affects erosion rates.

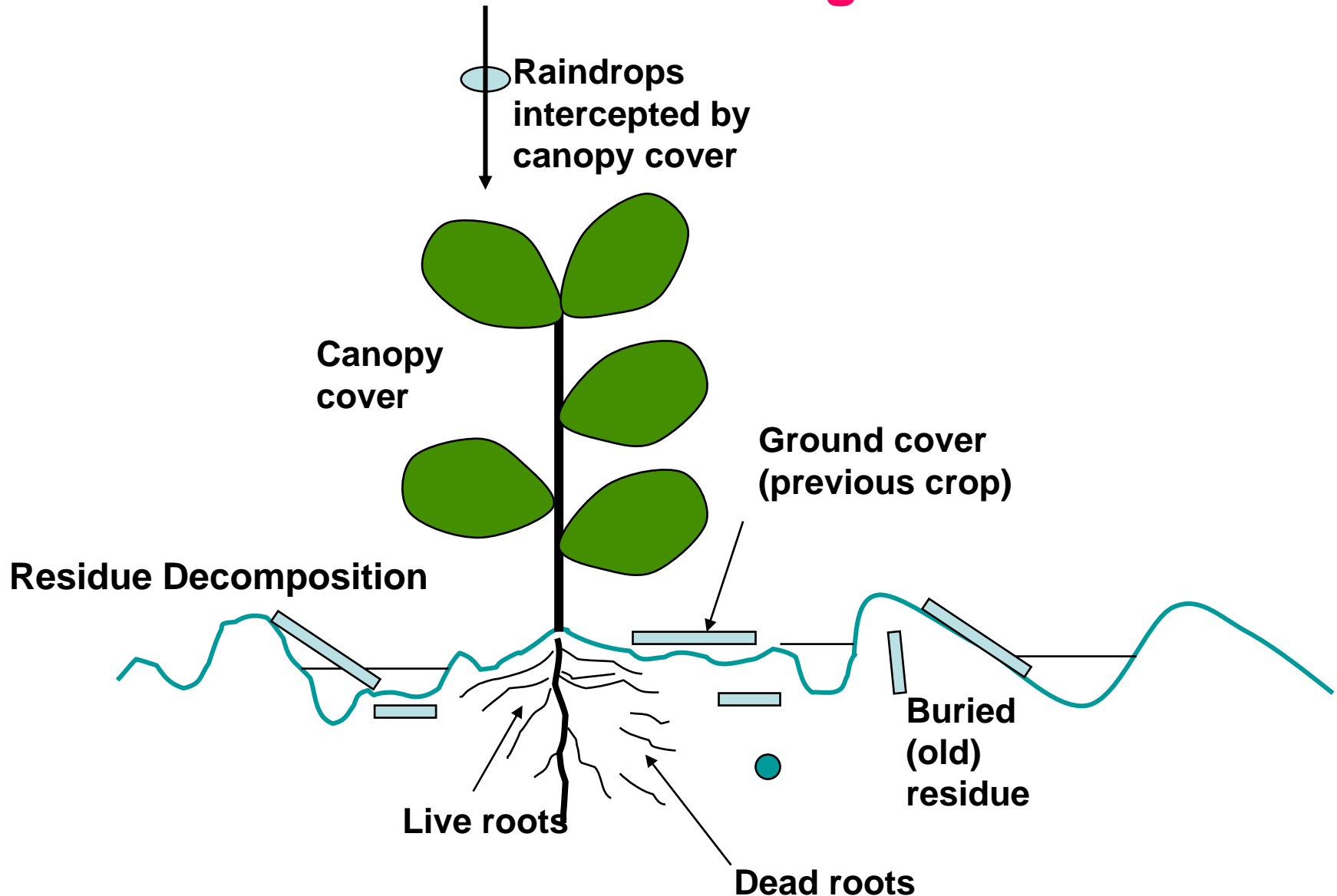


# Crop C Factor

Results from Crop Management using the same field criteria:

- **Established Sod.....0.3T.....0.9 SCI**
- **Corn Grain.....3.9T.....0.4 SCI**
- **Soybeans.....13T.....-1.0 SCI**
- **Corn Silage.....15T.....-1.0 SCI**

# WHY the CROP rotation impacts Erosion as much as Tillage!!



# NEW TOOL= Soil Condition Index

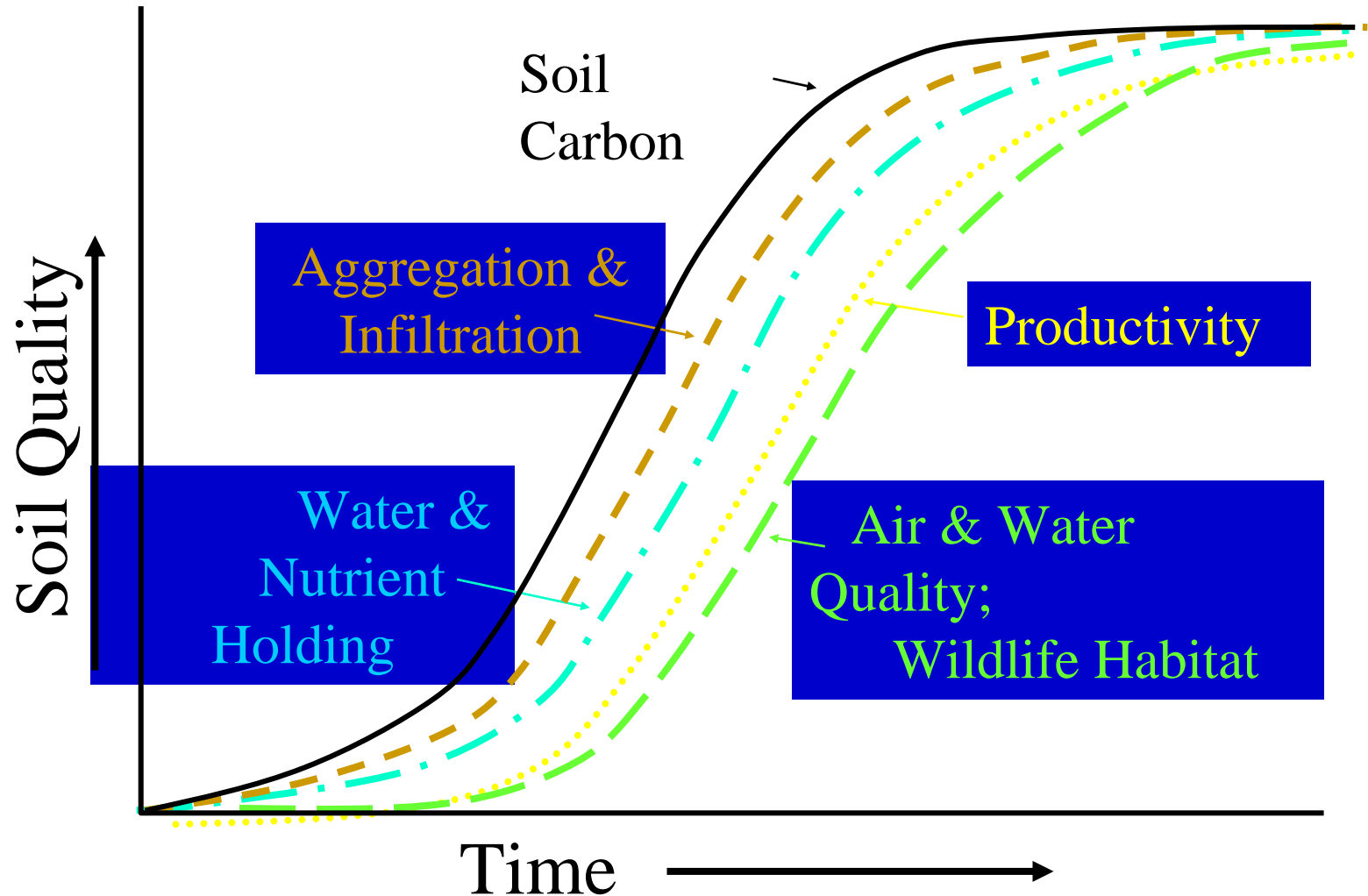
- Rotation—OM returned to the soil
- Field Operations—Type, speed & number of passes that impact OM
- Erosion Factors from Soil & Weather
- THE HIGHER THE SCI NUMBER THE BETTER!!
- “0” Means OM is being maintained  
(The numbers range from -2..0..+2)

# Soil Organic Matter Influences Carbon Levels





# Benefits of Soil Carbon



# **The Value of No Soil Disturbance**

- **Soil consolidation occurs after six years in Wisconsin which means infiltration, soil aggregation, microbial activity are at their peak**
- **This can be lost in two weeks through aggressive tillage + climate factors**
- **Consolidated Soil is much less likely to erode**





***What can be done???***





# ***OPTIONS TO CONSIDER WHEN ROW CROPS REPLACE SOD***

- Economically viable?
- Agronomically sound?
- **And** Environmentally friendly?



# ROTATION IS CRITICAL



- OM
- Canopy Cover
- Residue composition

# **KNOW YOUR SCI SCORE AND HOW IT IS INFLUENCED**

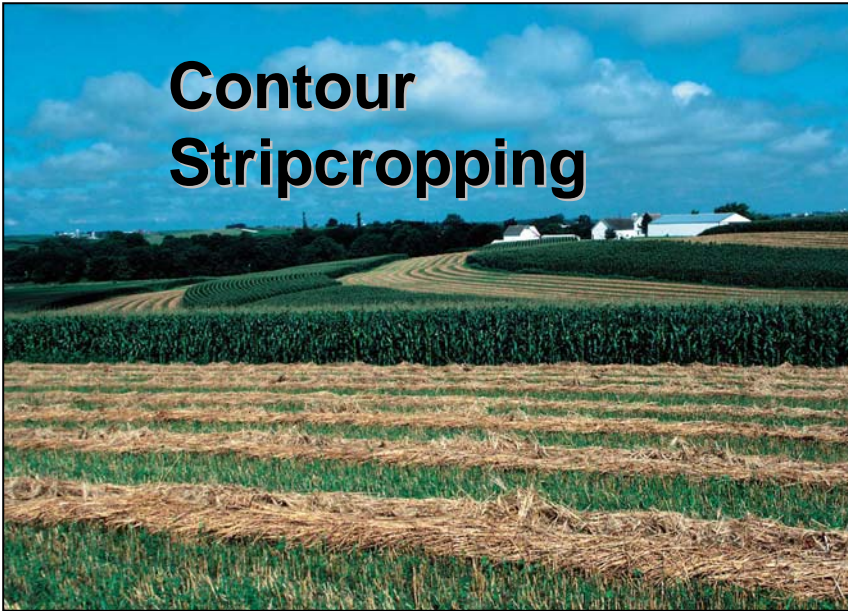
- **High residue crops in rotation**
- **Cover crops when it matters**
- **Mulch & Manure applications**
- **Reduce the tillage**
- **Reduce the soil disturbance**
- **Minimize the erosion from wind & water**
- **Increase crop production/residue levels**

**Soil Conditioning Index of 0 is maintaining Soil Carbon  
Above 0 is building & below 0 is depleting**



# Supporting Practices are in place

**Contour  
Stripcropping**



**Contouring**



**Terraces**



**Contour Buffer Strips**





# Maintain a Balance....





**Everyone one plays  
an important role in  
sustainable Management  
of Wisconsin Soils**



# REASONS TO THINK ABOUT SCI:

- No Till Standard
- Conservation Security Program
- New Farm Bill??.....

