STIR

Soil Tillage Intensity Rating

What is STIR ?

STIR is an index used to evaluate the kind, severity and number of ground disturbing passes on soil quality.

High STIR numbers indicate more disturbance .

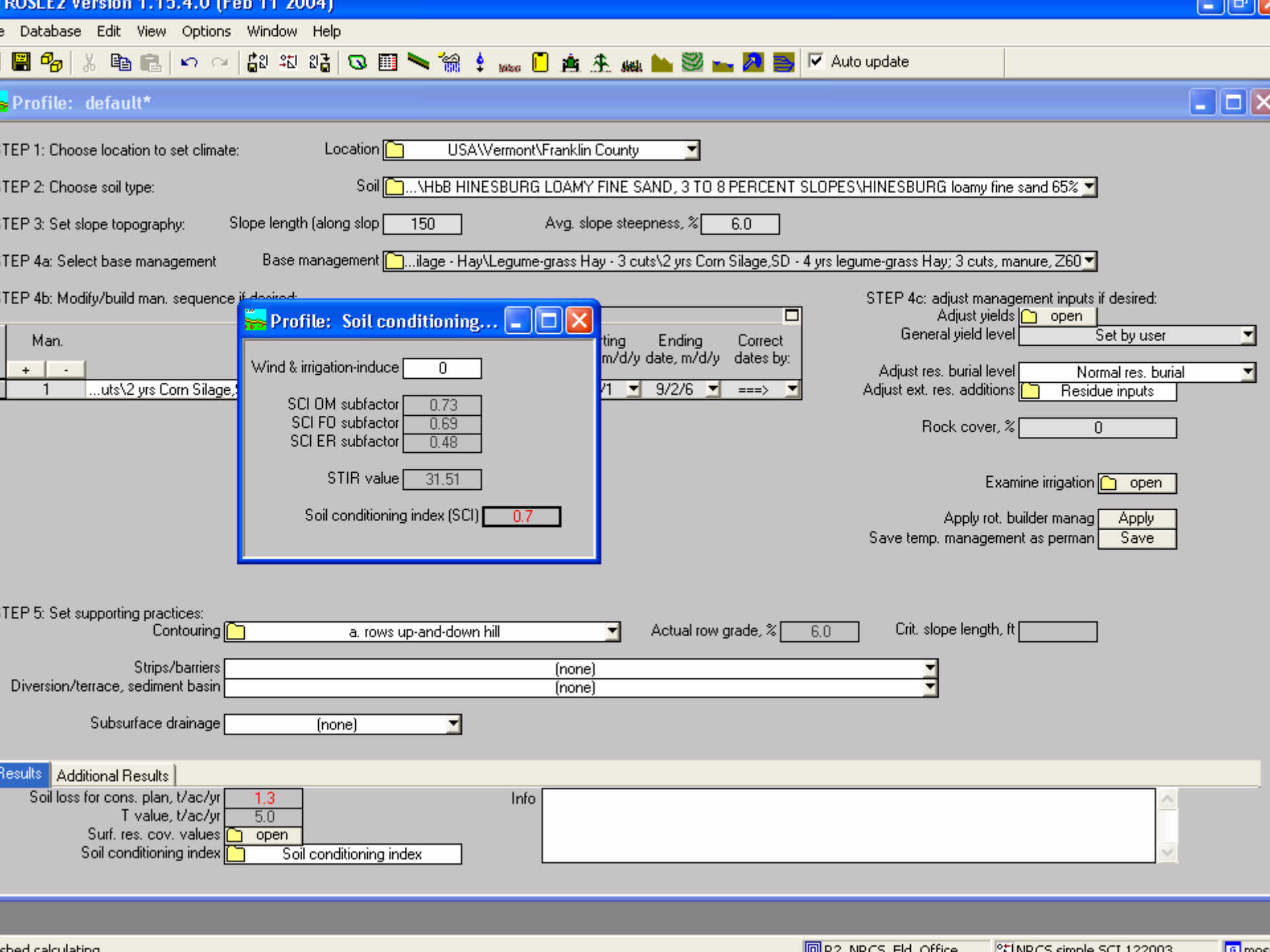
Components of STIR

- Operating speed of tillage equipment
- Tillage type
- Tillage depth
- Percent of surface area disturbed

(weights are assigned to each component to calculate a STIR rating)

Use of STIR

- STIR is not currently listed as a Vermont RMS Quality Criteria tool for soils (may be in the future)
- Currently the Conservation Security Program requires a STIR rating of “30” or less as a minimum eligibility requirement


ROSLE2 Version 1.15.4.0 (Feb 11 2004)
Database Edit View Options Window Help
Auto update
Profile: default*
STEP 1: Choose location to set climate:
Location USA\Vermont\Franklin County
STEP 2: Choose soil type:
Soil ...\HbB HINESBURG LOAMY FINE SAND, 3 TO 8 PERCENT SLOPES\HINESBURG loamy fine sand 65%
STEP 3: Set slope topography:
Slope length (along slop 150
Avg. slope steepness, % 6.0
STEP 4a: Select base management
Base management ...ilage - Hay\Legume-grass Hay - 3 cuts\2 yrs Corn Silage,SD - 4 yrs legume-grass Hay; 3 cuts, manure, Z60
STEP 4b: Modify/build man. sequence if desired:
Man.
+ -
1 ...uts\2 yrs Corn Silage,
Ending date, m/d/y
Correct dates by:
9/2/6
===>
Profile: Soil conditioning...
Wind & irrigation-induce 0
SCI OM subfactor 0.73
SCI FO subfactor 0.69
SCI ER subfactor 0.48
STIR value 31.51
Soil conditioning index (SCI) 0.7
STEP 4c: adjust management inputs if desired:
Adjust yields open
General yield level Set by user
Adjust res. burial level Normal res. burial
Adjust ext. res. additions Residue inputs
Rock cover, % 0
Examine irrigation open
Apply rot. builder manag Apply
Save temp. management as perman Save
STEP 5: Set supporting practices:
Contouring a. rows up-and-down hill
Actual row grade, % 6.0
Crit. slope length, ft
Strips/barriers (none)
Diversion/terrace, sediment basin (none)
Subsurface drainage (none)
Results
Additional Results
Soil loss for cons. plan, t/ac/yr 1.3
T value, t/ac/yr 5.0
Surf. res. cov. values open
Soil conditioning index Soil conditioning index
Info

Example STIR Results

- Continuous Hay = 14
- Continuous Corn, Moldboard Plow = 88
- 4 Years Corn, 4 Years Hay =42
- 2 Years Corn, 6 Hay = 25
- Pumpkins (cont.) = 145