
Nutrient Management - It's a SNAP
Snap Plus 1.123 Features
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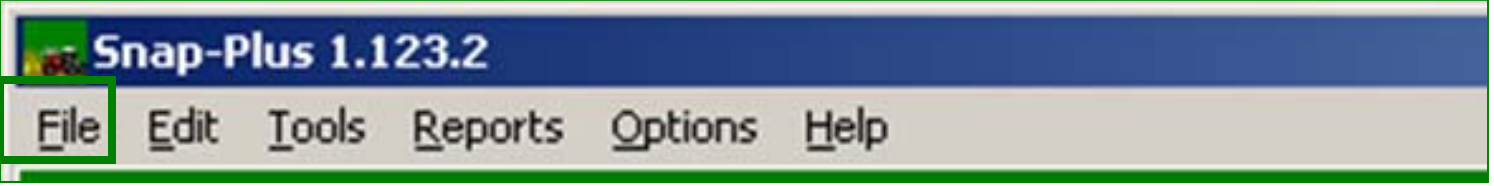
NRCS
UW Extension
SNAP-Plus • Wisconsin's Nutrient Management Software

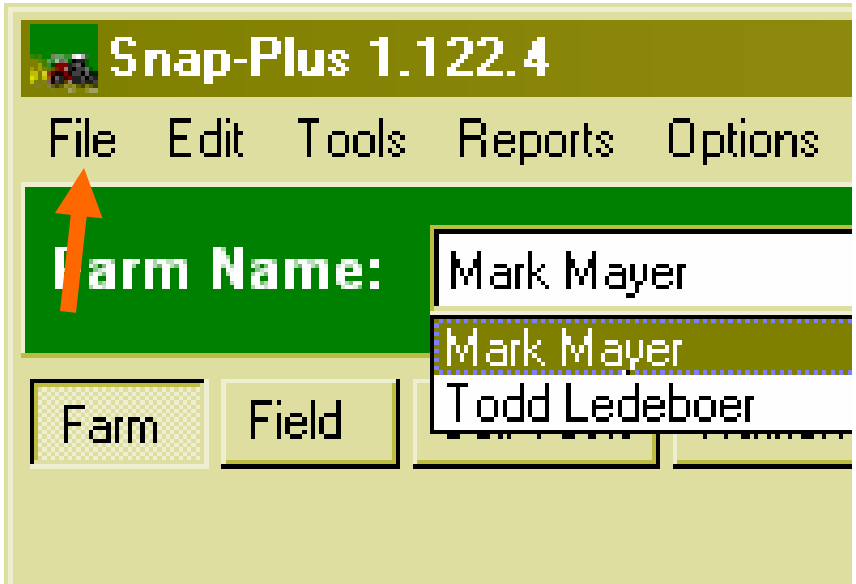


Split Multi-farm Databases

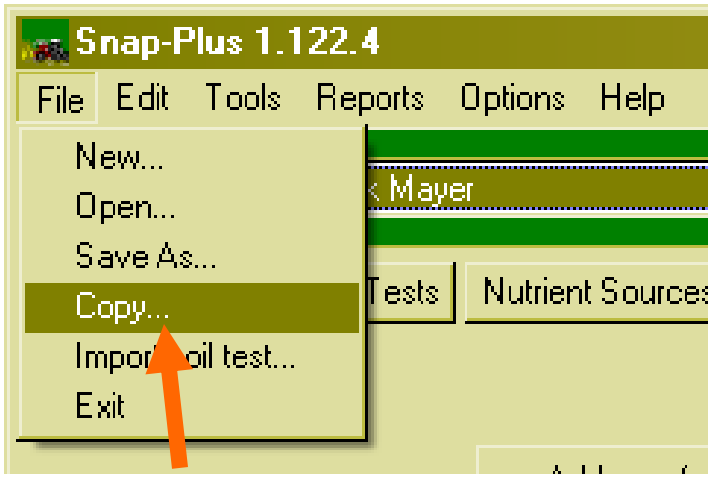
Problem: Slow calculations or computer times out during report generation.

Solution: Split farms out into their own database using the Snap Plus copy wizard.

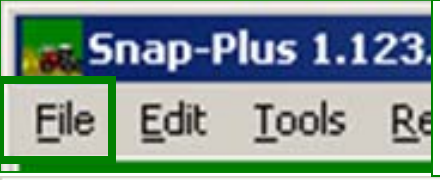
Choose "File"

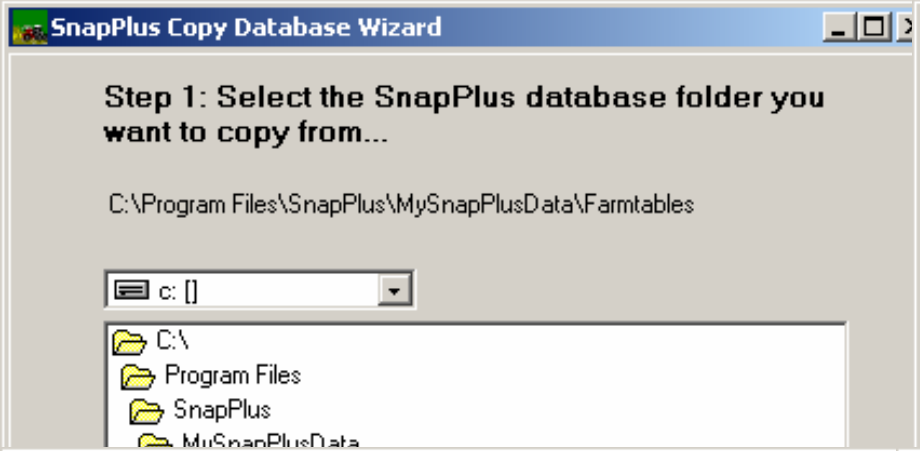


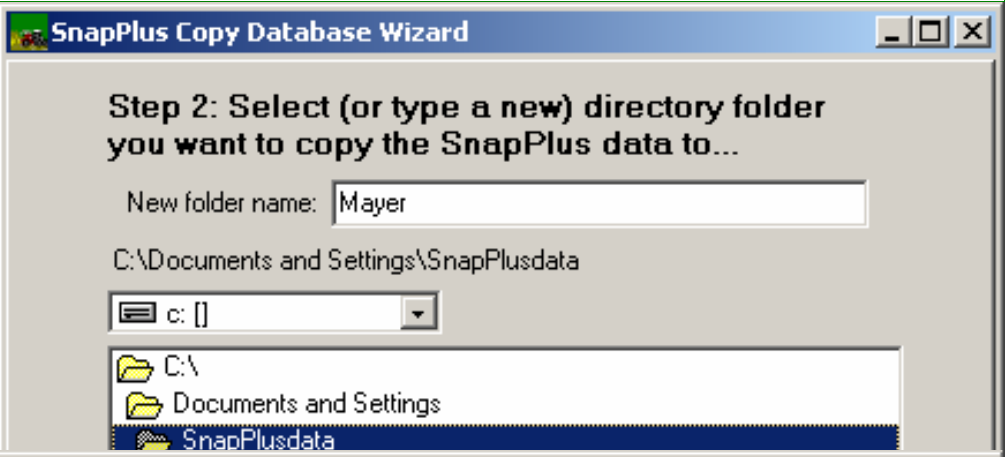
Then "Copy"

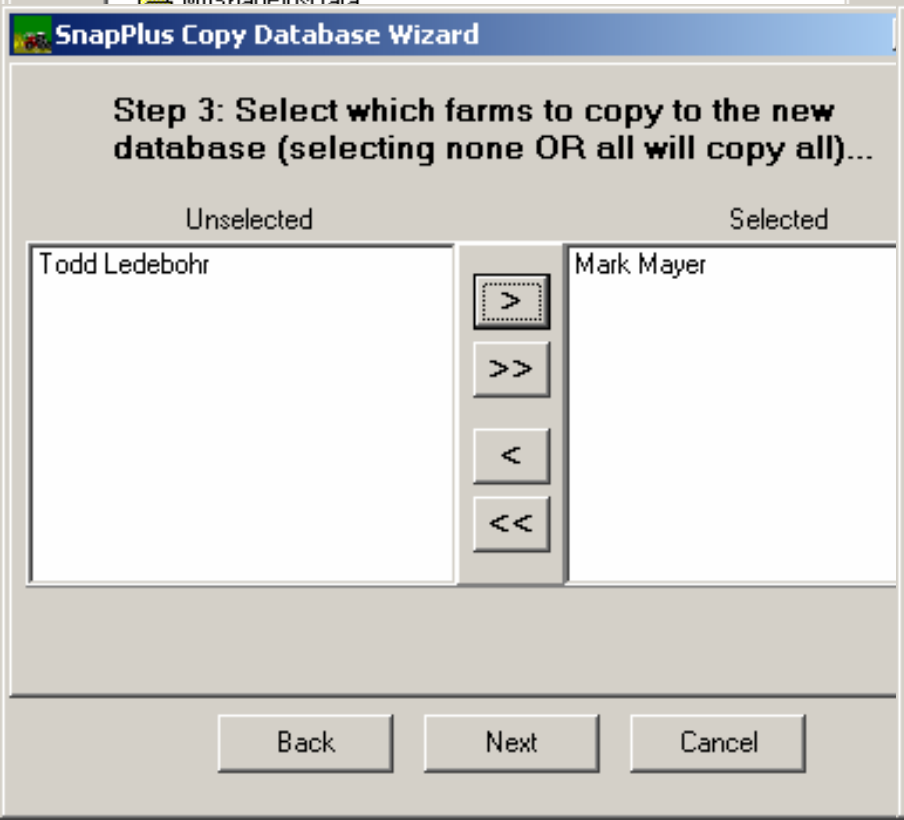


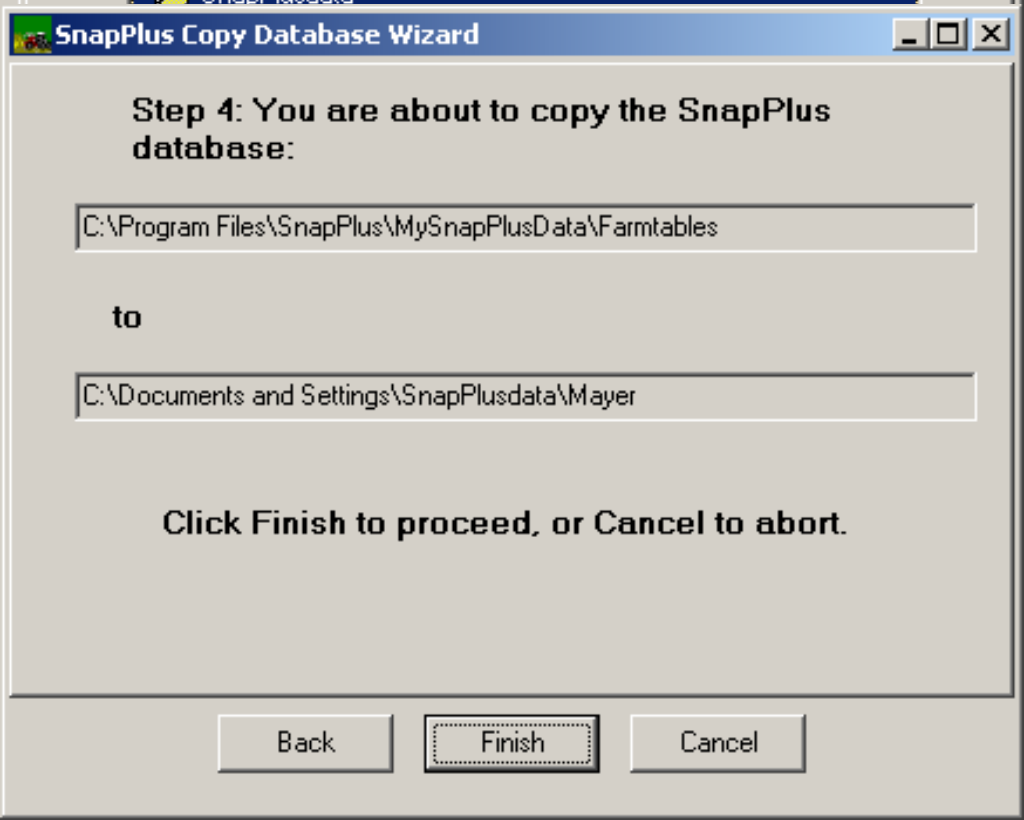
Copying & Splitting Databases



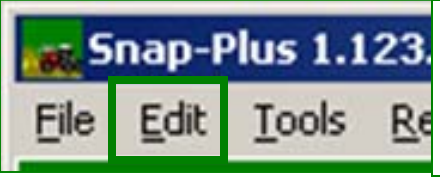


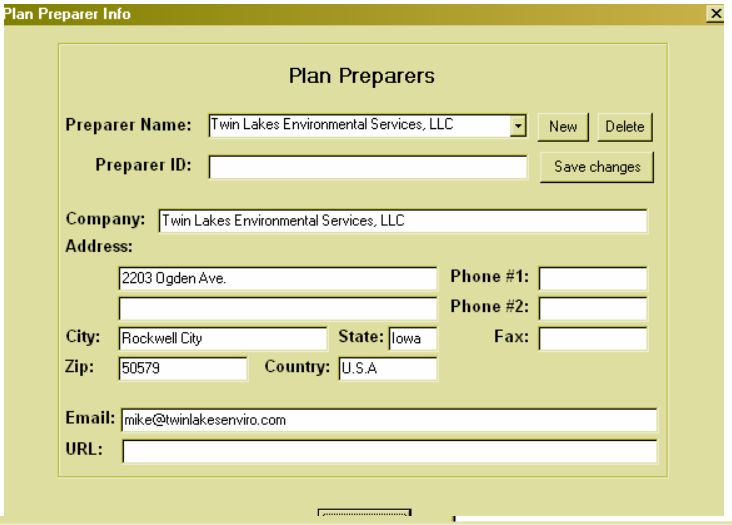


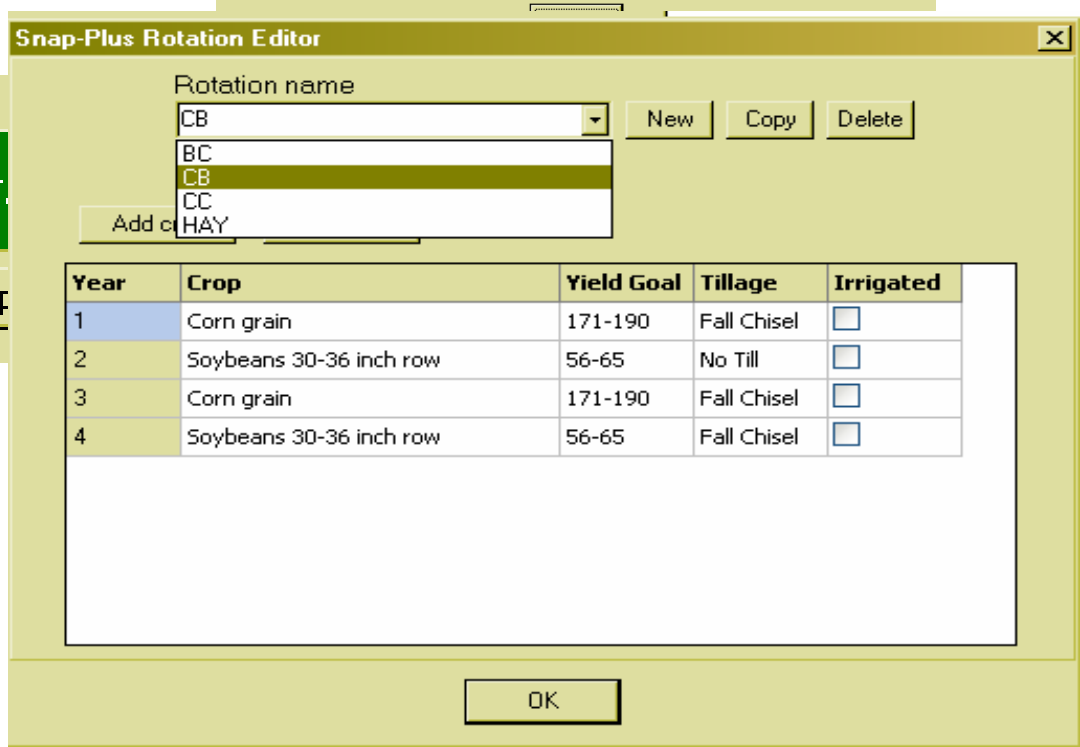




Preparer Info and Rotation Data



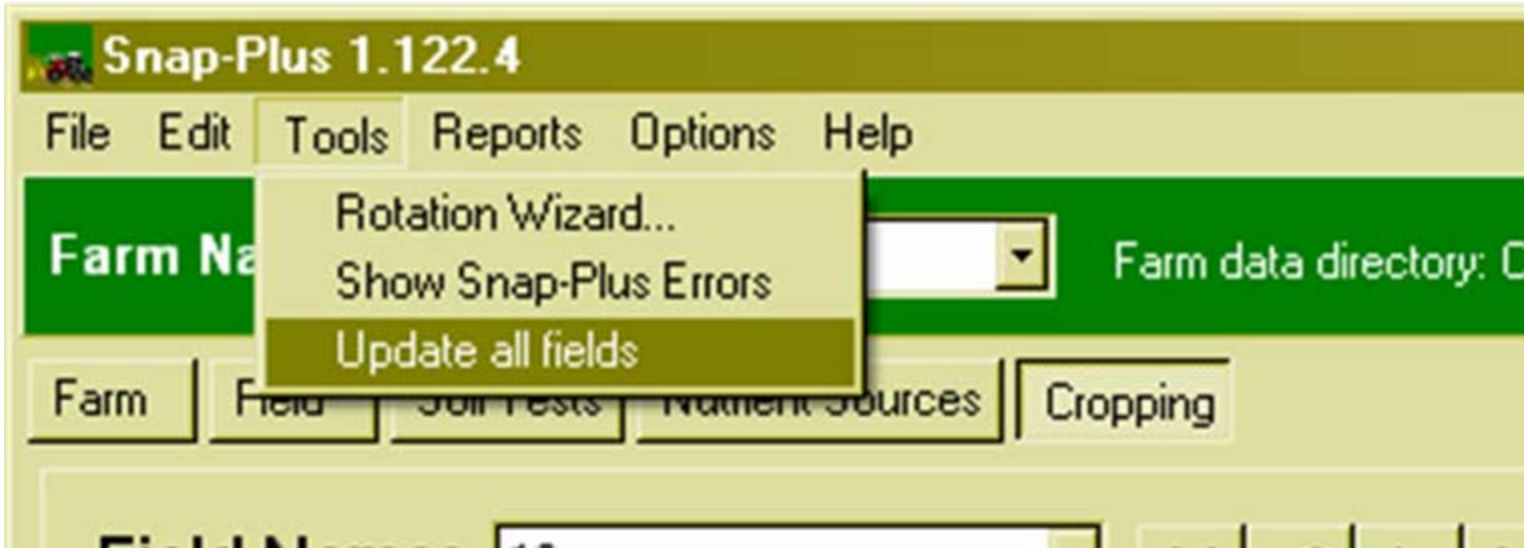




Fertilizer List

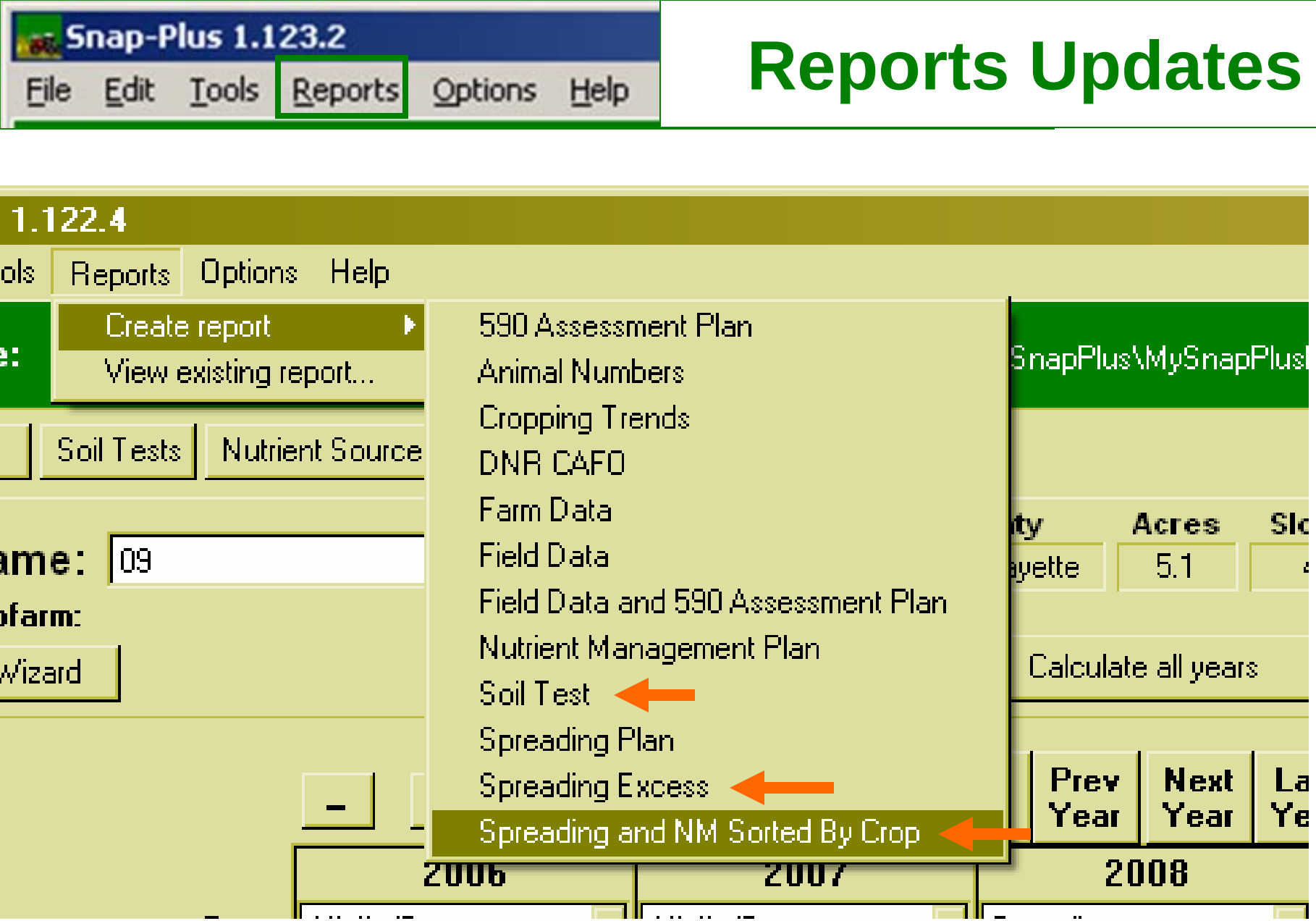
You can edit the master fertilizer list for all farm databases on your computer

Tools Menu

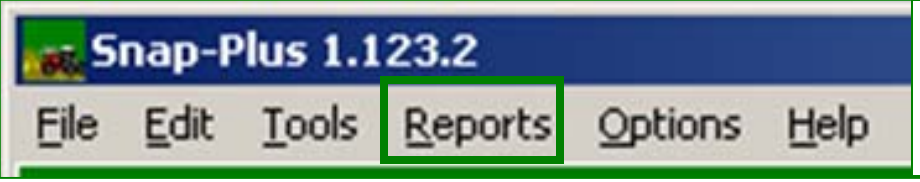


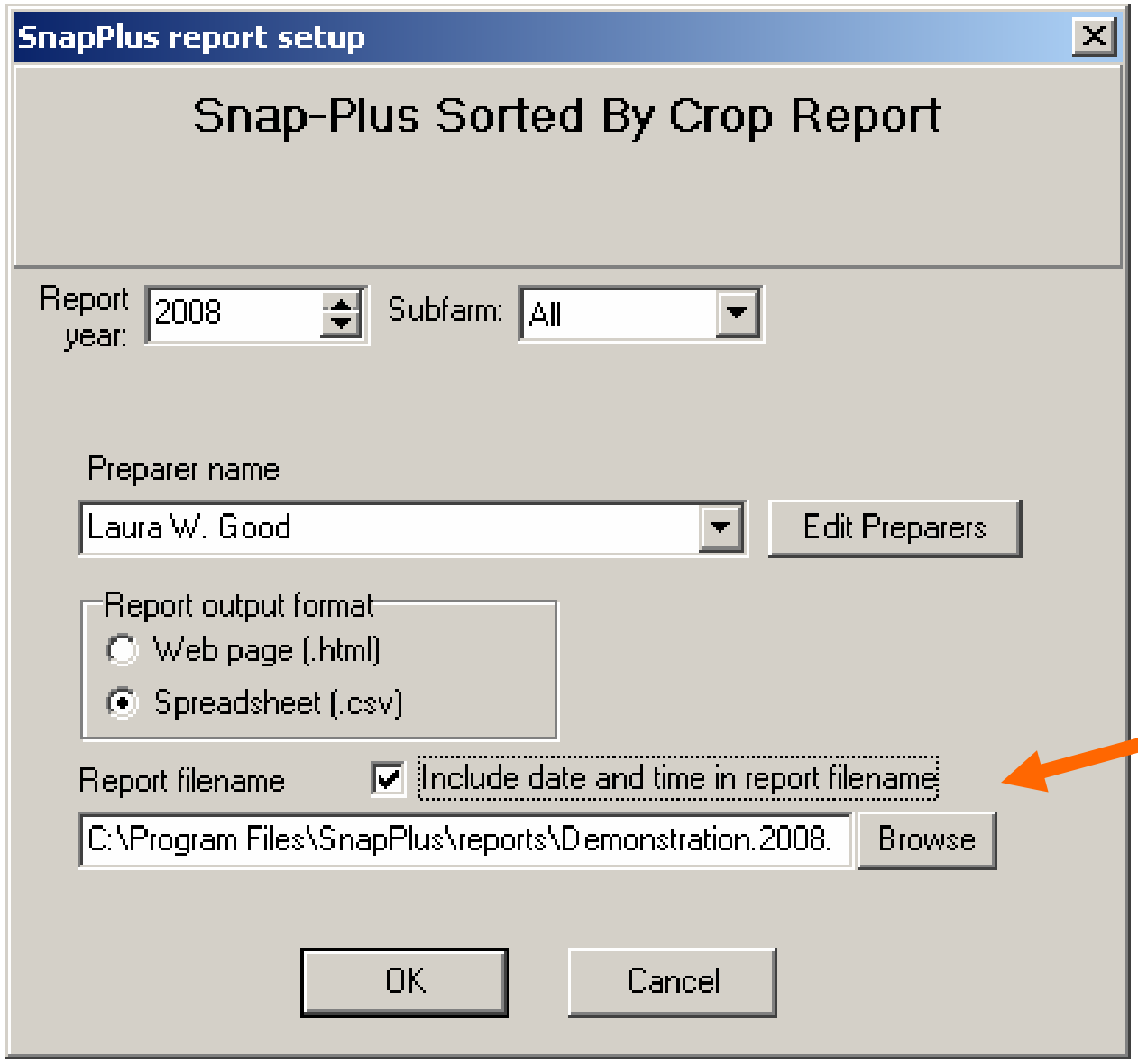
- Rotation Wizard
- Show Snap-Plus Errors
- Update all fields

Reports Updates

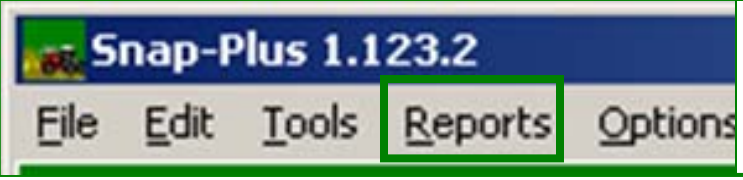


Report Setup Box





You now can enter a file name for storing the report



Short Soil Test Report

Snap-Plus Soil Test Report (short)

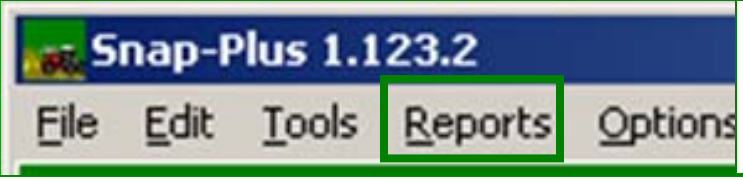
Snap-Plus version 1.122.4

Prepared 12/6/2007

Prepared for
salter farm
attn: mike salter
N5310 cty rd pp
Black Creek, WI 54106

Field data

Field name	Acres	Soil Map Symbol	Soil Name	Soil test date	Soil test lab	Lab Sample #	Number of Samples	Acres per Sample	pH	OM %	P ppm	K ppm	S ppm	BpH	CEC
1 al	5.8	HrB	HORTONVILLE	11/13/2006	AgSource	784665	1	6	7.4	2.1	15	79			
1 al	5.8	HrB	HORTONVILLE	12/12/2002		765633			7.1	2.4	24	83			
12	23.0	HrB	HORTONVILLE	11/13/2006	AgSource	784664	5	5	7.0	3.1	126	173			
12	23.0	HrB	HORTONVILLE	12/12/2002	AgSource	765633	5	5	7.3	3.4	111	148			
12COR1	5.1	HrB	HORTONVILLE	11/13/2006	AgSource	784664	1	5	7.1	2.6	111	171			
12COR1	5.1	HrB	HORTONVILLE	12/12/2002	AgSource	765633	1	5	7.5	3.4	52	121			
12COR2	5.9	HrB	HORTONVILLE	11/13/2006	AgSource	784664	1	6	7.4	2.5	70	123			
12COR2	5.9	HrB	HORTONVILLE	12/12/2002	AgSource	765633	1	6	7.7	1.8	69	100			
12COR3	3.0	HrB	HORTONVILLE	11/13/2006	AgSource	784664	1	3	7.2	2.6	85	143			
12COR3	3.0	HrB	HORTONVILLE	12/12/2002	AgSource	765633	1	3	7.2	2.5	79	122			
2	18.0	HrB	HORTONVILLE	11/13/2006	AgSource	784665	4	5	7.2	2.3	32	111			
2	18.0	HrB	HORTONVILLE	12/12/2002	AgSource	765633	4	5	7.4	2.2	30	102			
2F	4.0	HrB	HORTONVILLE	11/13/2006	AgSource	784665	1	4	7.5	2.2	28	114			
3-3D	12.0	HrB	HORTONVILLE	11/13/2006	AgSource	784665	2	6	7.5	2.2	69	115			
3-3D	12.0	HrB	HORTONVILLE	12/12/2002	AgSource	765633	2	6	7.4	2.9	81	108			
4	5.3	HrC2	HORTONVILLE	11/13/2006	AgSource	784665	1	5	7.8	2.1	36	107			
4	5.3	HrC2	HORTONVILLE	12/12/2002		765633			7.6	2.1	60	110			



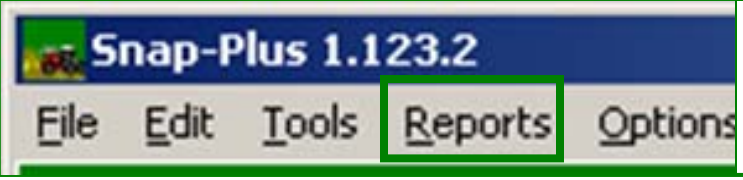
New Report

Spreading and nutrient management sorted by crop

First Year Corn Grain Fields								Applications				Soil Test		Recommend ations			Planned Applications and Credits			Over(+) Under(-) UW Recs		
Name	Acres	Field Slope (%)	Soil Series, Map Symbol & N Restriction	Prior Crop	2008 Crop	Yield Goal	Tillage	Product	Application rate and method	N P2O5 K2O credit	Total Amount	Ave P ppm	Ave K ppm	N lb/ac	P2O5 lb/ac	K2O lb/ac	N lb/ac	P2O5 lb/ac	K2O lb/ac	N lb/ac	P2O5 lb/ac	K2O lb/ac
11	8.3	8	TAMA (TaC2)	AB	Corn grain	171-190	Spring Chisel					68	99	165	0	50	174	43	130	9	43	80
11								Dairy Pack 4/5i-6-20	5 tons/acre Spring Surface	19-32-100	42 tons											
11								legume		130-0-0												

8.3 planned First Year Corn Grain acres

42 planned Tons Dairy Pack applied spring



New Report

Spreading excess report shows fields with N over-applications in excess of 590 guidelines

Snap-Plus Excess N Applications Report

Snap-Plus version 1.122.4

Prepared 12/4/2007

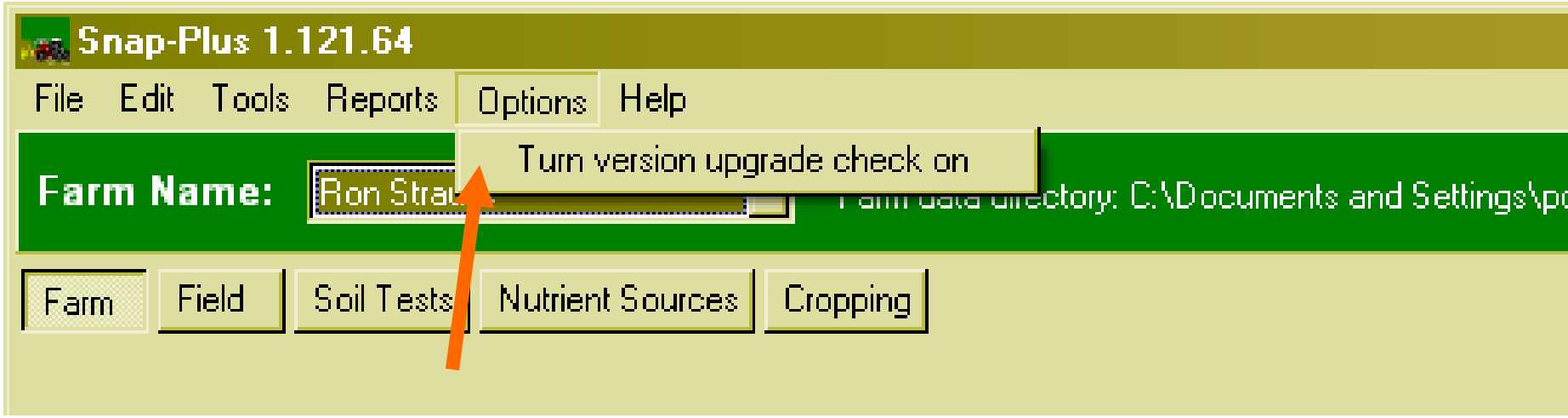
Prepared for
salter farm
attn: mike salter
N5310 cty rd pp
Black Creek, WI 54106

Excess N applications

Field Name	Year	Amount (lbs/acre)	Reason	Explanatio
12	2008	2	** Overapplication of manure or fertilizer N of 11 lbs N/acre.	

Options Menu

Version Upgrade Check



This feature is turned off at install.
Users can turn it on from the "Options" menu item.

New in Reference

Editable Emergency Response Form

Snap-Plus 1.121.64

File Edit Tools Reports Options Help

Farm Na

Farm

Manure Spill Emergency Response Plan

What to do in Case of a Manure Spill

1. **Eliminate the source.**
   - Stop manure application or pumps.
   - Close valves.
   - Separate pipes, creating an air gap and stopping flow.
   - Transfer manure/liquid to another basin or lagoon.
2. **Contain the spill, if possible.**
   - Create a containment dam in the field, ditch or stream.
   - In a field, use tillage equipment to slow the flow
   - Check for tile flows.
   - Construct a temporary holding basin down slope.
   - Ensure that you do not damage the embankment while creating a temporary basis.
   - If possible, place soil over the point of seepage, ensuring that you do not drive over or compact the seepage point.
3. **Assess the extent of the spill and note any obvious damages.**
   - Did the spill reach any surface waters, well casings or other sensitive areas?
   - How much was released?
   - What time?
   - Did any damage occur (employee injury, fish kills, or property damage)?
   - Can the spill reach streams?
4. **Contact the appropriate agencies.**
6. **Clean up the spill and make repairs.**
8. **Prepare and submit summary.**

Farm Information	
Farm Name:	Porters Dairy
Address:	
City:	State: Zip:
Farm Owner:	
Phone:	Mobile Phone:
Directions to the farm (from crossroad or highway)	

Emergency Phone Numbers	
County Sheriff Dispatch:	Dial 911
DNR 24-hour Spill Reporting Hotline	1-800-943-0003

County Land & Water Conservation Dept.	
County Conservationist	Kurt Calkins
Phone Number	608-742-9670
Department of Natural Resources	
Animal Waste Specialist	
Phone Number	
Conservation Warden	
Phone Number	

Refer to listing on back for: Earth Moving, Pumping Equipment, & Manure Hauling Contractors

Equipment Owners (other neighboring farms)	
Name	Phone Number

Manure Spill Emergency Response Plan

Earthmoving Contactors

Company Name	Address	Phone

Pumping Equipment

Company Name	Address	Phone

Custom Manure Applicators

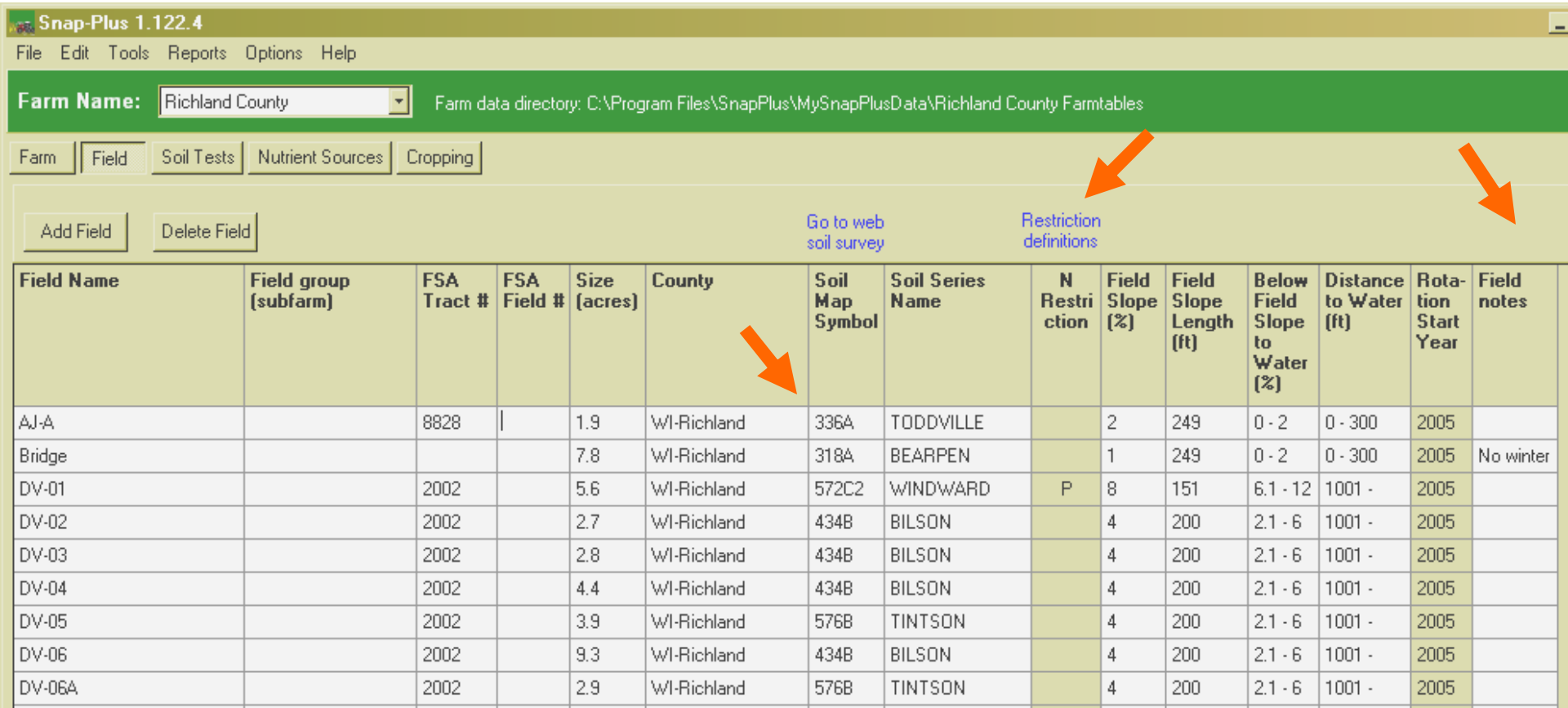
Company Name	Address	Phone

This is a partial listing for informational purposes only. No endorsement is implied or intended.

Field Screen Updates

NRCS Soil survey map symbol updates through February 2007 are included

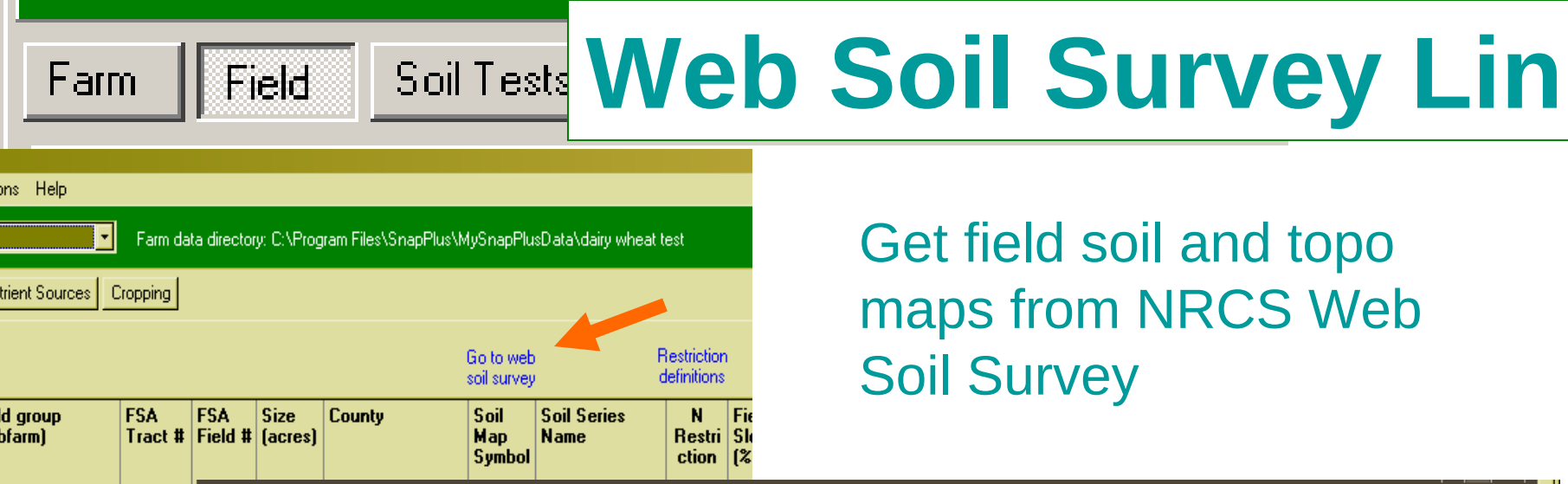
New version adds "N Restrictions" column & removes existing N restrictions notices from "Field notes" column

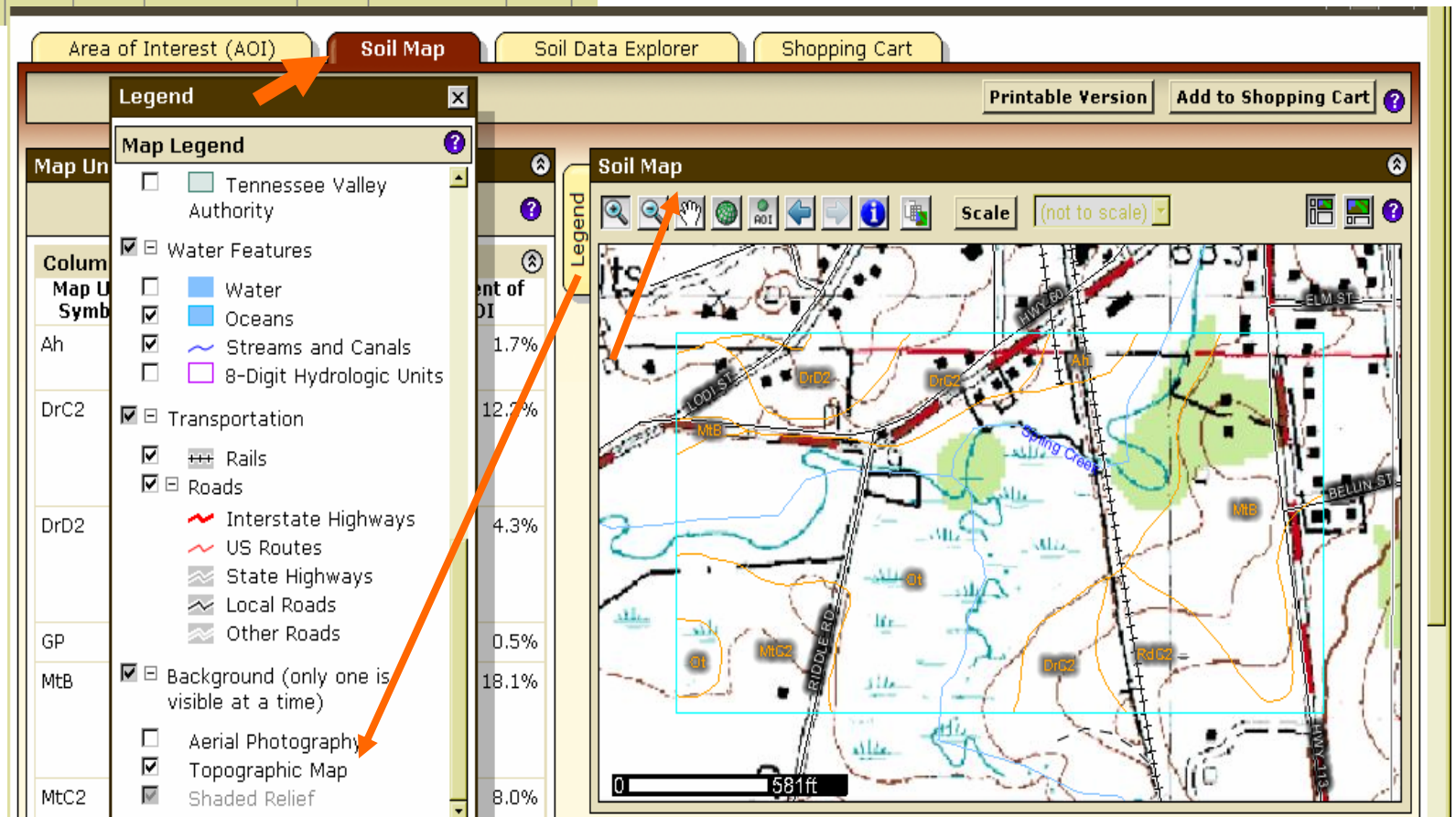


Field Name	Field group (subfarm)	FSA Tract #	FSA Field #	Size (acres)	County	Soil Map Symbol	Soil Series Name	N Restriction	Field Slope (%)	Field Slope Length (ft)	Below Field Slope to Water (%)	Distance to Water (ft)	Rotation Start Year	Field notes
AJ-A		8828		1.9	WI-Richland	336A	TODDVILLE		2	249	0 - 2	0 - 300	2005	
Bridge				7.8	WI-Richland	318A	BEARPEN		1	249	0 - 2	0 - 300	2005	No winter
DV-01		2002		5.6	WI-Richland	572C2	WINDWARD	P	8	151	6.1 - 12	1001 -	2005	
DV-02		2002		2.7	WI-Richland	434B	BILSON		4	200	2.1 - 6	1001 -	2005	
DV-03		2002		2.8	WI-Richland	434B	BILSON		4	200	2.1 - 6	1001 -	2005	
DV-04		2002		4.4	WI-Richland	434B	BILSON		4	200	2.1 - 6	1001 -	2005	
DV-05		2002		3.9	WI-Richland	576B	TINTSON		4	200	2.1 - 6	1001 -	2005	
DV-06		2002		9.3	WI-Richland	434B	BILSON		4	200	2.1 - 6	1001 -	2005	
DV-06A		2002		2.9	WI-Richland	576B	TINTSON		4	200	2.1 - 6	1001 -	2005	

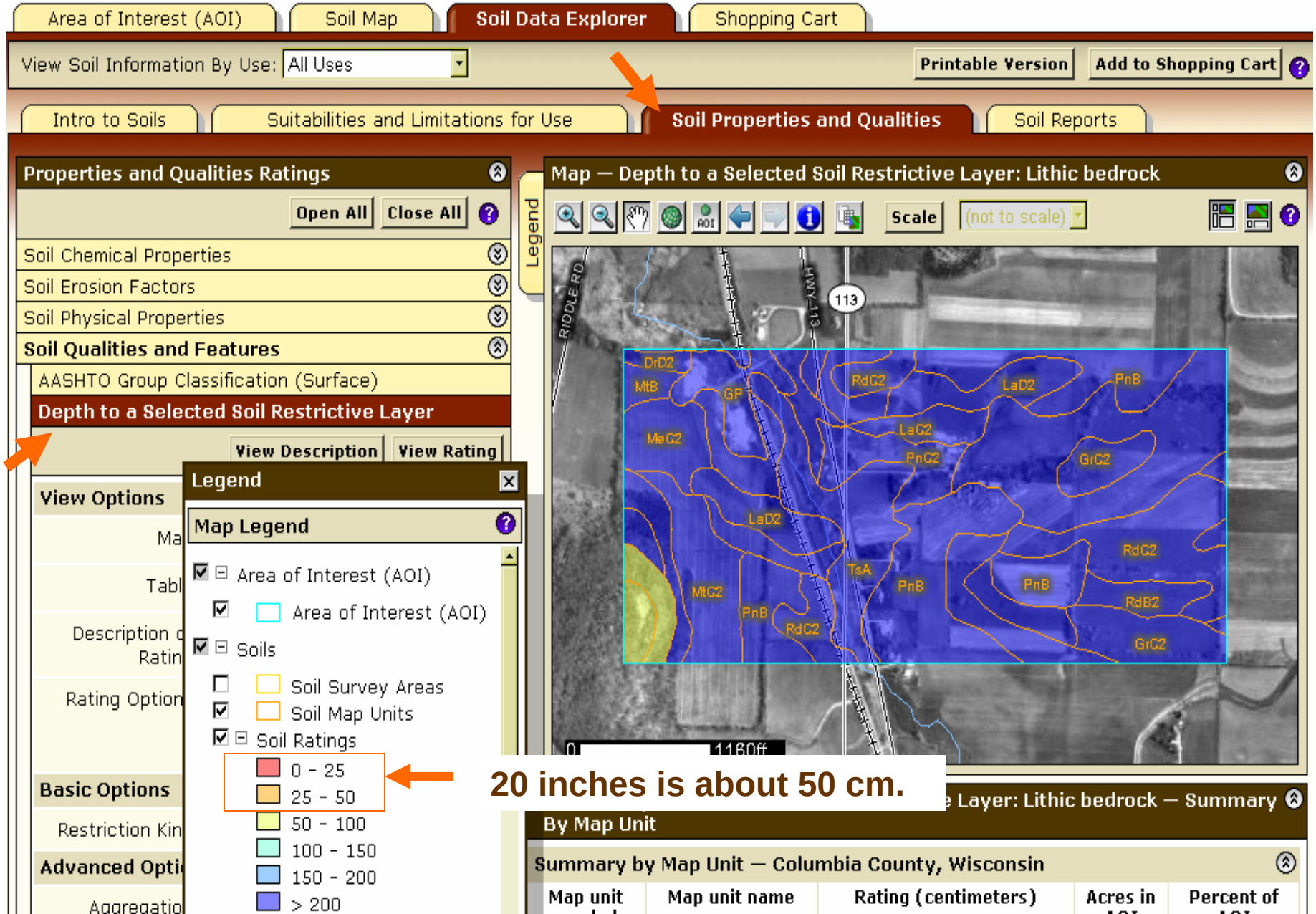
Web Soil Survey Link

Get field soil and topo maps from NRCS Web Soil Survey

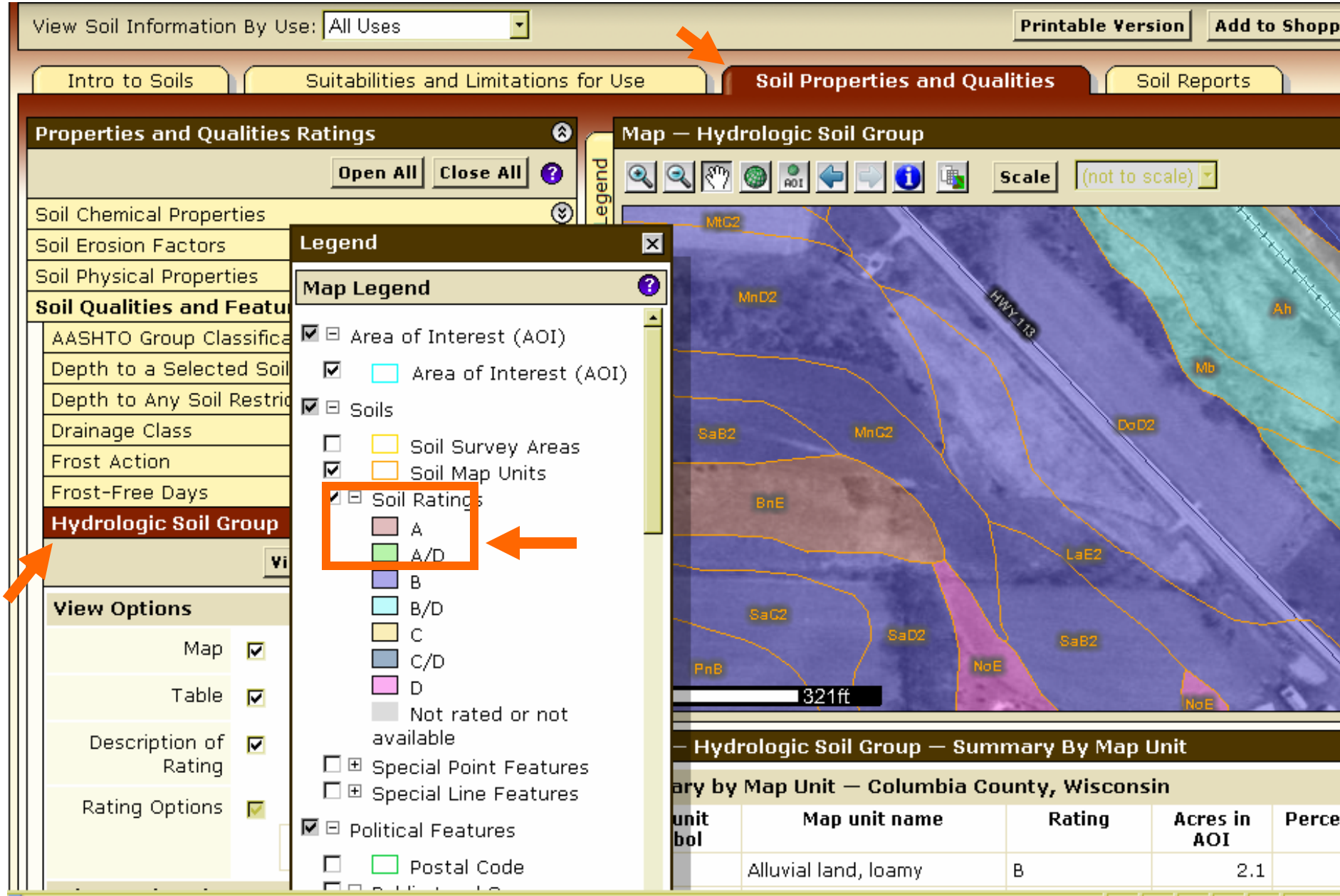




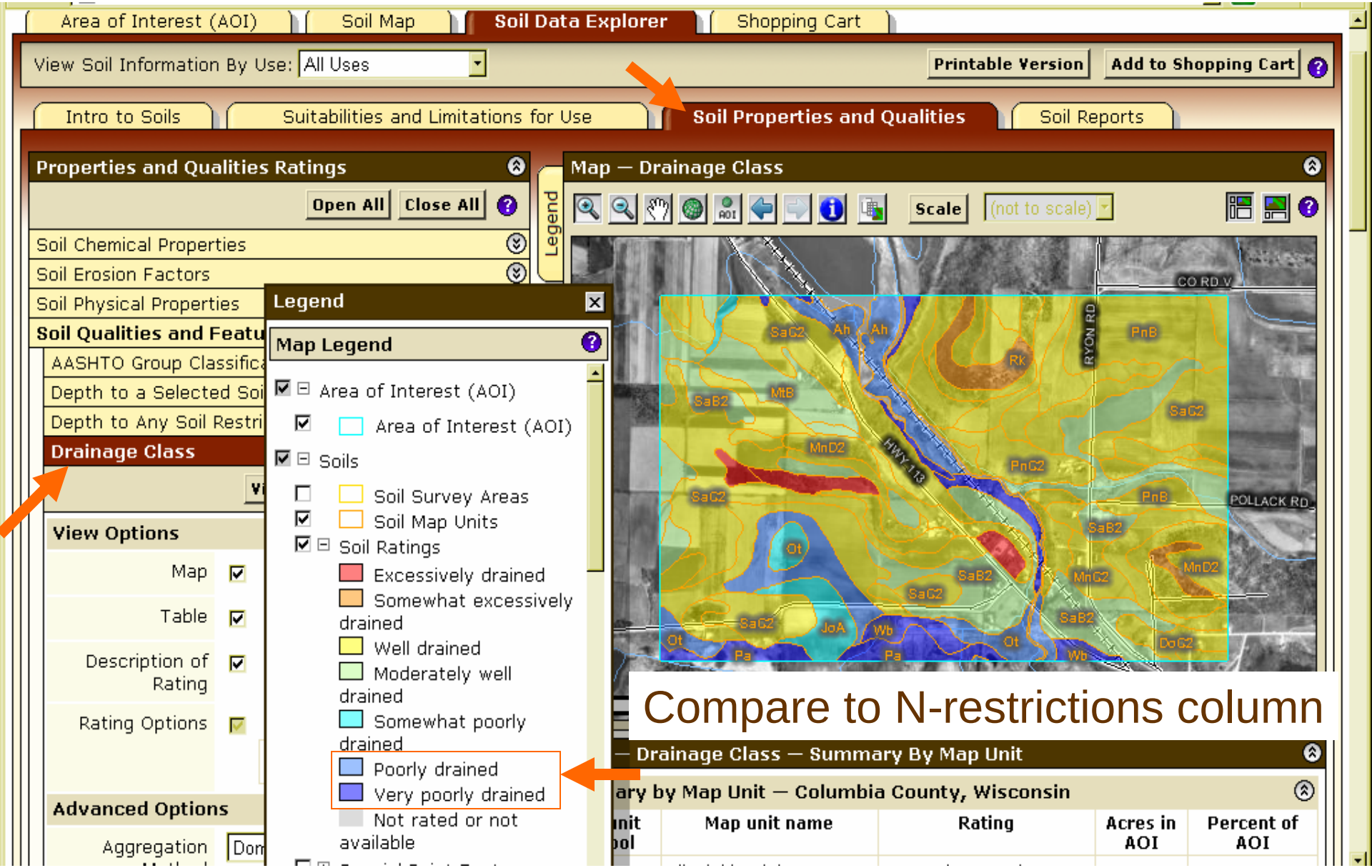
Web Soil Survey: N-Restricted R (shallow bedrock) soils



Web Soil Survey: N-Restricted P (permeable) soils

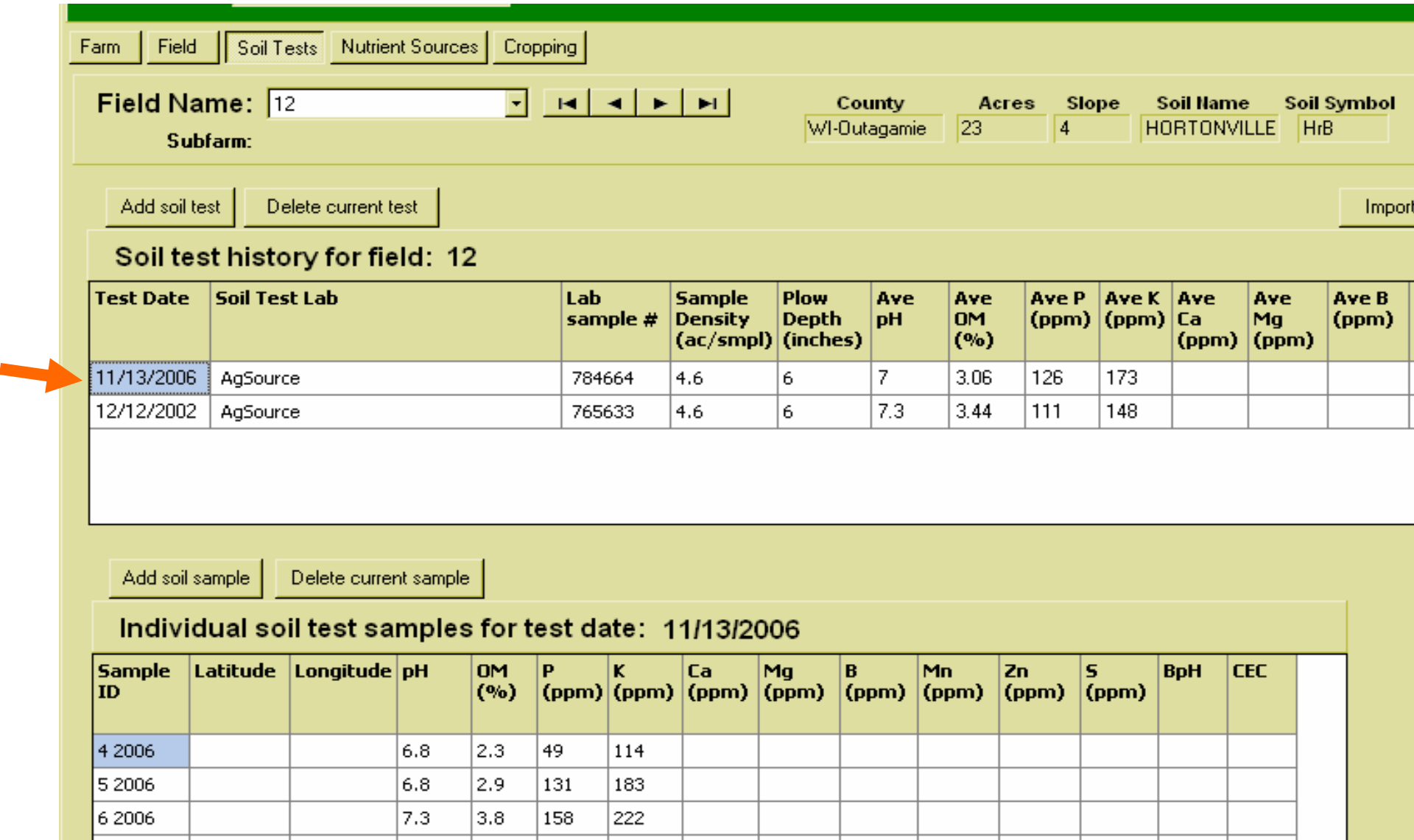


Web Soil Survey: N-Restricted W (<12” to water table)



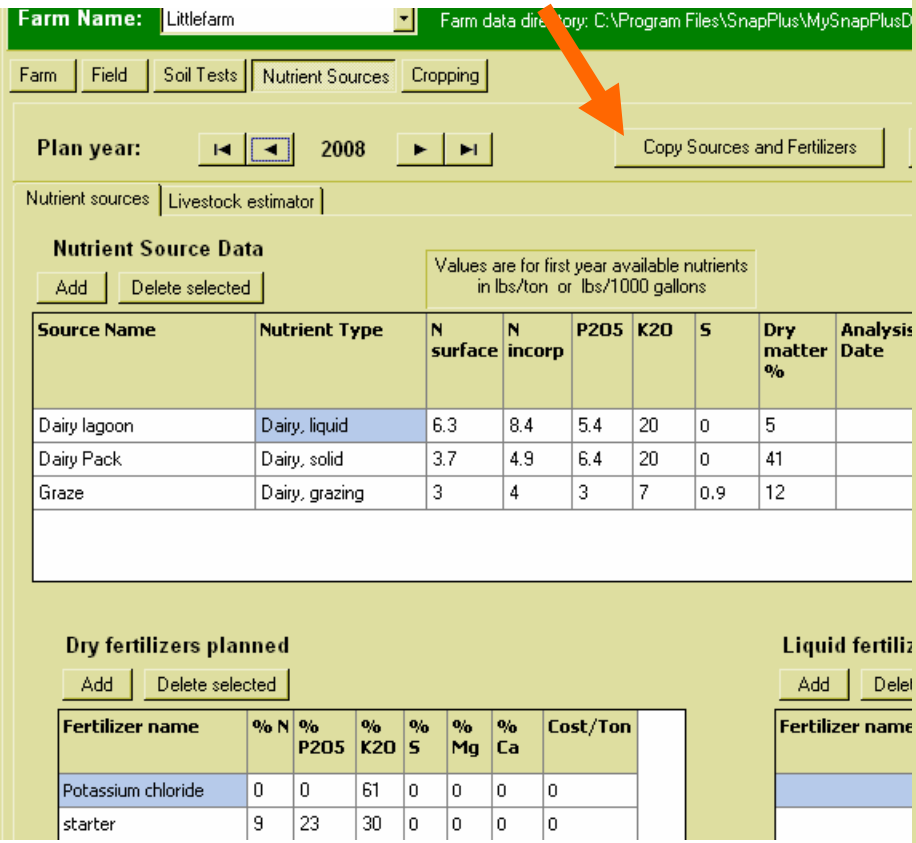
Soil Test Screen

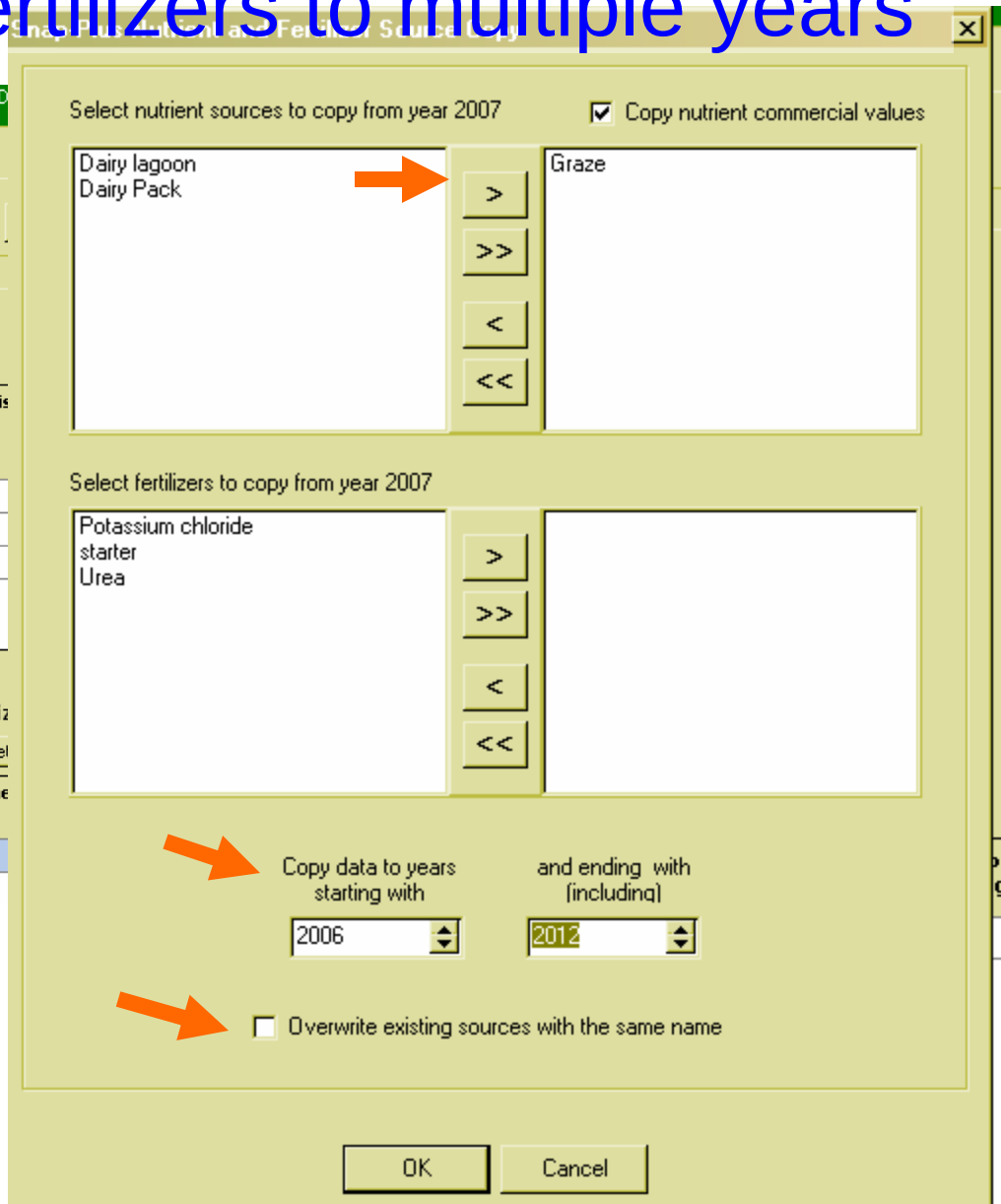
Most recent soil test is listed first



Nutrient Sources

Copy manures and fertilizers to multiple years





The Livestock Estimator is improved

Farm | Field | Soil Tests | Nutrient Sources | Cropping

Plan year: ⏮ ◀ 2009 ▶ ⏭ Copy Sources and Fertilizers | Edit Fertilizer List

Nutrient sources | Livestock estimator

Livestock Manure Production Estimator

Add all animals in group

Animal Type (Add / Delete current)	# of animals	Of Total Manure Collected: % of total spread as solid	% of total spread as liquid	Other Liquid (gal/day)	Bedding (cu ft/day /animal)	Yearly Tons	Yearly Gallons	Animal Units (see footnote)
Beef Cow 1000 lbs	95	17	0	0	0	186	0	95.0
Swine Boar 350 lbs	20	0	100	0	0	0	7,300	10.0
Swine Gestating Sow 275 lbs	2550	0	100	0	0	0	930,750	1,020.0
Swine Grow-Finish Pig 150 lbs	150	0	100	0	0.1	0	65,973	60.0
Swine Nursery Pig 25 lbs	150	0	100	0	0	0	16,425	15.0
Swine Sow and Litter 370 lbs	350	0	100	0	0	0	383,250	140.0

Delete all

Farm Totals: 186 | 1,403,698 | 1,340

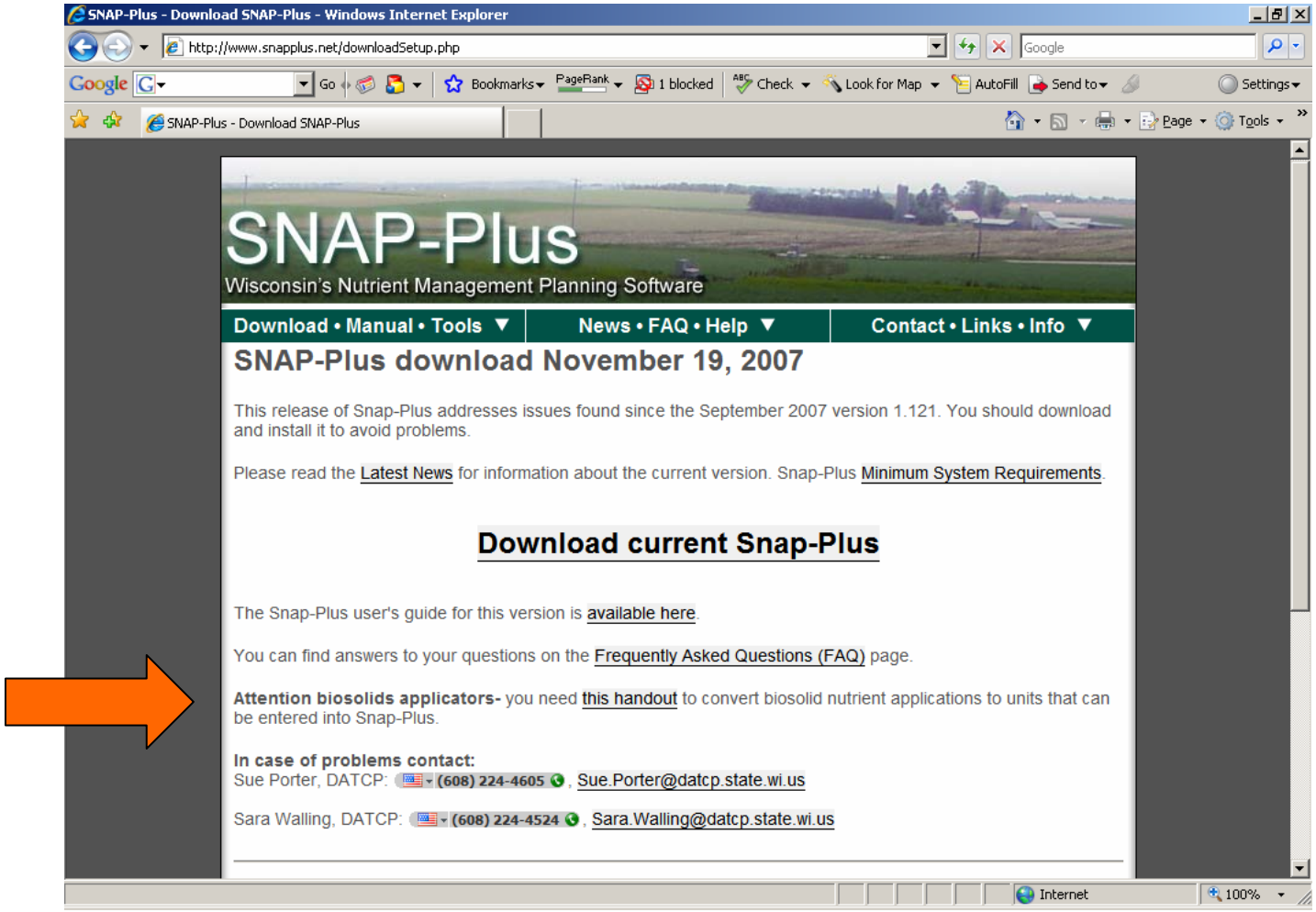
NOTE: Animal categories are from "Wisconsin Conservation Planning Technical Note WI-1". To calculate animal units these categories have been roughly matched with the animal categories in WI DNR NR 243, Table 2A to get the appropriate equivalency factors. Not all animal categories included in NR 243 Table 2A could be included in this estimator. In particular, this estimator does not currently calculate animal units for chickens and ducks raised using "liquid system" processes. Please refer to NR 243 Table 2A to calculate animal units for any animal type not shown here. Both the Tech Note and NR243 are included with Snap-Plus and can be viewed from the "Help/References" menu or by clicking the following links.

Technical Note WI-1 NR 243

Field | Soil Tests | Nutrient Sources | Cropping

Biosolids Entry

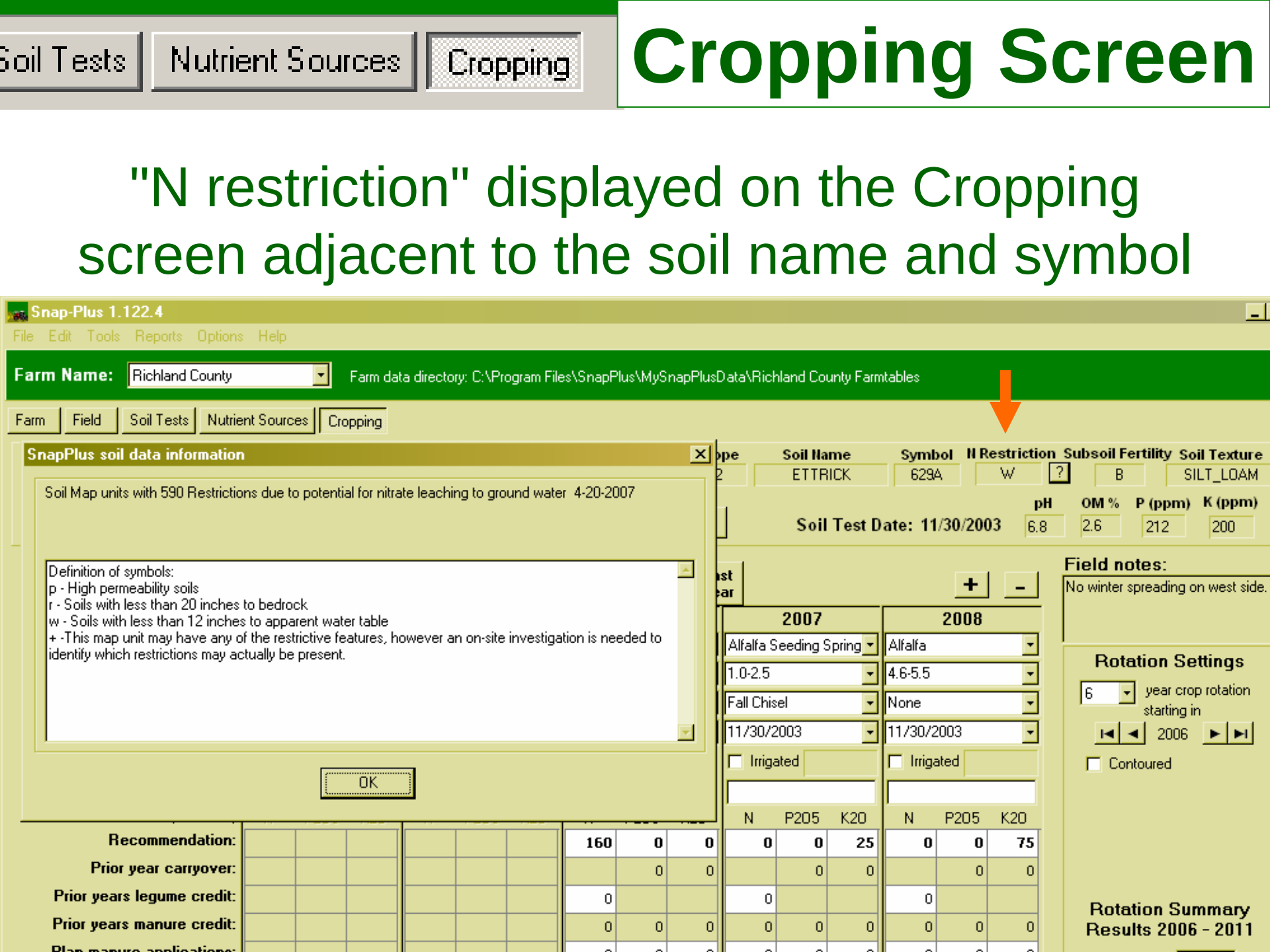
If you need to enter biosolids applications in Snap-Plus, get the explanation handout from the Snap-Plus download site.



Future versions of Snap-Plus will have a biosolids nutrient analysis data entry feature.

Cropping Screen

"N restriction" displayed on the Cropping screen adjacent to the soil name and symbol



Field | Soil Tests | Nutrient Sources | Cropping

Crop Years

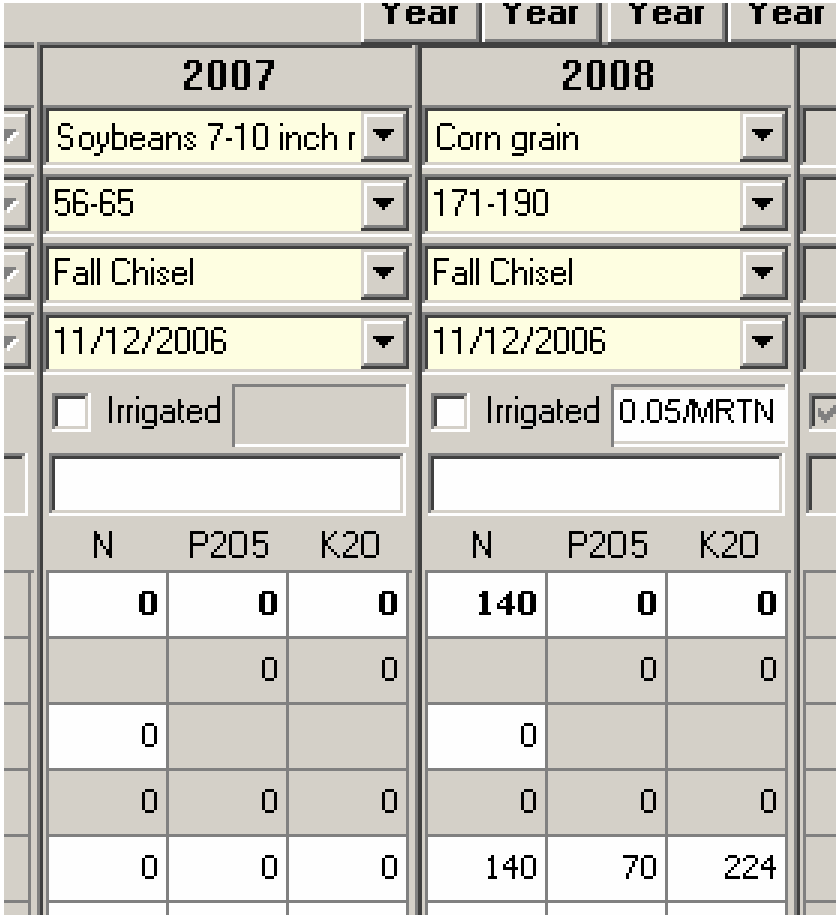
Snap-Plus years are crop years
Crop years = harvest-to-harvest

2007 Crop Year
Soybean

Chisel plowed:
11/3/2006

Planted :
5/12/2007

Harvested:
10/14/2007



2008 Crop Year
Corn

14,000 gal/acre dairy manure inc. with chisel plow:
10/31/2007

Planted :
4/20/2008

Harvested:
10/24/2008

Double Crops

Double crops: Two crops are harvested in one crop year

Example: Winter grains harvested for forage in the spring and followed by a spring-planted crop harvested in the fall

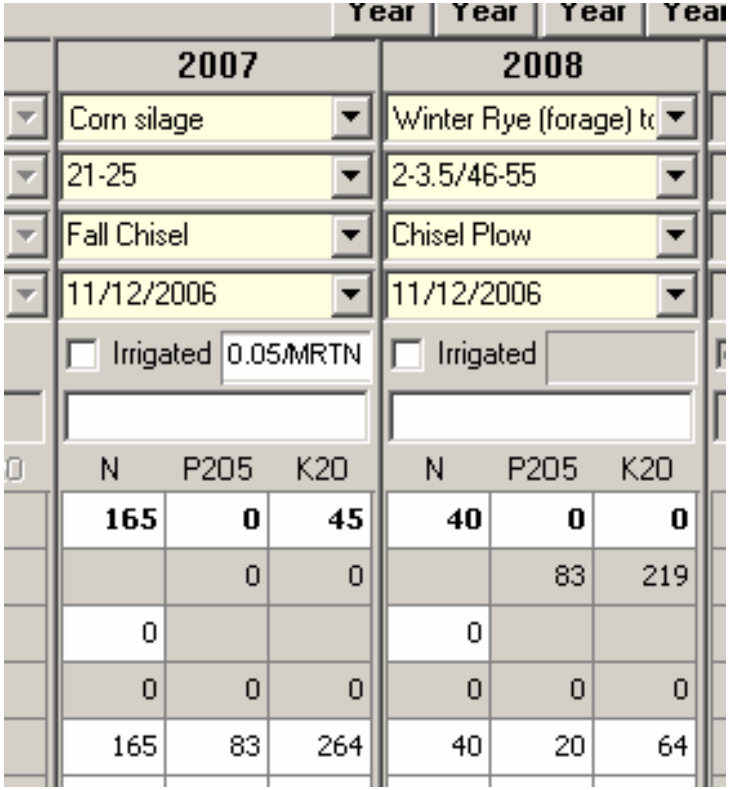
2007 Crop Year
Corn for silage

16,500 gal/a dairy manure
Applied: **11/2/2006**

Chisel plowed: **11/3/2006**

Planted : **5/12/2007**

Harvested: **9/6/2007**



2008 Crop Year
Winter rye and soybean

4,000 gal/acre
dairy manure inc. w/ chisel
9/12/2007

Rye planted :**9/18/2007**
Rye harvested:**5/15/2008**

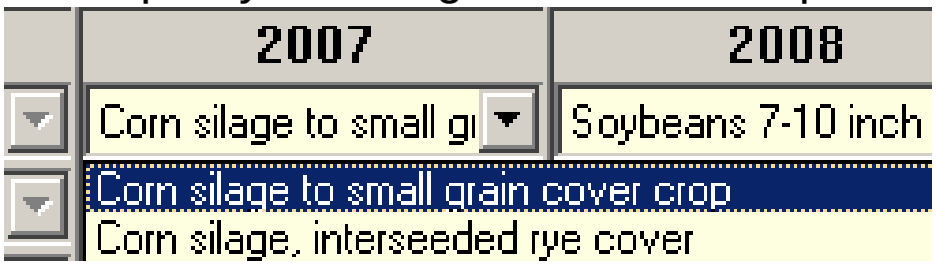
Chisel plow: **5/20/08**
Soybean planted:**5/25/08**
Harvested: **10/25/2008**

Cover Crops

Cover crops: Not harvested

Purpose: To reduce soil loss and improve soil quality following low residue crops

Example: Winter rye planted after corn silage and killed in the spring without harvesting



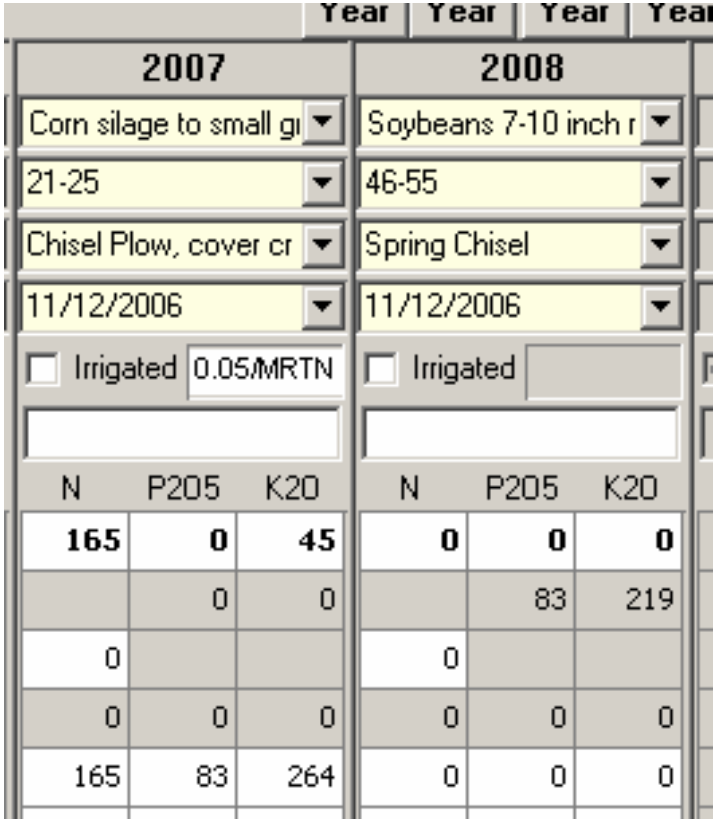
2007 Crop Year
Corn for silage

16,500 gal/a dairy manure: **11/2/2006**

Chisel plow: **11/3/2006**
Planted : **5/12/2007**
Harvested: **9/6/2007**

Rye cover crop

Disk: **9/12/2007**
Rye planted: **9/15/2007**
Rye killed: **4/15/2008**



2008 Crop Year
Soybean

Chisel plow:
5/1/2008

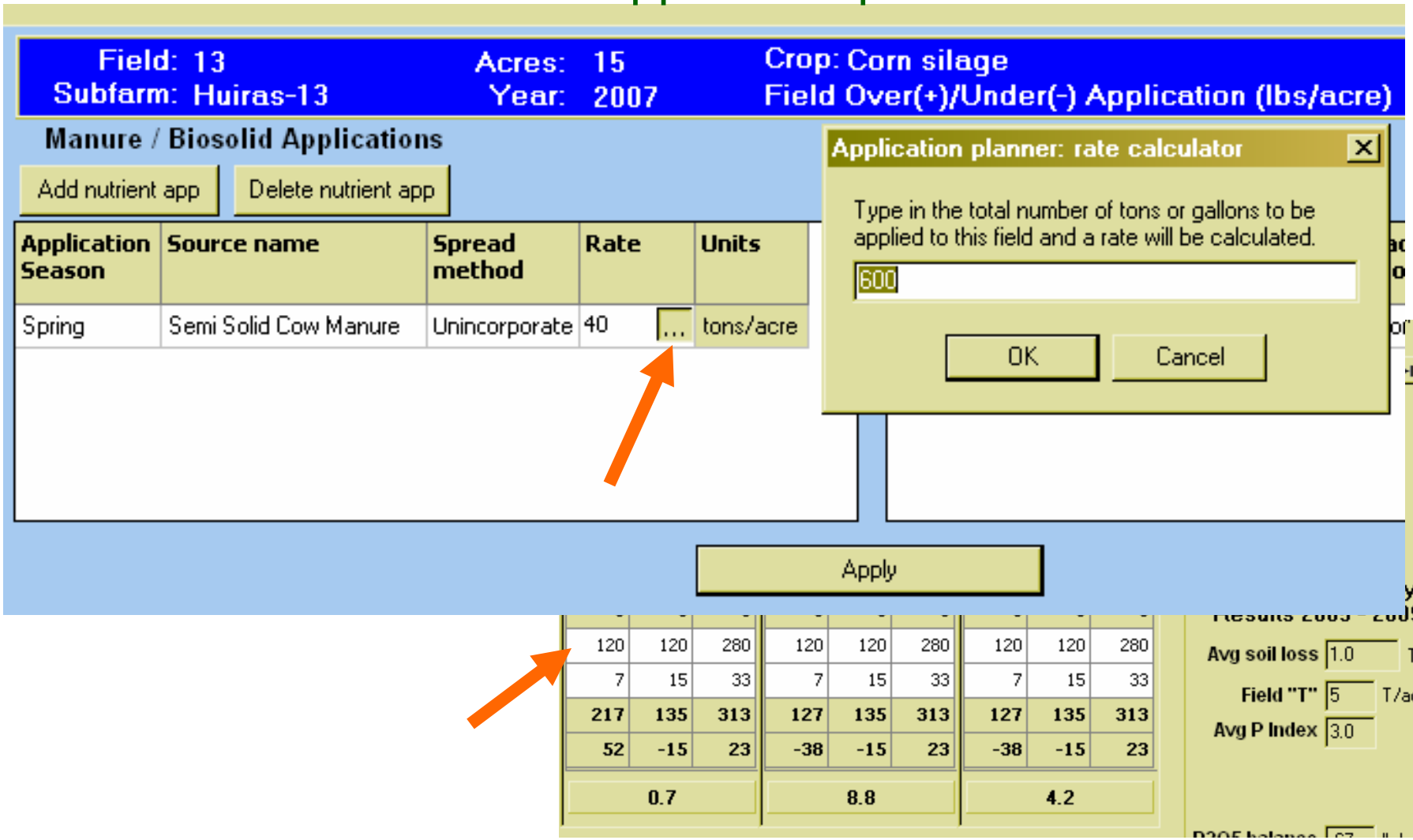
Planted :
5/15/2008

Harvested:
10/10/2008

Nutrient Sources | Cropping

Field Application Rates

The amount of manure applied to the entire field can be entered into the nutrient application planner.



Nutrient Sources | Cropping

Animal-Applied Manure

Farm | Field | Soil Tests | Nutrient Sources | Croppi

Plan year: 2007

Nutrient sources | Livestock estimator

Nutrient Source Data

Add | Delete selected

Source Name	Nutrient Type	N sur
Dairy Pack	Dairy, solid	3.7
Graze	Dairy, grazing	3
Dairy lagoon	Dairy, grazing	

Dairy, grazing
Dairy, liquid
Dairy, semi-solid
Dairy, solid
Duck, solid
Horse, solid

2008

Pasture, rotationally gr
4.1-5
None
8/30/2004
Irrigated

N	P205	K20
0	0	60
	96	275
0		
19	16	38
56	96	300
0	0	0
74	112	338

Field: 12 pasture Acres: 2 Crop:
Year: 2008 Field

Manure / Biosolid Applications

Add nutrient app | Delete nutrient app

Application Season	Source name	Spread method	Rate	Units
Spring	Dairy Pack	Unincorporate	15	tons/acre
Summer	Graze	Unincorpor	15	tons/acre

Unincorporated
Incorporated
Injected
Grazing

Grazing Nutrient Rate Calculator

This calculator finds the nutrient application rate for manure deposited by grazing animals for any field where animals are put out to pasture or for gleaning. If the field is divided into paddocks, then type in the correct number of paddocks.

The calculator can be used either for a single grazing "application" or for a summary of all grazing for a whole season. The number of "Days on each paddock" should reflect which rate you are trying to find.

Field/Pasture size (acres): 126.5

Number of paddocks in field: 10

Type of Animal: Dairy Lactating Cows 1400 lbs

Manure production (lbs/day): 148

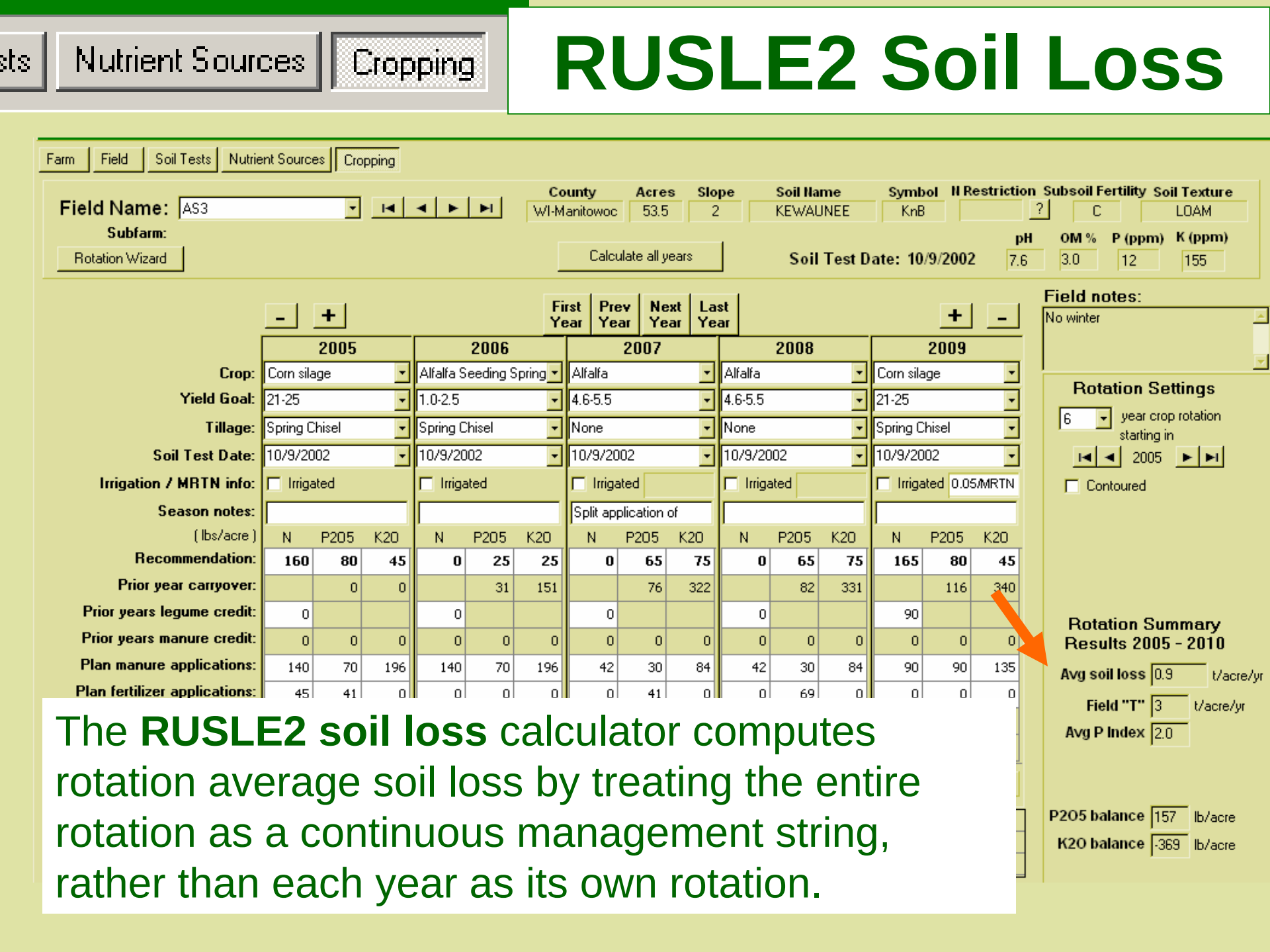
Number of Animals: 100

Days on each paddock: 16

Percent of each day spent grazing here: 75

Calculated Spreading Rate (tons/acre): 7.0

OK | Cancel



The **RUSLE2 soil loss** calculator computes rotation average soil loss by treating the entire rotation as a continuous management string, rather than each year as its own rotation.

arm | Field | Soil Tests | Nutrient Sources | Cropping

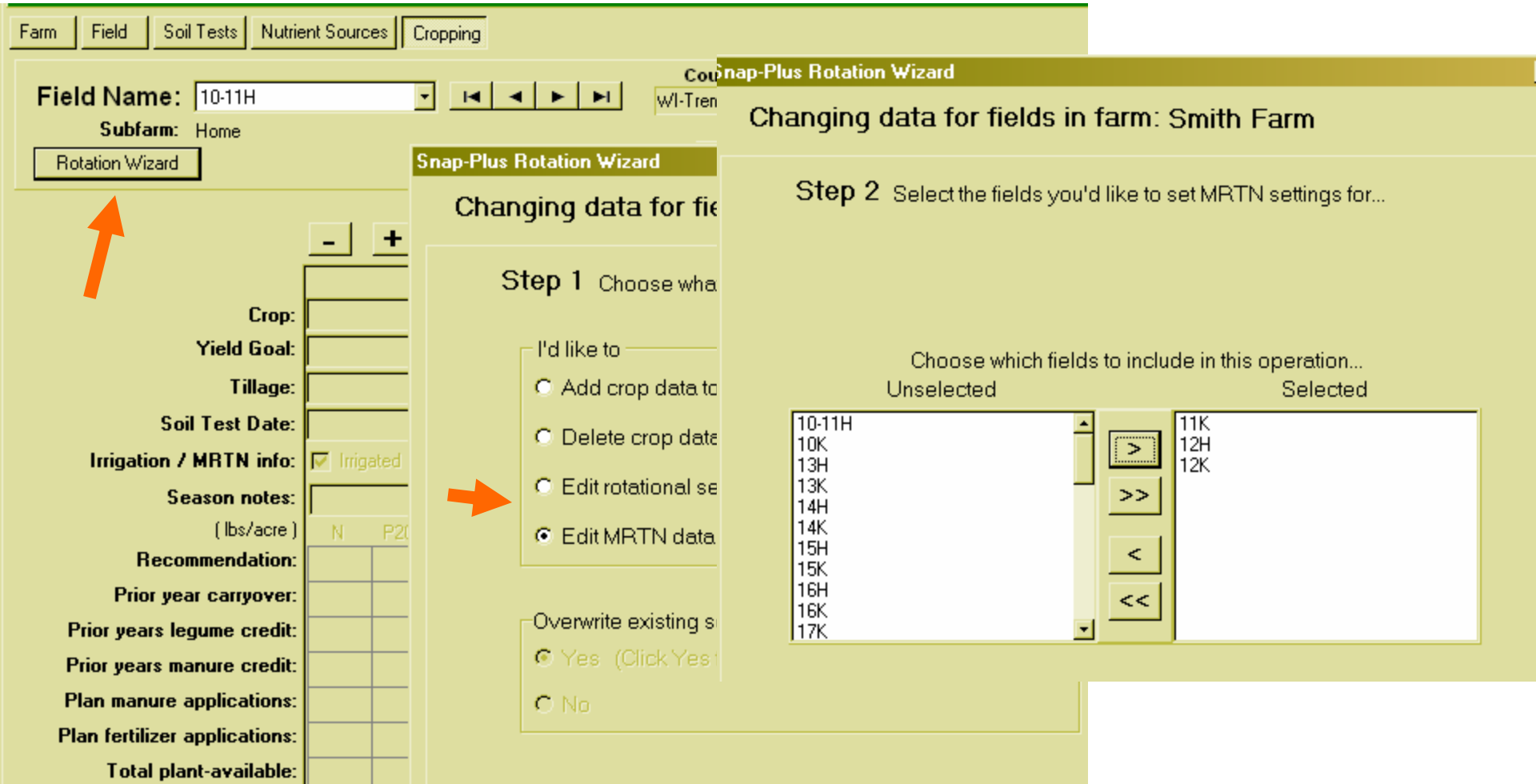
P Index

- P Index takes a most-probable rather than “worst-case” approach to losses from unincorporated manure or fertilizer .
- No longer displays "Acute loss (**unfrozen**)" PI.
- Acute Loss (**frozen**) PI is still in display.

Prior years legume credit:	0			0			0			0	
Prior years manure credit:	0	0	0	0	0	0	0	0	0	0	0
Plan manure applications:	85	43	136	0	0	0	0	0	0	0	0
Plan fertilizer applications:	49	14	29	0	0	0	0	0	124	0	0
Total plant-available:	**134**	**57**	**165**	**0**	**0**	**0**	**0**	**0**	**124**	**0**	**0**
Over(+)/Under(-) UW Rec:	**14**	**57**	**165**	**0**	**0**	**0**	**0**	**0**	**124**	**0**	**0**
Annual Total PI	**5.2**			**5.9**			**1.2**			**0.8**	
☑ Details											
Particulate PI:	**4.7**			**5.5**			**0.8**			**0.5**	
Soluble PI:	**0.4**			**0.4**			**0.4**			**0.4**	
Acute loss (frozen) PI:	**0.0**			**0.0**			**0.0**			**0.0**	

Rotation Wizard

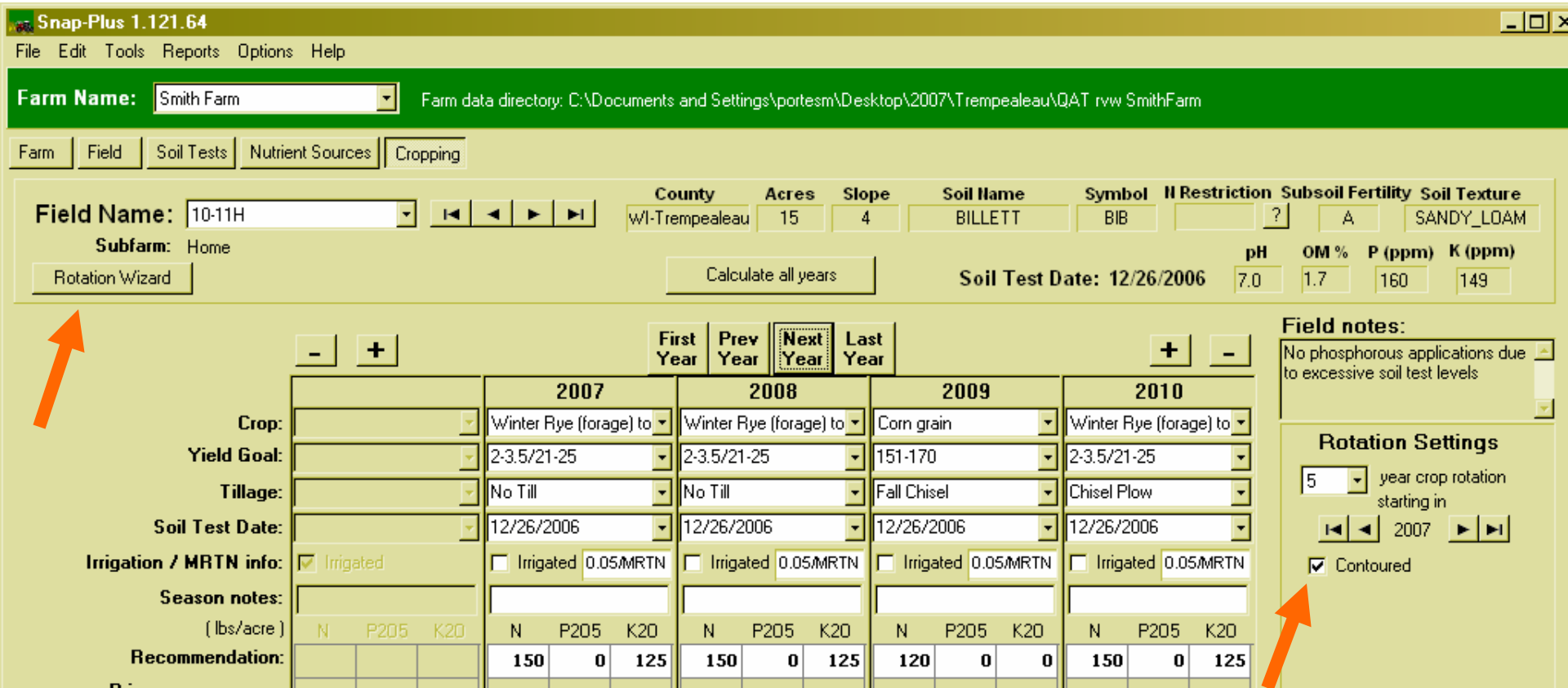
Rotation Wizard allows editing of rotation start year, rotation length, contour, and MRTN rate for multiple fields



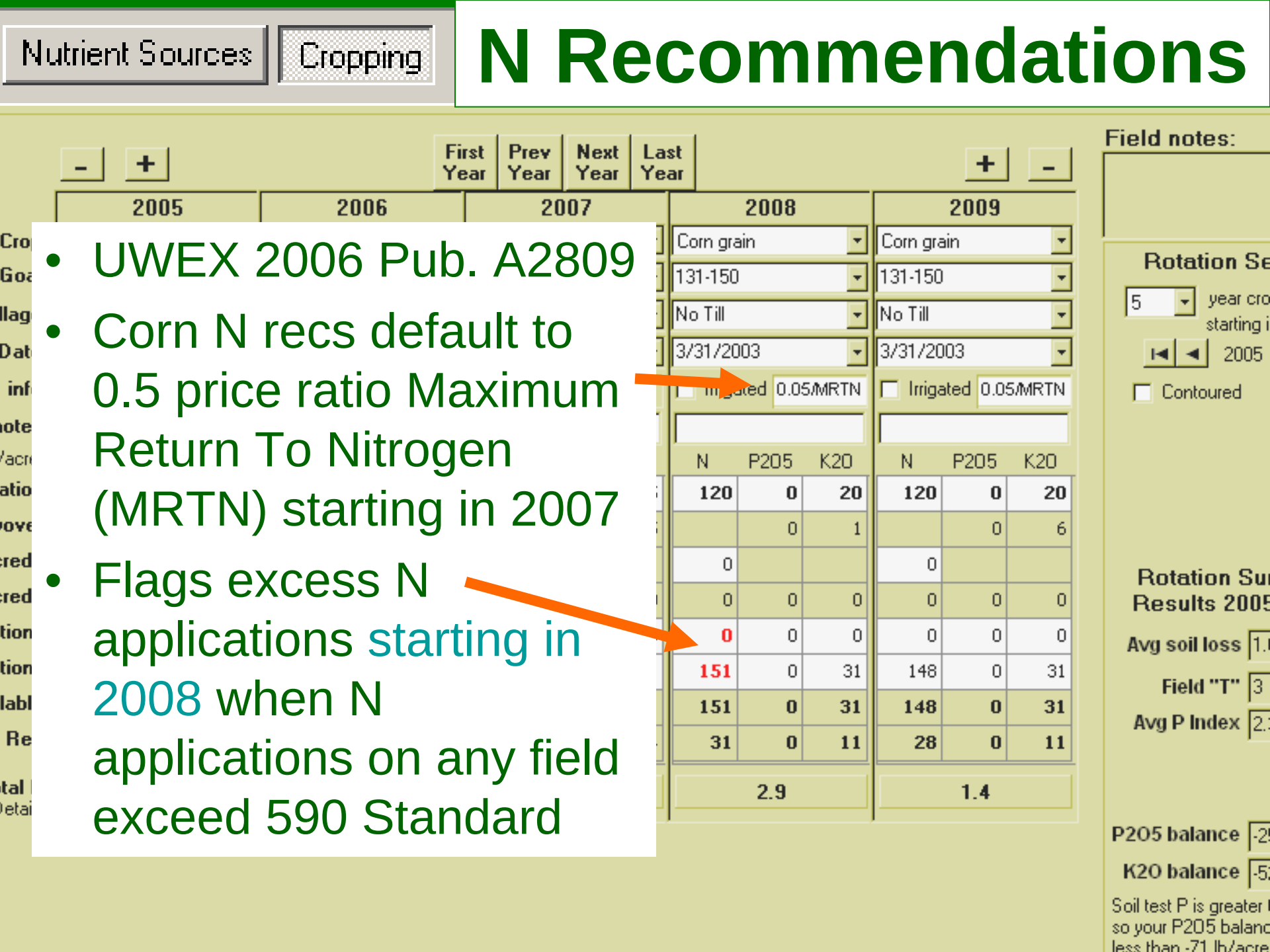
sts | Nutrient Sources | Cropping

Rotation Settings

Field contouring can be set for rotation in the “Rotation Settings” box or in the “Rotation Wizard”



N Recommendations

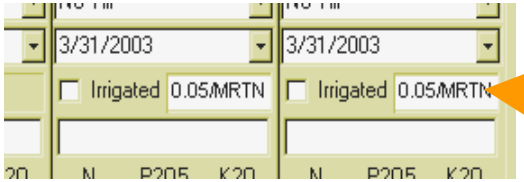


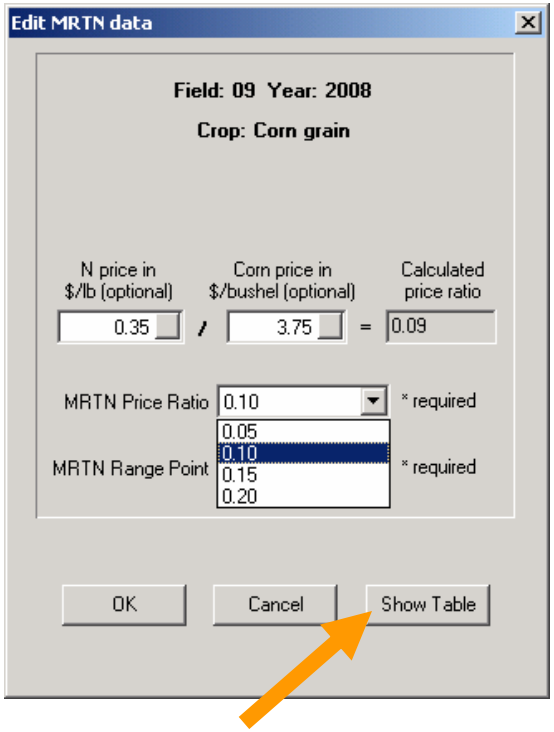
- UWEX 2006 Pub. A2809
- Corn N recs default to 0.5 price ratio Maximum Return To Nitrogen (MRTN) starting in 2007
- Flags excess N applications starting in 2008 when N applications on any field exceed 590 Standard

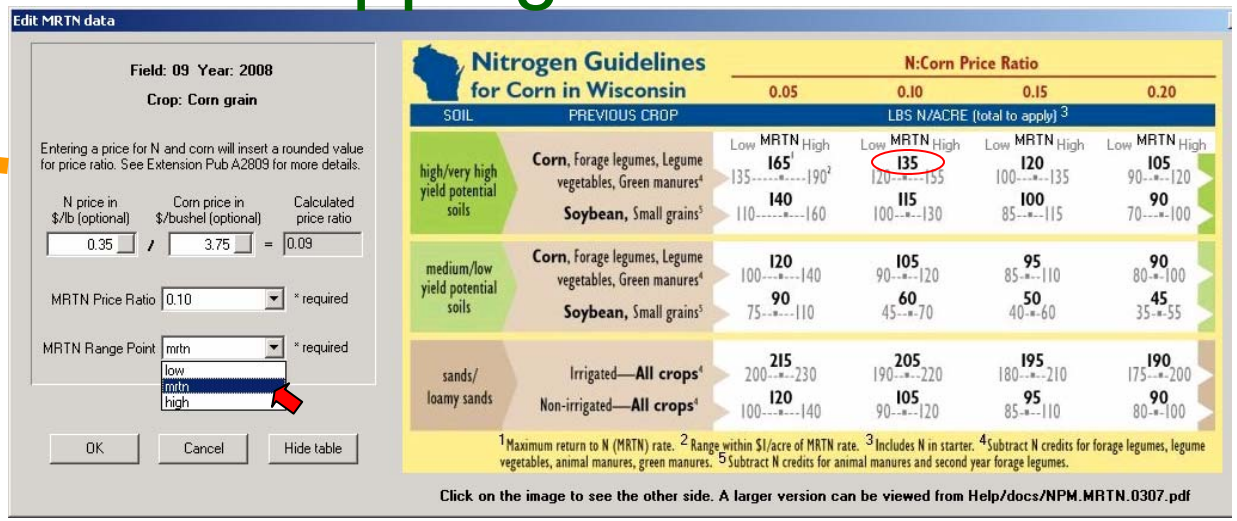
Nutrient Sources | Cropping

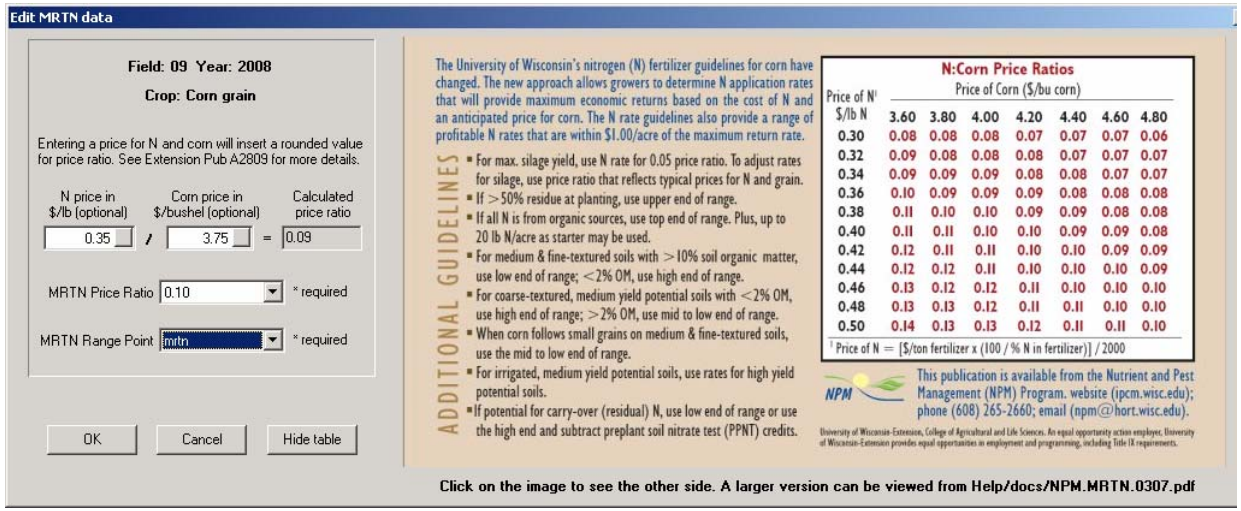
MRTN Settings

Change MRTN settings for individual fields and years from the cropping screen









Solutions to known problems are listed on Snap-Plus web site

Known Problems

- The manure or fertilizer applications row on the cropping screen blanks out after updating Snap-Plus.
- One or more messages saying "Follow 590 N-use guidelines for high-leaching potential soil..." remain in the "Field Notes" column after upgrading.
- I get an error saying "Can't close R2 profile for SnapPlus", or "Rusle2 exception".
- I get an "I/O error 103" message when I try to create a report or import a soil test.
- Sometimes my selected crops and counties disappear from the farm screen.
- When I close the program, I get a series of error dialogs

Vista users should keep farm data folders and reports files in “Documents”