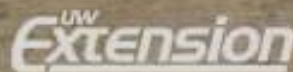
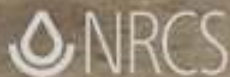


Nutrient Management - *It's a SNAP*

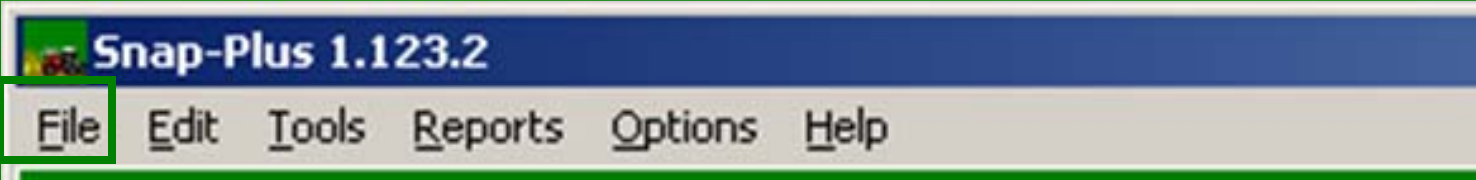
Snap Plus 1.123 Features

Sue Porter, DATCP 608-224-4605

Dr. Laura Ward Good, UW Soil Science Dept. 608-262-9894



SNAP-Plus • Wisconsin's Nutrient Management Software



Split Multi-farm Databases

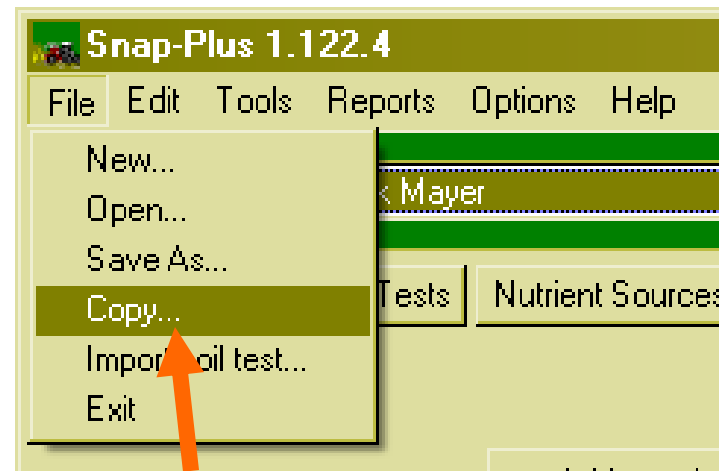
Problem: Slow calculations or computer times out during report generation.

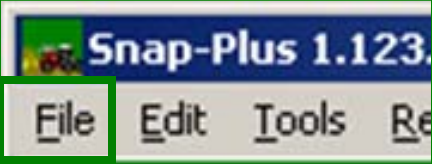
Solution: Split farms out into their own database using the Snap Plus copy wizard.

Choose "File"

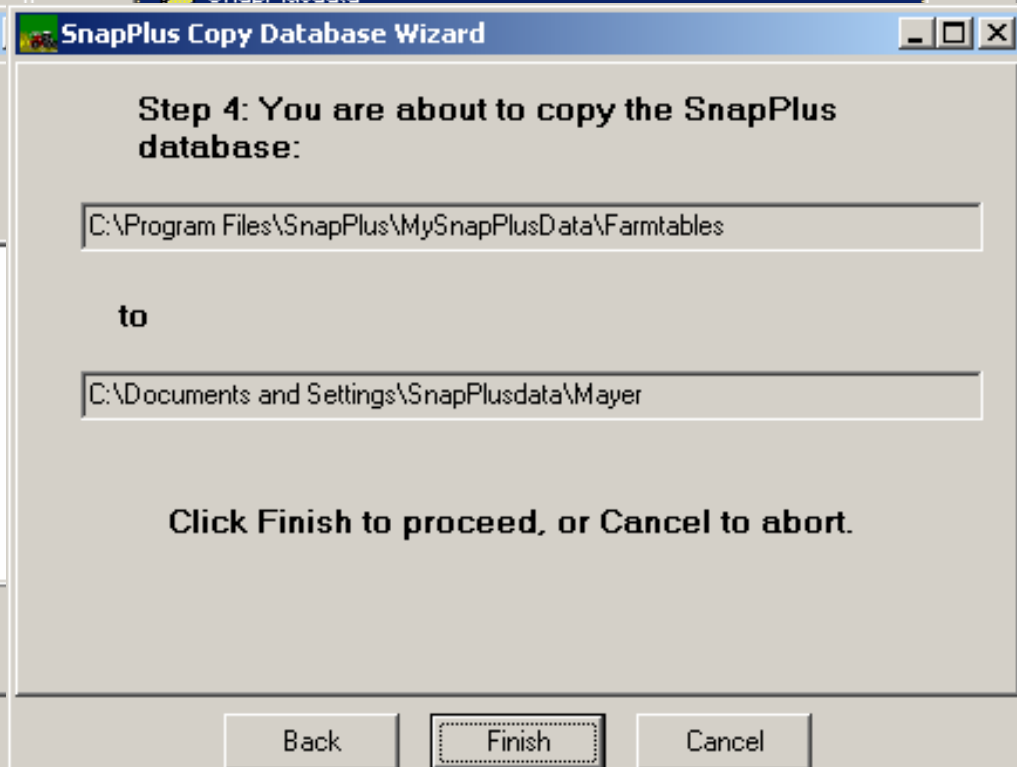
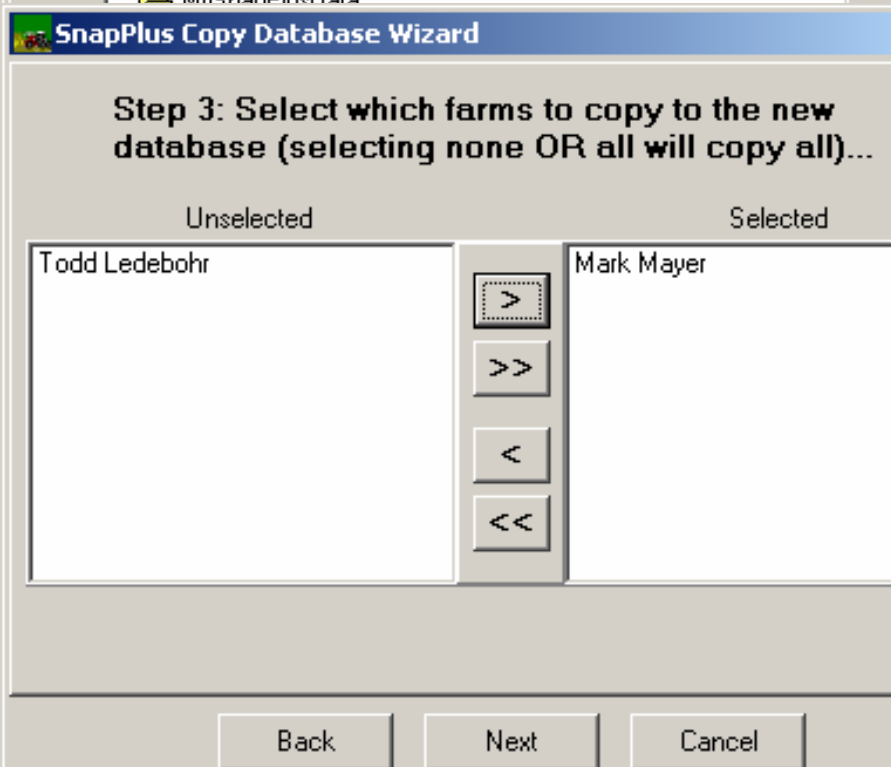
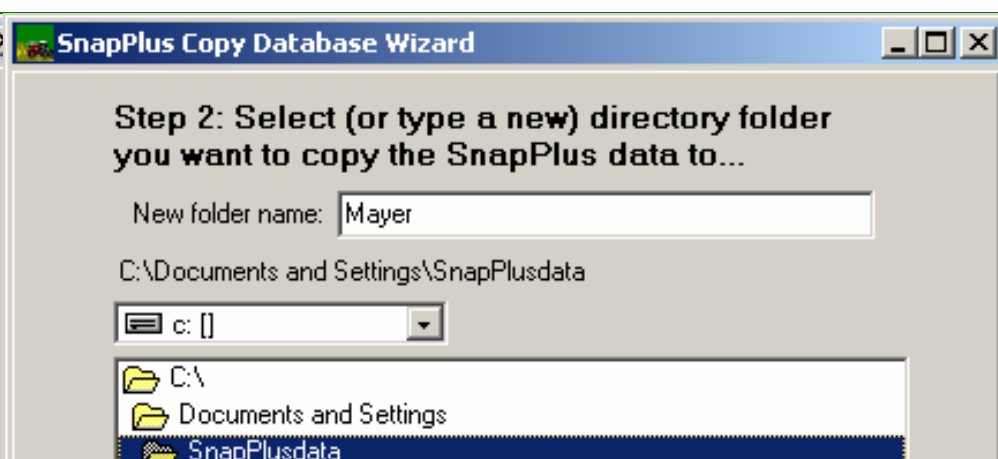
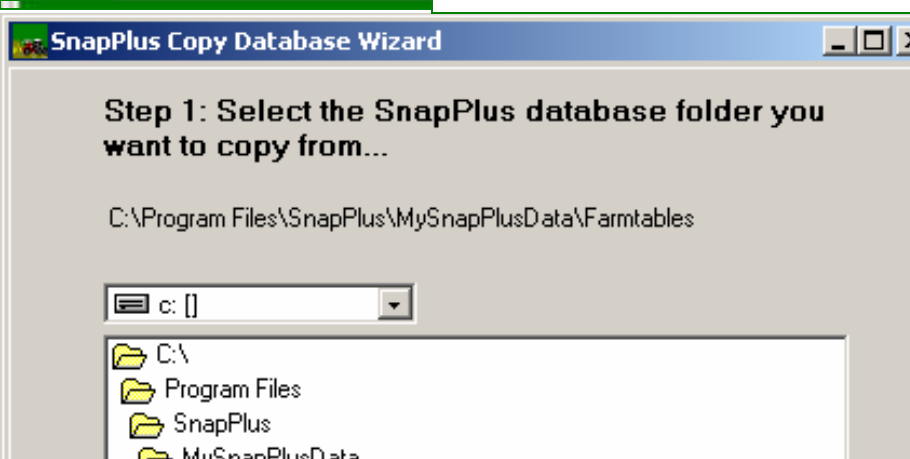


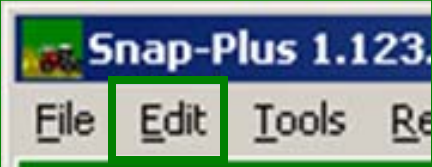
Then "Copy"





Copying & Splitting Databases





Preparer Info and Rotation Data



Plan Preparer Info

Plan Preparers

Preparer Name:

Preparer ID:

Company:

Address:

City: State: Fax:

Zip: Country:

Email:

URL:



Snap-Plus Rotation Editor

Rotation name:

Year	Crop	Yield Goal	Tillage	Irrigated
1	Corn grain	171-190	Fall Chisel	<input type="checkbox"/>
2	Soybeans 30-36 inch row	56-65	No Till	<input type="checkbox"/>
3	Corn grain	171-190	Fall Chisel	<input type="checkbox"/>
4	Soybeans 30-36 inch row	56-65	Fall Chisel	<input type="checkbox"/>



Fertilizer List

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

Snap-Plus 1 | Snap-Plus Fertilizer List Management

File Edit Tools

Far
Preparer
Rotation
Fertilizer
Farm
Field

Plan year:

Fertilizer Type
☒ Solid ☐ Liquid

Add Delete

Ammonium nitrate
Ammonium polyphosphate
Ammonium sulfate (AMS)
Ammonium thiosulfate (AMS)
Anhydrous ammonia
Calcium nitrate (CN)
Diammonium phosphate (DAP)
Monoammonium phosphate (MAP)
Potassium chloride
Potassium nitrate
Potassium sulfate
Potassium-magnesium sulfate
Triple superphosphate (TSP)
Urea

Name Potassium chloride

Fertilizer Type
☒ Solid ☐ Liquid

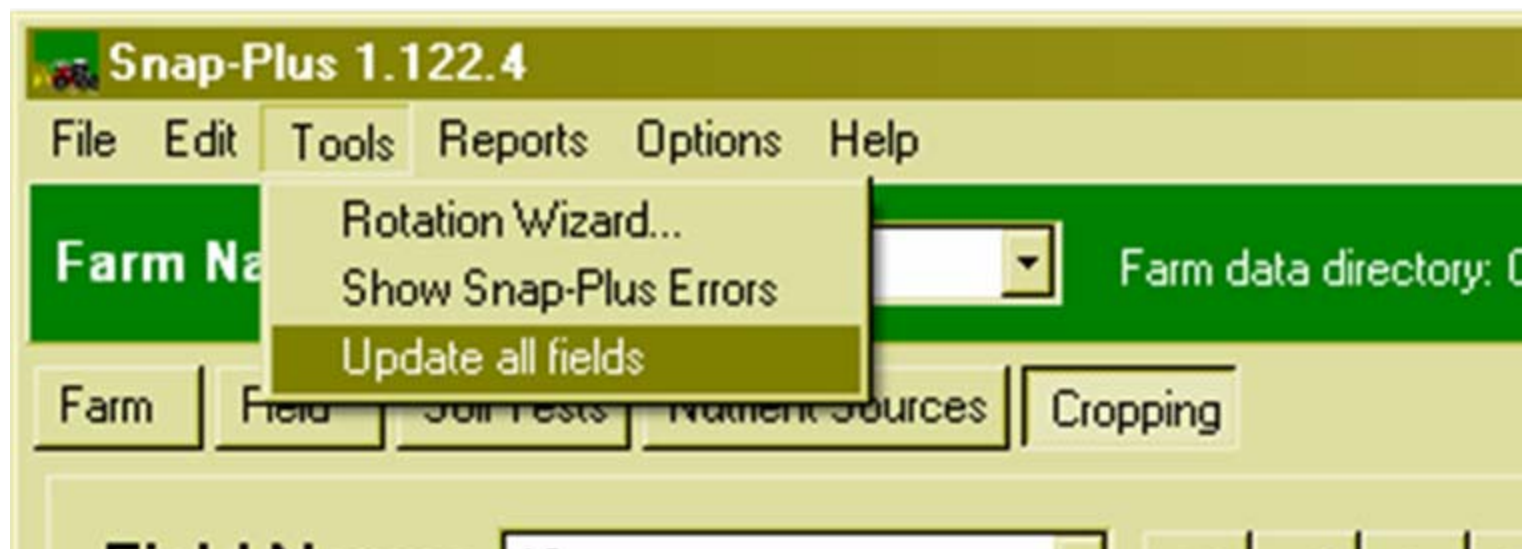
Density lbs/gal

Formulation in percent

N	0	%	Mg	0	%
P205	0	%	Ca	0	%
			B	0	%
K20	61	%	Mn	0	%
S	0	%	Zn	0	%



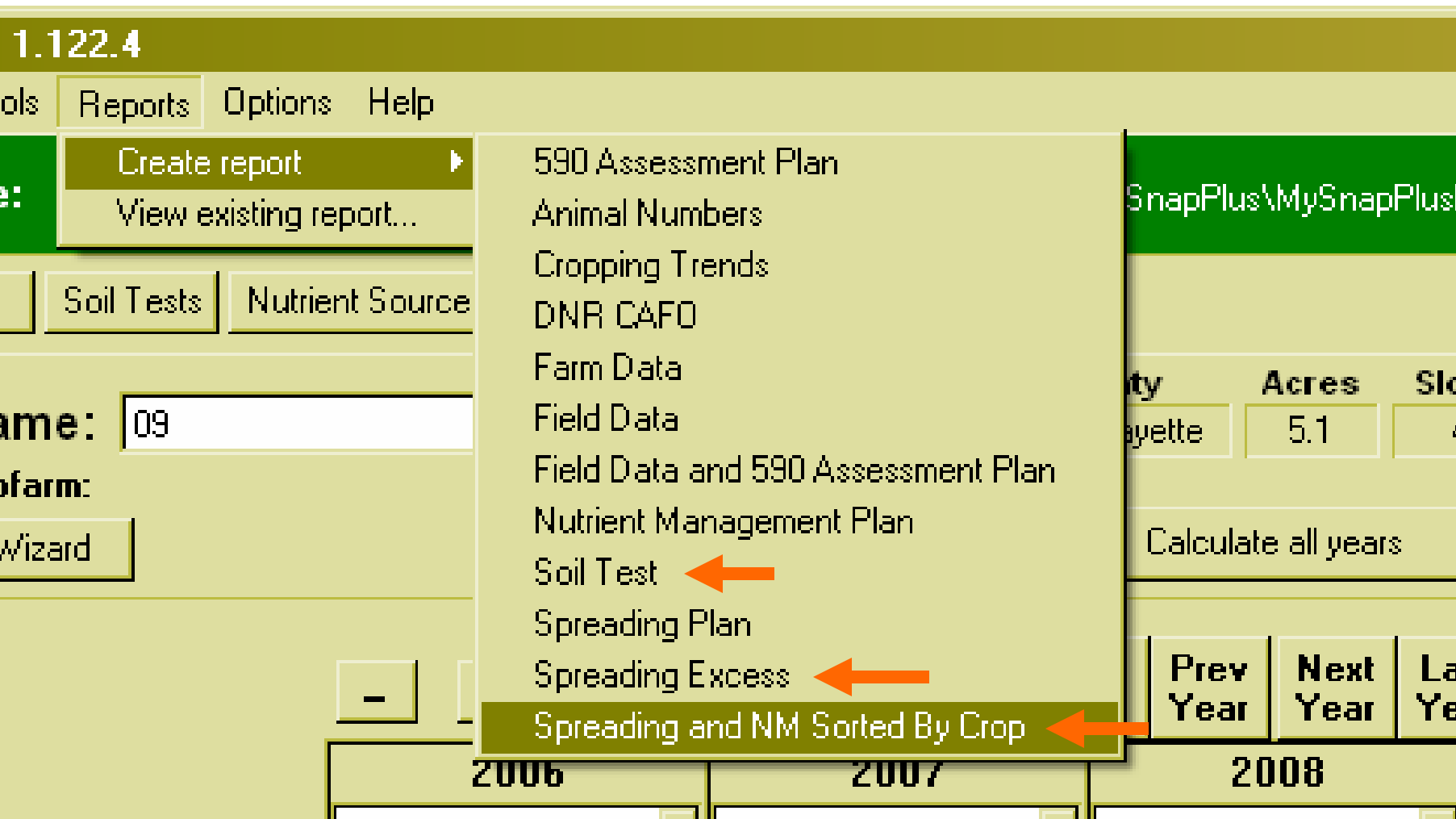
Tools Menu



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



Reports Updates





Report Setup Box

SnapPlus report setup [X]

Snap-Plus Sorted By Crop Report

Report year: 2008 Subfarm: All

Preparer name
Laura W. Good [v] [Edit Preparers]

Report output format
☐ Web page (.html)
☒ Spreadsheet (.csv)

Report filename ☒ Include date and time in report filename
C:\Program Files\SnapPlus\reports\Demonstration.2008. [Browse]

[OK] [Cancel]

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 P205 K2O credit	Total Amount	Ave P ppm	Ave K ppm	N lb/ac	P205 lb/ac	K2O lb/ac	N lb/ac	P205 lb/ac	K2O lb/ac	N lb/ac	P205 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

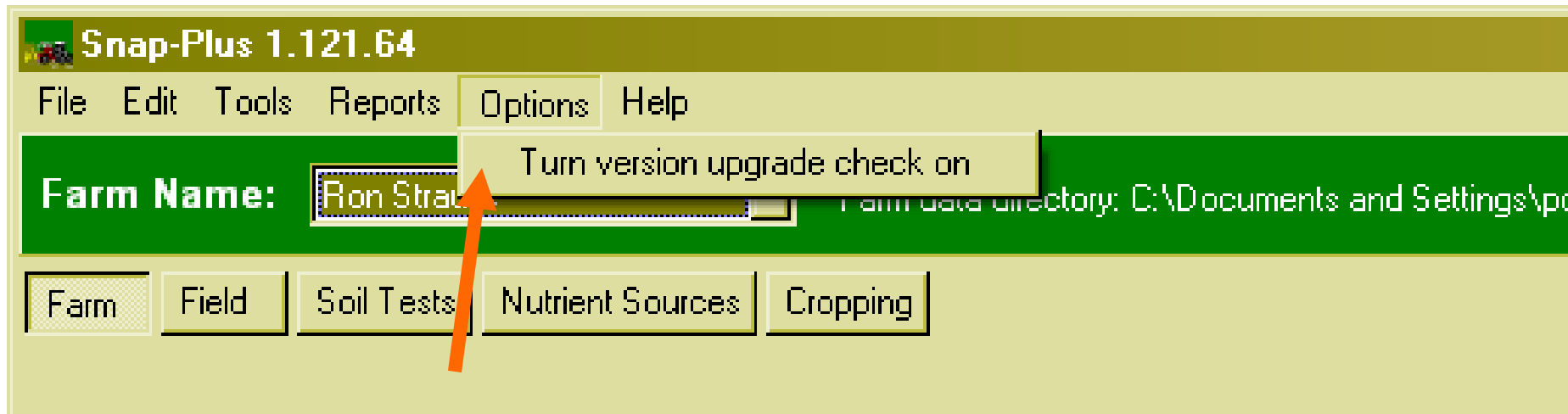
Excess N applications

Field Name	Year	Amount (lbs/acre)	Reason	Explanation
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.

Editable Emergency Response Form

Farm Name

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 basin.
 - 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	608-742-5670

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 Contractors

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.

Farm

Field

Soil Tests

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

Snap-Plus 1.122.4

File Edit Tools Reports Options Help

Farm Name: Farm data directory: C:\Program Files\SnapPlus\MySnapPlusData\Richland County Farmtables

Farm Field Soil Tests Nutrient Sources Cropping

Add Field Delete Field

Go to web soil survey Restriction definitions

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	

Farm

Field

Soil Tests

Web Soil Survey Link

Get field soil and topo maps from NRCS Web Soil Survey

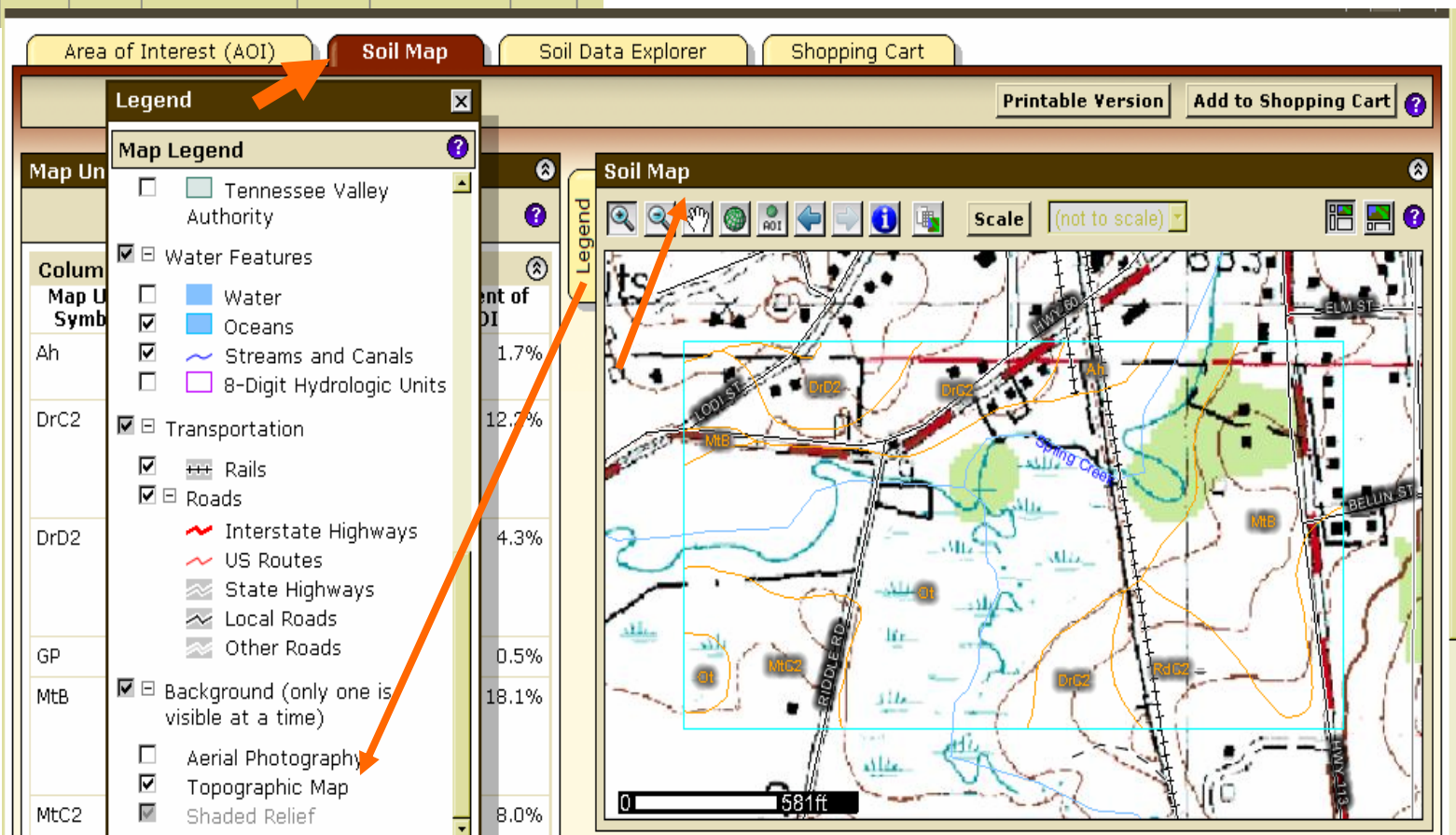
ons Help

Farm data directory: C:\Program Files\SnapPlus\MySnapPlusData\dairy wheat test

Strient Sources Cropping

Go to web soil survey Restriction definitions

nd group (farm)	FSA Tract #	FSA Field #	Size (acres)	County	Soil Map Symbol	Soil Series Name	N Restri ction	Fi Sl (%
--------------------	----------------	----------------	-----------------	--------	-----------------------	---------------------	----------------------	----------------



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

Area of Interest (AOI) Soil Map **Soil Data Explorer** Shopping Cart

View Soil Information By Use: All Uses [Printable Version](#) [Add to Shopping Cart](#)

Intro to Soils Suitabilities and Limitations for Use **Soil Properties and Qualities** Soil Reports

Properties and Qualities Ratings

[Open All](#) [Close All](#)

Soil Chemical Properties

Soil Erosion Factors

Soil Physical Properties

Soil Qualities and Features

AASHTO Group Classification (Surface)

Depth to a Selected Soil Restrictive Layer

[View Description](#) [View Rating](#)

View Options

Map Legend

☒ Area of Interest (AOI)

☒ Area of Interest (AOI)

☒ Soils

☐ Soil Survey Areas

☒ Soil Map Units

☒ Soil Ratings

0 - 25

25 - 50

50 - 100

100 - 150

150 - 200

> 200

Map — Depth to a Selected Soil Restrictive Layer: Lithic bedrock

Scale (not to scale)

0 1180ft

By Map Unit

Summary by Map Unit — Columbia County, Wisconsin

Map unit	Map unit name	Rating (centimeters)	Acres in AOI	Percent of AOI
DrD2				
MtB				
GP				
RdC2				
LaD2				
PnB				
MeC2				
LaC2				
PnC2				
GrC2				
LaD2				
MtC2				
PnB				
RdC2				
TsA				
PnB				
PnB				
RdB2				
GrC2				

20 inches is about 50 cm.

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

View Soil Information By Use: All Uses Printable Version Add to Shopping Cart

Intro to Soils Suitabilities and Limitations for Use **Soil Properties and Qualities** Soil Reports

Properties and Qualities Ratings

Open All Close All ?

Soil Chemical Properties

Soil Erosion Factors

Soil Physical Properties

Soil Qualities and Features

AASHTO Group Classification

Depth to a Selected Soil Property

Depth to Any Soil Restriction

Drainage Class

Frost Action

Frost-Free Days

Hydrologic Soil Group

Map — Hydrologic Soil Group

Map Scale (not to scale)

Legend

Map Legend

- ☒ Area of Interest (AOI)
- ☒ Area of Interest (AOI)
- ☒ Soils
- ☐ Soil Survey Areas
- ☒ Soil Map Units
- ☒ Soil Ratings
 - A
 - A/D
 - B
 - B/D
 - C
 - C/D
 - D
 - Not rated or not available
- ☐ Special Point Features
- ☐ Special Line Features
- ☒ Political Features
- ☐ Postal Code

View Options

Map ☒

Table ☒

Description of Rating ☒

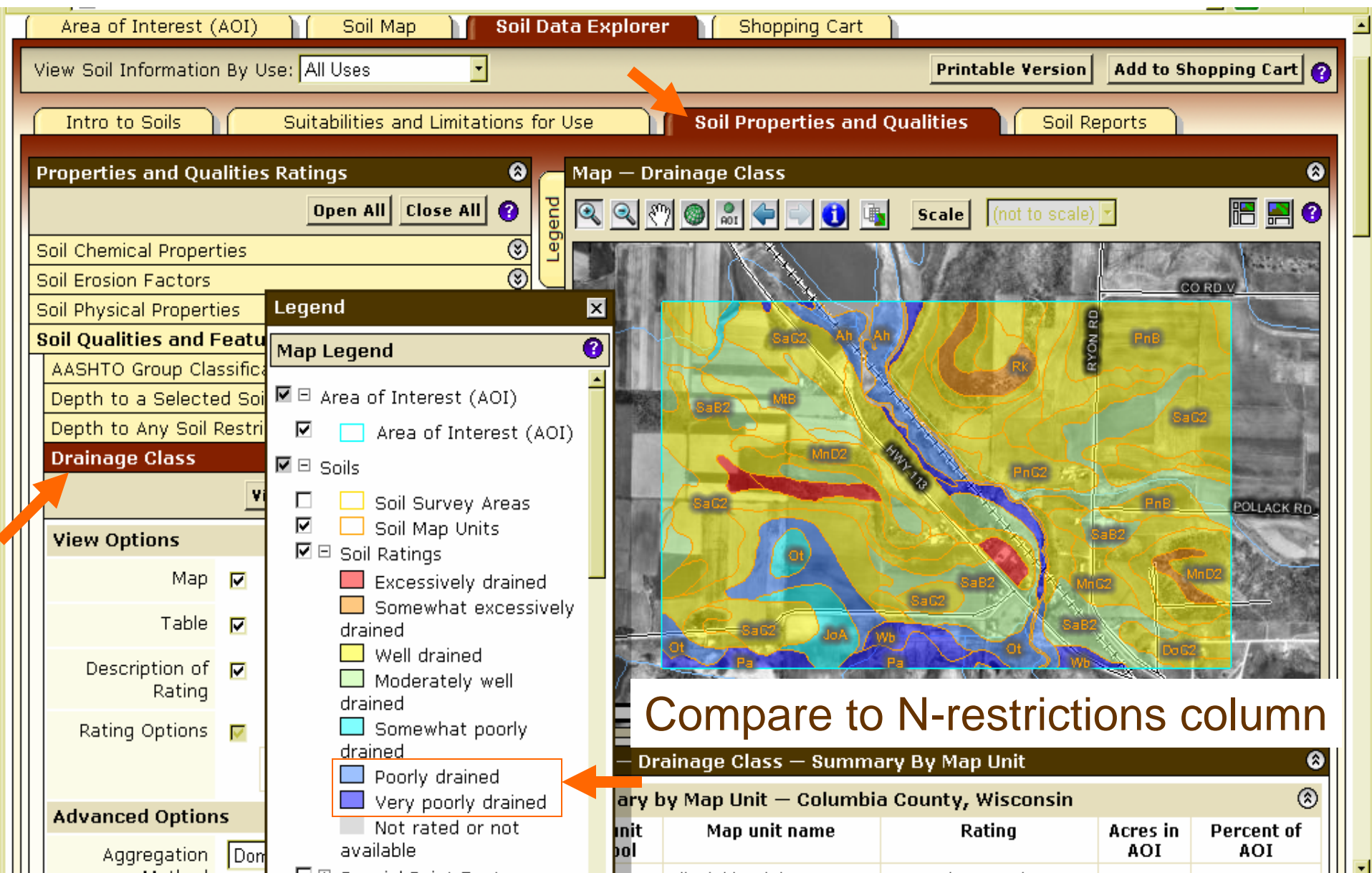
Rating Options ☒

Hydrologic Soil Group — Summary By Map Unit

Summary by Map Unit — Columbia County, Wisconsin

Map unit symbol	Map unit name	Rating	Acres in AOI	Percentage
	Alluvial land, loamy	B	2.1	

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



Farm

Field

Soil Tests

Nutrient Sources

Cropping

Soil Test Screen

Most recent soil test is listed first

Farm

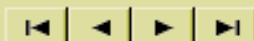
Field

Soil Tests

Nutrient Sources

Cropping

Field Name: 12



County

WI-Outagamie

Acres

23

Slope

4

Soil Name

HORTONVILLE

Soil Symbol

HrB

Subfarm:

Add soil test

Delete current test

Import

Soil test history for field: 12

Test Date	Soil Test Lab	Lab sample #	Sample Density (ac/smpl)	Plow Depth (inches)	Ave pH	Ave OM (%)	Ave P (ppm)	Ave K (ppm)	Ave Ca (ppm)	Ave Mg (ppm)	Ave B (ppm)
11/13/2006	AgSource	784664	4.6	6	7	3.06	126	173			
12/12/2002	AgSource	765633	4.6	6	7.3	3.44	111	148			

Add soil sample

Delete current sample

Individual soil test samples for test date: 11/13/2006

Sample ID	Latitude	Longitude	pH	OM (%)	P (ppm)	K (ppm)	Ca (ppm)	Mg (ppm)	B (ppm)	Mn (ppm)	Zn (ppm)	S (ppm)	BpH	CEC
4 2006			6.8	2.3	49	114								
5 2006			6.8	2.9	131	183								
6 2006			7.3	3.8	158	222								

Copy manures and fertilizers to multiple years

Farm Name: Littlefarm Farm data directory: C:\Program Files\SnapPlus\MySnapPlusD

Farm Field Soil Tests Nutrient Sources Cropping

Plan year: 2008 Copy Sources and Fertilizers

Nutrient sources Livestock estimator

Nutrient Source Data

Add Delete selected

Values are for first year available nutrients in lbs/ton or lbs/1000 gallons

Source Name	Nutrient Type	N surface	N incorp	P205	K20	S	Dry matter %	Analysis Date
Dairy lagoon	Dairy, liquid	6.3	8.4	5.4	20	0	5	
Dairy Pack	Dairy, solid	3.7	4.9	6.4	20	0	41	
Graze	Dairy, grazing	3	4	3	7	0.9	12	

Dry fertilizers planned

Add Delete selected

Fertilizer name	% N	% P205	% K20	% S	% Mg	% Ca	Cost/Ton
Potassium chloride	0	0	61	0	0	0	0
starter	9	23	30	0	0	0	0

Liquid fertiliz

Add Delet

Fertilizer name

Select nutrient sources to copy from year 2007 ☒ Copy nutrient commercial values

Dairy lagoon
Dairy Pack

Graze

Select fertilizers to copy from year 2007

Potassium chloride
starter
Urea

Copy data to years starting with 2006 and ending with (including) 2012

☐ Overwrite existing sources with the same name

OK Cancel

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

▼

Of Total Manure Collected

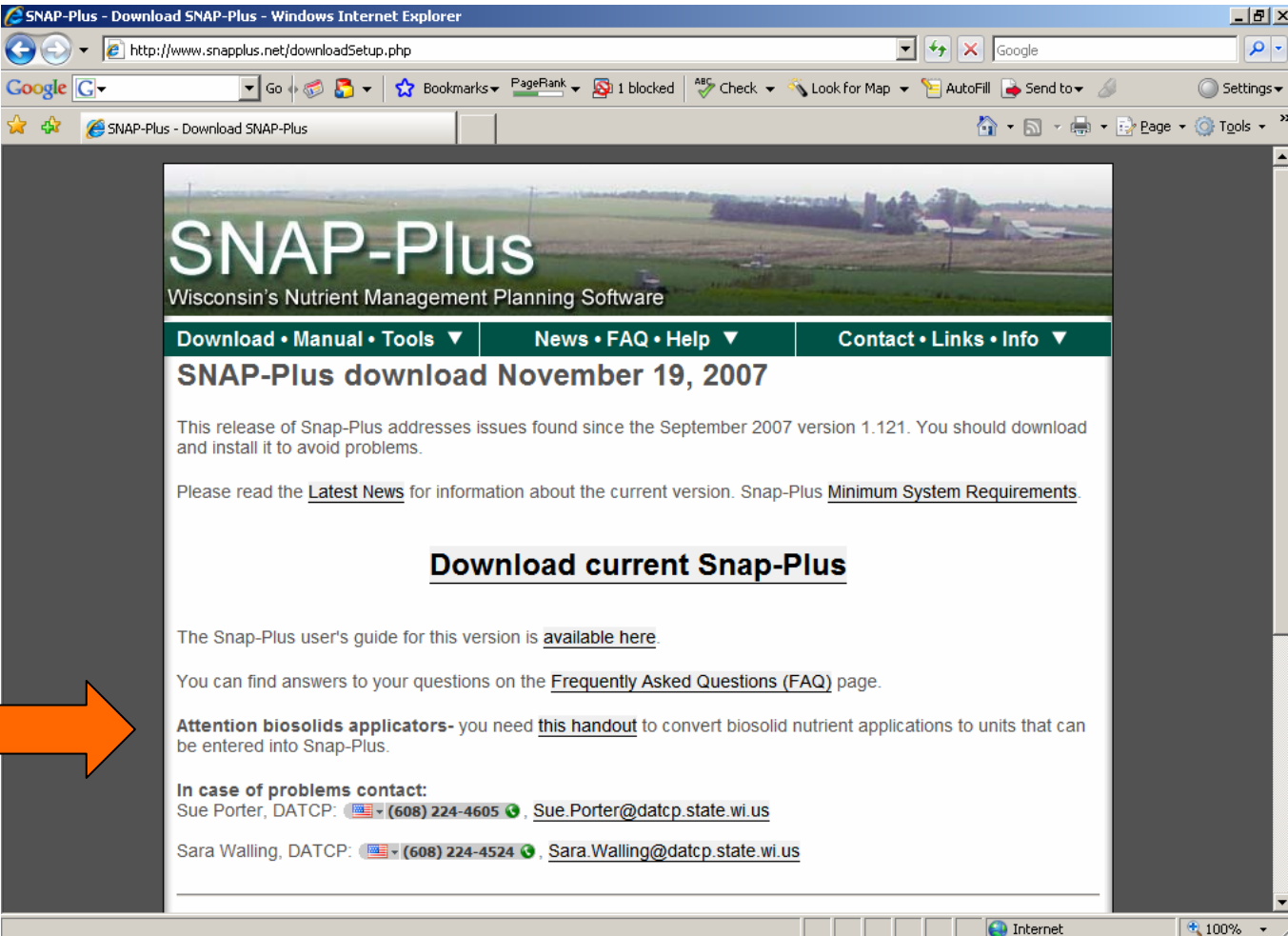
Animal Type	# of animals	% of total spread as solid	% of total spread as liquid	Other Liquid (gal/day)	Bedding (cu ft/day /animal)	Yearly Tons	Yearly Gallons	Animal Units (see footnote)
Beef Cow 1000 lbs	95	17	0	0	0	186	0	95.0
Swine Boar 350 lbs	20	0	100	0	0	0	7,300	10.0
Swine Gestating Sow 275 lbs	2550	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
<div> <div>Delete all</div> </div>						<div> <div>Farm Totals:</div> <div>186</div> <div>1,403,698</div> <div>1,340</div> </div>		

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

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



SNAP-Plus
Wisconsin's Nutrient Management Planning Software

Download • Manual • Tools ▾ News • FAQ • Help ▾ Contact • Links • Info ▾

SNAP-Plus download November 19, 2007

This release of Snap-Plus addresses issues found since the September 2007 version 1.121. You should download and install it to avoid problems.

Please read the [Latest News](#) for information about the current version. Snap-Plus [Minimum System Requirements](#).

Download current Snap-Plus

The Snap-Plus user's guide for this version is [available here](#).

You can find answers to your questions on the [Frequently Asked Questions \(FAQ\)](#) page.

Attention biosolids applicators- you need [this handout](#) to convert biosolid nutrient applications to units that can be entered into Snap-Plus.

In case of problems contact:
 Sue Porter, DATCP: [\(608\) 224-4605](#) [Sue.Porter@datcp.state.wi.us](#)
 Sara Walling, DATCP: [\(608\) 224-4524](#) [Sara.Walling@datcp.state.wi.us](#)

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

Soil Tests

Nutrient Sources

Cropping

Cropping Screen

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

Snap-Plus 1.122.4

File Edit Tools Reports Options Help

Farm Name: Richland County Farm data directory: C:\Program Files\SnapPlus\MySnapPlusData\Richland County Farmtables

Farm Field Soil Tests Nutrient Sources Cropping

SnapPlus soil data information

Soil Map units with 590 Restrictions due to potential for nitrate leaching to ground water 4-20-2007

Definition of symbols:
 p - High permeability soils
 r - Soils with less than 20 inches to bedrock
 w - Soils with less than 12 inches to apparent water table
 + - This map unit may have any of the restrictive features, however an on-site investigation is needed to identify which restrictions may actually be present.

OK

Type	Soil Name	Symbol	N Restriction	Subsoil Fertility	Soil Texture
2	ETTRICK	629A	W	B	SILT_LOAM

Soil Test Date: 11/30/2003

	pH	OM %	P (ppm)	K (ppm)
	6.8	2.6	212	200

Field notes:
No winter spreading on west side.

Rotation Settings
 6 year crop rotation starting in 2006
☐ Contoured

Rotation Summary Results 2006 - 2011

	2007	2008
Alfalfa Seeding Spring	Alfalfa	
1.0-2.5	4.6-5.5	
Fall Chisel	None	
11/30/2003	11/30/2003	
<input type="checkbox"/> Irrigated	<input type="checkbox"/> Irrigated	
N	P205	K20
0	0	25
0	0	0
0	0	0
0	0	0
0	0	0

	2007	2008
N	P205	K20
160	0	0
0	0	0
0	0	0
0	0	0
0	0	0

Recommendation:

Prior year carryover:

Prior years legume credit:

Prior years manure credit:

Plan manure applications:

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

			Year	Year	Year	Year
			2007		2008	
			Soybeans 7-10 inch r	Corn grain		
			56-65	171-190		
			Fall Chisel	Fall Chisel		
			11/12/2006	11/12/2006		
			<input type="checkbox"/> Irrigated	<input type="checkbox"/> Irrigated		0.05/MRTN
			N	P205	K20	N P205 K20
			0	0	0	140 0 0
				0	0	0 0
			0			0
			0	0	0	0 0 0
			0	0	0	140 70 224

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

2008	
▼	Winter Rye (forage) to ▼
▼	Winter Rye (forage) to Soybeans, 7 inch row
▼	Winter Rye (forage) to Sweet corn

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**

Year	Year	Year	Year
2007	2008		
▼ Corn silage ▼	▼ Winter Rye (forage) to ▼		
▼ 21-25 ▼	▼ 2-3.5/46-55 ▼		
▼ Fall Chisel ▼	▼ Chisel Plow ▼		
▼ 11/12/2006 ▼	▼ 11/12/2006 ▼		
<input type="checkbox"/> Irrigated 0.05/MRTN	<input type="checkbox"/> Irrigated		
N P205 K20	N P205 K20		
165 0 45	40 0 0		
	83 219		
0	0		
0 0 0	0 0 0		
165 83 264	40 20 64		

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**

Field

Soil Tests

Nutrient Sources

Cropping

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	2008
▼	Corn silage to small gr ▼	Soybeans 7-10 inch
▼	Corn silage to small grain cover crop	
	Corn silage, interseeded rye cover	

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**

Year	Year	Year	Year
2007	2008		
Corn silage to small gr ▼	Soybeans 7-10 inch r ▼		
21-25 ▼	46-55 ▼		
Chisel Plow, cover cr ▼	Spring Chisel ▼		
11/12/2006 ▼	11/12/2006 ▼		
<input type="checkbox"/> Irrigated 0.05/MRTN	<input type="checkbox"/> Irrigated		
N	P205	K20	
165	0	45	
	0	0	
0			
0	0	0	
165	83	264	
N	P205	K20	
0	0	0	
	83	219	
0			
0	0	0	
0	0	0	

2008 Crop Year Soybean

Chisel plow:
5/1/2008

Planted :
5/15/2008

Harvested:
10/10/2008

Field Application Rates

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

Field: 13
Subfarm: Huiras-13

Acres: 15
Year: 2007

Crop: Corn silage
Field Over(+)/Under(-) Application (lbs/acre)

Manure / Biosolid Applications

Add nutrient app

Delete nutrient app

Application Season	Source name	Spread method	Rate	Units
Spring	Semi Solid Cow Manure	Unincorporate	40	...

Apply

Application planner: rate calculator

Type in the total number of tons or gallons to be applied to this field and a rate will be calculated.

600

OK

Cancel

120	120	280	120	120	280	120	120	280
7	15	33	7	15	33	7	15	33
217	135	313	127	135	313	127	135	313
52	-15	23	-38	-15	23	-38	-15	23
0.7			8.8			4.2		

Results 2005 - 2009

Avg soil loss 1.0 T/acre

Field "T" 5 T/acre

Avg P Index 3.0

P205 balance 67

Animal-Applied Manure

Farm Field Soil Tests **Nutrient Sources** Cropping

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

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

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
74	112	278

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	Unincorporated	15	...
		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 gleaned. 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

ts Nutrient Sources

Cropping

RUSLE2 Soil Loss

Farm

Field

Soil Tests

Nutrient Sources

Cropping

Field Name: AS3

County: WI-Manitowoc

Acres: 53.5

Slope: 2

Soil Name: KEWAUNEE

Symbol: KnB

II Restriction: ?

Subsoil Fertility: C

Soil Texture: LOAM

Subfarm:

Rotation Wizard

Calculate all years

Soil Test Date: 10/9/2002

pH: 7.6

OM %: 3.0

P (ppm): 12

K (ppm): 155

Field notes:

No winter

Rotation Settings

6 year crop rotation starting in

2005

Contoured

Rotation Summary Results 2005 - 2010

Avg soil loss 0.9 t/acre/yr

Field "T" 3 t/acre/yr

Avg P Index 2.0

P205 balance 157 lb/acre

K20 balance 369 lb/acre

First Year

Prev Year

Next Year

Last Year

2005

2006

2007

2008

2009

Crop:

Yield Goal:

Tillage:

Soil Test Date:

Irrigation / MRTN info:

Season notes:

Recommendation:

Prior year carryover:

Prior years legume credit:

Prior years manure credit:

Plan manure applications:

Plan fertilizer applications:

Corn silage	Alfalfa Seeding Spring	Alfalfa	Alfalfa	Corn silage
21-25	1.0-2.5	4.6-5.5	4.6-5.5	21-25
Spring Chisel	Spring Chisel	None	None	Spring Chisel
10/9/2002	10/9/2002	10/9/2002	10/9/2002	10/9/2002
<input type="checkbox"/> Irrigated	<input type="checkbox"/> Irrigated	<input type="checkbox"/> Irrigated	<input type="checkbox"/> Irrigated	<input type="checkbox"/> Irrigated 0.05/MRTN
		Split application of		
N P205 K20	N P205 K20	N P205 K20	N P205 K20	N P205 K20
160 80 45	0 25 25	0 65 75	0 65 75	165 80 45
0 0 0	0 31 151	0 76 322	0 82 331	0 116 340
0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
140 70 196	140 70 196	42 30 84	42 30 84	90 90 135
45 41 0	0 0 0	0 41 0	0 69 0	0 0 0

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.

- 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	0
Plan manure applications:	85	43	136	0	0	0	0	0	0	0	0	0
Plan fertilizer applications:	49	14	29	0	0	0	0	0	124	0	0	0
Total plant-available:	134	57	165	0	0	0	0	0	124	0	0	0
Over(+)/Under(-) UW Rec:	14	57	165	0	0	0	0	0	124	0	0	0
Annual Total PI	5.2			5.9			1.2			0.8		
<input checked="" type="checkbox"/> 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		

The screenshot displays the 'Snap-Plus Rotation Wizard' software interface. At the top, there are navigation tabs: 'Farm', 'Field', 'Soil Tests', 'Nutrient Sources', and 'Cropping'. Below these, the 'Field Name' is set to '10-11H' and the 'Subfarm' is 'Home'. A red arrow points to the 'Rotation Wizard' button. The main area is titled 'Snap-Plus Rotation Wizard' and 'Changing data for fields in farm: Smith Farm'. It shows 'Step 1: Choose what you'd like to do' with options: 'Add crop data to', 'Delete crop data', 'Edit rotational sequence', and 'Edit MRTN data' (selected). Below this, there are options to 'Overwrite existing data' with 'Yes' (selected) or 'No'. On the right, 'Step 2: Select the fields you'd like to set MRTN settings for...' shows a list of fields: '10-11H', '10K', '13H', '13K', '14H', '14K', '15H', '15K', '16H', '16K', and '17K'. A red arrow points to the '10-11H' field in this list. The 'Selected' list on the right contains '11K', '12H', and '12K'.

Rotation Settings

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

Snap-Plus 1.121.64 File Edit Tools Reports Options Help

Farm Name: Farm data directory: C:\Documents and Settings\portesm\Desktop\2007\Trempealeau\QAT_rvw SmithFarm

[Farm](#)
[Field](#)
[Soil Tests](#)
[Nutrient Sources](#)
[Cropping](#)

Field Name:

County:
Acres:
Slope:
Soil Name:
Symbol:
II Restriction:
Subsoil Fertility:
Soil Texture:

Subfarm:

Soil Test Date:
pH:
OM %:
P (ppm):
K (ppm):

	First Year	Prev Year	Next Year	Last Year
Crop:	Winter Rye (forage) to	Winter Rye (forage) to	Corn grain	Winter Rye (forage) to
Yield Goal:	2-3.5/21-25	2-3.5/21-25	151-170	2-3.5/21-25
Tillage:	No Till	No Till	Fall Chisel	Chisel Plow
Soil Test Date:	12/26/2006	12/26/2006	12/26/2006	12/26/2006
Irrigation / MRTN info:	<input checked="" type="checkbox"/> Irrigated	<input type="checkbox"/> Irrigated 0.05/MRTN	<input type="checkbox"/> Irrigated 0.05/MRTN	<input type="checkbox"/> Irrigated 0.05/MRTN
Season notes:				
Recommendation:	N: 150 P205: 0 K20: 125	N: 150 P205: 0 K20: 125	N: 120 P205: 0 K20: 0	N: 150 P205: 0 K20: 125

Field notes:

Rotation Settings
 year crop rotation starting in

☒ Contoured

N Recommendations

Field notes:

Rotation Se

5 year cro
starting i

2005

☐ Contoured

Rotation Sur
Results 2005

Avg soil loss 1.1

Field "T" 3

Avg P Index 2.3

P205 balance -2.1

K20 balance -5.1

Soil test P is greater than your P205 balance so your P205 balance is less than -71 lb/acre

- 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

2005	2006	2007	2008	2009
			Corn grain	Corn grain
			131-150	131-150
			No Till	No Till
			3/31/2003	3/31/2003
			<input type="checkbox"/> Irrigated 0.05/MRTN	<input type="checkbox"/> Irrigated 0.05/MRTN
			N P205 K20	N P205 K20
			120 0 20	120 0 20
			0 0 1	0 0 6
			0 0 0	0 0 0
			0 0 0	0 0 0
			0 0 0	0 0 0
			151 0 31	148 0 31
			151 0 31	148 0 31
			31 0 11	28 0 11
			2.9	1.4

MRTN Settings

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

3/31/2003 3/31/2003

☐ Irrigated 0.05/MRTN ☐ Irrigated 0.05/MRTN

N P205 K20 N P205 K20

Edit MRTN data

Field: 09 Year: 2008
Crop: Corn grain

N price in \$/lb (optional) / Corn price in \$/bushel (optional) = Calculated price ratio
0.35 / 3.75 = 0.09

MRTN Price Ratio: 0.10 * required

MRTN Range Point: low * required

OK Cancel **Show Table**

Edit MRTN data

Field: 09 Year: 2008
Crop: Corn grain

Entering a price for N and corn will insert a rounded value for price ratio. See Extension Pub A2809 for more details.

N price in \$/lb (optional) / Corn price in \$/bushel (optional) = Calculated price ratio
0.35 / 3.75 = 0.09

MRTN Price Ratio: 0.10 * required

MRTN Range Point: mrtn * required

OK Cancel Hide table

Nitrogen Guidelines for Corn in Wisconsin

SOIL	PREVIOUS CROP	N: Corn Price Ratio							
		0.05		0.10		0.15		0.20	
		Low	High	Low	High	Low	High	Low	High
high/very high yield potential soils	Corn, Forage legumes, Legume vegetables, Green manures ⁴	135	165 ¹	120	135	100	120	90	105
	Soybean, Small grains ⁵	110	140	100	115	85	100	70	90
medium/low yield potential soils	Corn, Forage legumes, Legume vegetables, Green manures ⁴	100	120	90	105	85	95	80	90
	Soybean, Small grains ⁵	75	90	45	60	40	50	35	45
sands/loamy sands	Irrigated—All crops ⁴	200	215	190	205	180	195	175	190
	Non-irrigated—All crops ⁴	100	120	90	105	85	95	80	90

¹ Maximum return to N (MRTN) rate. ² Range within \$1/acre of MRTN rate. ³ Includes N in starter. ⁴ Subtract N credits for forage legumes, legume vegetables, animal manures, green manures. ⁵ Subtract N credits for animal manures and second year forage legumes.

Click on the image to see the other side. A larger version can be viewed from Help/docs/NPM.MRTN.0307.pdf

Edit MRTN data

Field: 09 Year: 2008
Crop: Corn grain

Entering a price for N and corn will insert a rounded value for price ratio. See Extension Pub A2809 for more details.

N price in \$/lb (optional) / Corn price in \$/bushel (optional) = Calculated price ratio
0.35 / 3.75 = 0.09

MRTN Price Ratio: 0.10 * required

MRTN Range Point: mrtn * required

OK Cancel Hide table

ADDITIONAL GUIDELINES

The University of Wisconsin's nitrogen (N) fertilizer guidelines for corn have changed. The new approach allows growers to determine N application rates that will provide maximum economic returns based on the cost of N and an anticipated price for corn. The N rate guidelines also provide a range of profitable N rates that are within \$1.00/acre of the maximum return rate.

- For max. silage yield, use N rate for 0.05 price ratio. To adjust rates for silage, use price ratio that reflects typical prices for N and grain.
- If > 50% residue at planting, use upper end of range.
- If all N is from organic sources, use top end of range. Plus, up to 20 lb N/acre as starter may be used.
- For medium & fine-textured soils with > 10% soil organic matter, use low end of range; < 2% OM, use high end of range.
- For coarse-textured, medium yield potential soils with < 2% OM, use high end of range; > 2% OM, use mid to low end of range.
- When corn follows small grains on medium & fine-textured soils, use the mid to low end of range.
- For irrigated, medium yield potential soils, use rates for high yield potential soils.
- If potential for carry-over (residual) N, use low end of range or use the high end and subtract preplant soil nitrate test (PPNT) credits.

N: Corn Price Ratios

Price of N \$/lb N	Price of Corn (\$/bu corn)							
	3.60	3.80	4.00	4.20	4.40	4.60	4.80	
0.30	0.08	0.08	0.08	0.07	0.07	0.07	0.06	
0.32	0.09	0.08	0.08	0.08	0.07	0.07	0.07	
0.34	0.09	0.09	0.09	0.08	0.08	0.07	0.07	
0.36	0.10	0.09	0.09	0.09	0.08	0.08	0.08	
0.38	0.11	0.10	0.10	0.09	0.09	0.08	0.08	
0.40	0.11	0.11	0.10	0.10	0.09	0.09	0.08	
0.42	0.12	0.11	0.11	0.10	0.10	0.09	0.09	
0.44	0.12	0.12	0.11	0.10	0.10	0.10	0.09	
0.46	0.13	0.12	0.12	0.11	0.10	0.10	0.10	
0.48	0.13	0.13	0.12	0.11	0.11	0.10	0.10	
0.50	0.14	0.13	0.13	0.12	0.11	0.11	0.10	


¹ Price of N = (\$/ton fertilizer x (100 / % N in fertilizer)) / 2000

This publication is available from the Nutrient and Pest Management (NPM) Program website (ipcm.wisc.edu); phone (608) 265-2660; email (npm@hort.wisc.edu).

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Click on the image to see the other side. A larger version can be viewed from Help/docs/NPM.MRTN.0307.pdf

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



SNAP-Plus
Wisconsin's Nutrient Management Planning Software

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Answers to Frequently Asked Questions (FAQ)

Data Issues

- [How is Snap-Plus data stored?](#)
- [How should I arrange my Snap-Plus data?](#)

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”

