Snap Plus Update
quick start

Sue Porter, DATCP

608-224-4605
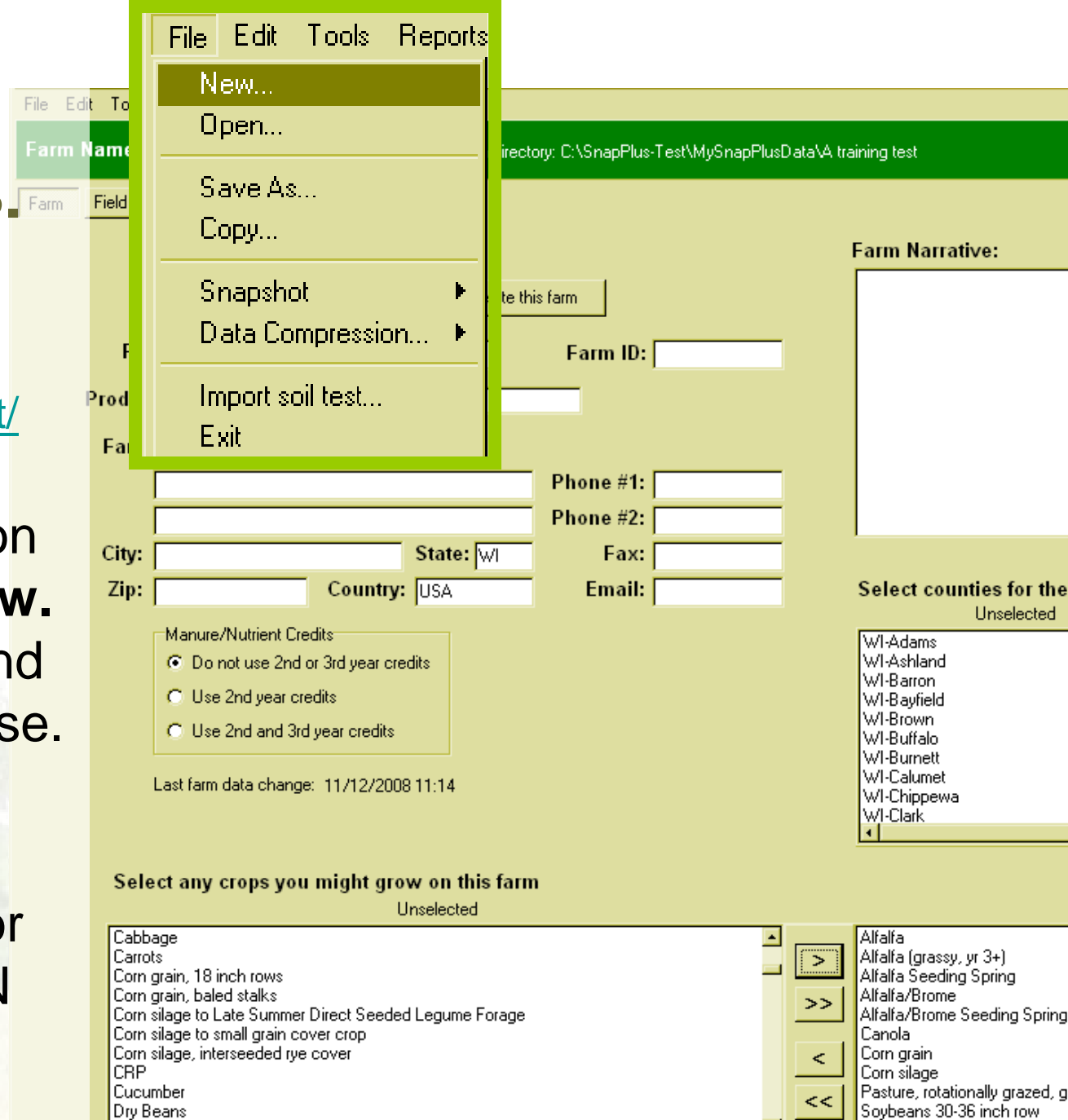
Sue.porter@wisconsin.gov

Developing a plan Step 1. 2. 3.

- Install current version

  http://www.snapplus.net/

- Add new operation with **File** then **New.** Select location and name the database.

- Fill *Farm Screen.* Use 2nd year manure credits for CAFO. Excess N will turn red.

Developing a plan Step 4.

Import Soil Tests

- Edit in Snap Plus farm, field, sample names to make each row unique and match map.

- Allows field names like 002 and 02 for alpha numeric order.

Snap-Plus 1.126.23

File Edit Tools Reports

New...
Open...

Save As...
Copy...

Snapshot ▶
Data Compression... ▶

Import soil test...
Exit

SnapPlus Soil Test Import

The SnapPlus import function assu̶ ... only one farm, and that farm is the current farm in SnapPlus. Multiple fields per import file is OK.

[   ] Select File

Data preview

LabID	LabSmplID	SmplDate	FarmName	FSAFarm	FieldName	Size	PlowDepth	SoilSm
UW Soil &	6320	8/30/2004	Little Farm		09	5.1	6	1
UW Soil &	6320	8/30/2004	Little Farm		10	5.4	6	2
UW Soil &	6320	8/30/2004	Little Farm		11	8.3	6	3
UW Soil &	6320	8/30/2004	Little Farm		11	8.3	6	4
UW Soil &	6320	8/30/2004	Little Farm		12	12	6	5
UW Soil &	6320	8/30/2004	Little Farm		12p	2	6	6

☐ Use as soil test date for existing data in soil test year or later.   ☐ Overwrite existing data

Import   0 records imported

Close

Developing a plan Step 4.
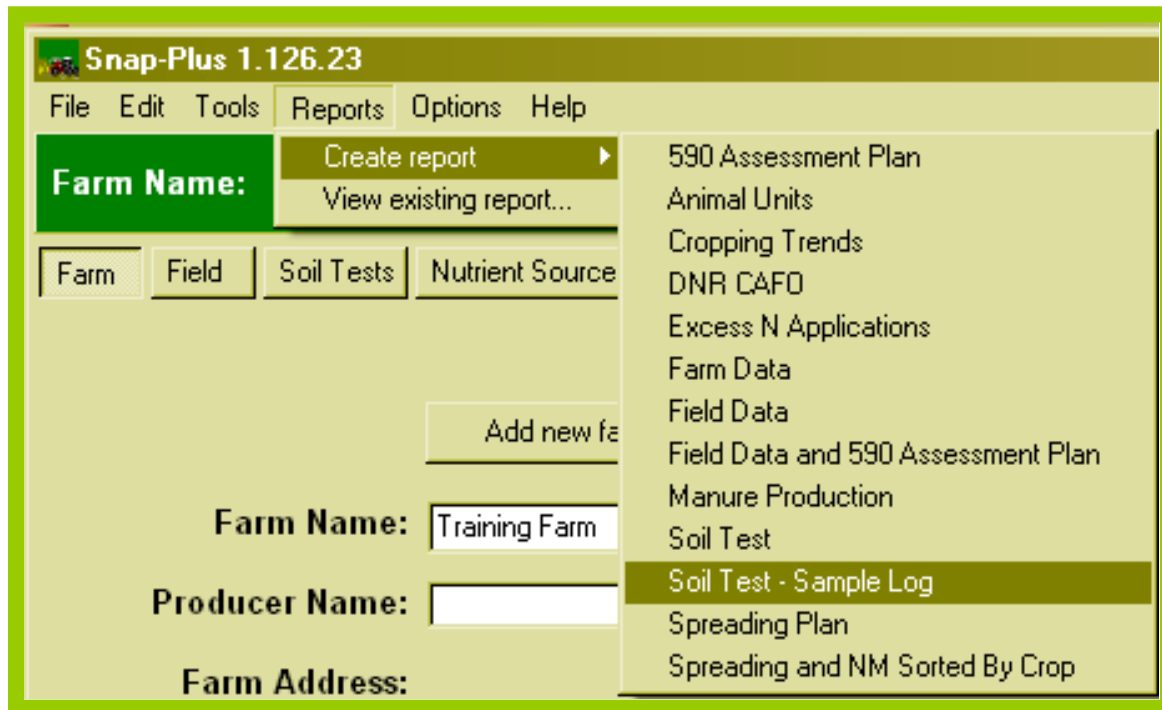
Export
Soil Test Log

- Copies exact farm, field, acres from Snap Plus in a unique sample row.

Snap-Plus 1.126.23

File Edit Tools Reports Options Help

Farm Name:

Create report ▶
View existing report...

590 Assessment Plan
Animal Units
Cropping Trends
DNR CAFO
Excess N Applications
Farm Data
Field Data
Field Data and 590 Assessment Plan
Manure Production
Soil Test
Soil Test - Sample Log
Spreading Plan
Spreading and NM Sorted By Crop

Farm Field Soil Tests Nutrient Source

Add new fa

Farm Name: Training Farm

Producer Name:

Farm Address:

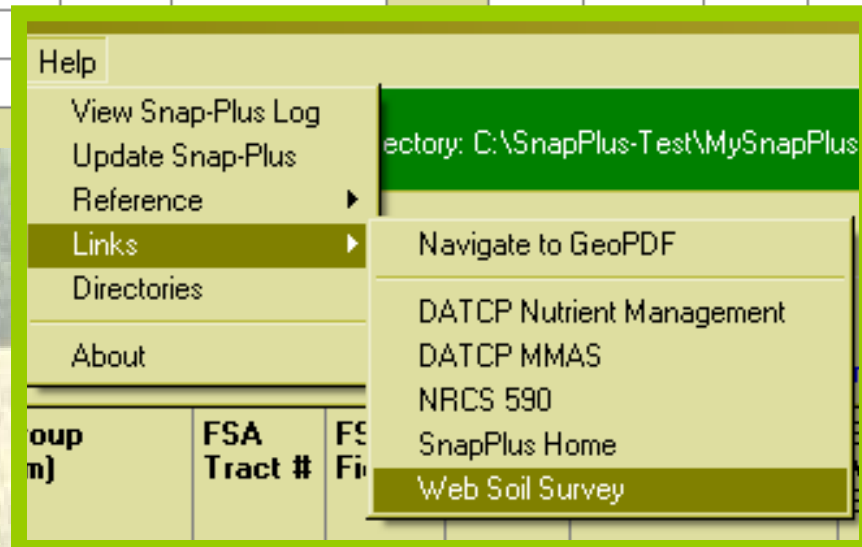|	A	B	C	D	E	F	G
1	Soil Test - Soil Sample Log						
2							
3	Sample Date	Farm Name	Field Tract	Field Nam	Field Size	Plow Depth	Sample ID
4		Training Farm	"	'09'	5.1		
5		Training Farm	"	'09'	5.1		
6							
7		Training Farm	"	'10'	5.4		
8		Training Farm	"	'10'	5.4		
9							
10		Training Farm	"	'11'	8.3		
11		Training Farm	"	'11'	8.3		
12							
13		Training Farm	"	'12'	12		
14		Training Farm	"	'12'	12		
15		Training Farm	"	'12'	12		
16							
17		Training Farm	"	'12p'	2		
18							

Developing a plan Step 5.

Field Tab

- Select field dominant critical soil type.
- *Below Field Slope to Water (%)* should be something other than 0-2 if slopes are greater than 6%.
- *Distance to Water (ft)* should be something other than 0-300 if the field is NOT next to surface water.

File	Edit	Tools	Reports	Options	Help

Farm Name: Training Farm ▼   Farm da

Farm	Field	Soil Tests	Nutrient Sources	Cropping

Go to soil and restriction maps   Restriction definitions

	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
e	TaB2	TAMA		4	249	2.1 - 6	301 - 1000	2007	
e	TaB2	TAMA		4	249	2.1 - 6	301 - 1000	2007	
e	TaC2	TAMA		9	174	2.1 - 6	0 - 300	2007	No winte
e								1000	2007	
e								00	2007	No winte

Help

- View Snap-Plus Log
- Update Snap-Plus   ectory: C:\SnapPlus-Test\MySnapPlus
- Reference ▶
- Links ▶   Navigate to GeoPDF
- Directories   DATCP Nutrient Management
- About   DATCP MMAS
          NRCS 590
          SnapPlus Home
          Web Soil Survey

oup m)	FSA Tract #	FS Fi

Developing a plan Step 6.

Nutrient Sources

– Add manures, volumes, fertilizers
– Values added

Plan year: 2009

Nutrient sources | Manure production estimator | Animal Units calculator

Nutrient Source Data

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

[Add] [Delete selected]

Source Name	Nutrient Type	N surface	N incorp	P2O5	K2O	S	Dry matter %	Analysis Date	Known Annual Volume	Volume Units	Value Per Unit	Total Value (Incorp)
graze	Dairy, grazing	3	4	3	7	0.9	12		135	Tons	$11.92	$1,609
lagoon	Dairy, liquid	7	10	5	16	0.9	6		230,000	Gallons	$26.43	$6,079
solid	Dairy, solid	3	4	3	7	0.9	24		130	Tons	$11.92	$1,550

Total: $9238

Value of nutrients in 2009 based on commercial fertilizer costs

N 0.89 $/lb

P2O5 0.85 $/lb

K2O 0.83 $/lb

Sulfur 0 $/lb

Dry fertilizers planned

Liquid fertilizers planned

Developing a plan Step 6.

Nutrient Sources

- Manure production estimator annual volume of:
  - Animal type & size
  - Storage
  - Spreader

| Farm | Field | Soil Tests | Nutrient Sources | Cropping |

Plan year: |◄ | ◄ | 2009 | ► | ►|

| Nutrient sources | Manure production estimator | Animal Units calculator |

Livestock Manure Production Estimator

590 Technical Note

Animal Type and Size	No. of Hd.	Solid (lbs/day)	Liquid (gal/day x dilution factor)	Total No. of days	Of Total Manure Excreted % collected and spread as solid	% collected and spread as liquid	Yearly Tons	Yearly Gallons
Add Add all dairy Delete current								
Beef Cow 1000 lbs	95	63	7.5x3.2=24	365	17	0	186	0
Swine Boar 350 lbs	20	7.2	1	365	0	100	0	7,300
Swine Grow-Finish Pig 150 lbs	150	9.5	1.2	365	0	100	0	65,700
Swine Nursery Pig 25 lbs	150	2.7	0.3	365	0	100	0	16,425
Swine Sow 275 lbs	2550	7.5	1	365	0	100	0	930,750
Swine Sow 275 lbs	350	7.5	1	365	0	100	0	127,750

Delete all   **Farm Totals:** 186   1,147,925

NOTE: Animal categories are from "Wisconsin Conservation Planning Technical Note WI-1". Both the Tech Note and NR243 are included with Snap-Plus and can be viewed from the "Help/References" menu.

Manure quantities are more likely to be accurately estimated from storage size.

Storage Name	Pit Size	Tons or Gallons	No. of times emptied per year	Collected annually (ton/gal)
Add Delete current				
gestation barn	1300000	Gallons	1	1300000
finish barn	100000	Gallons	1	100000

Delete all   **Farm Totals:** 0 Tons / 1400000 Gallons

Spreader Name	Load Size (tons)	No. of loads per year	Spread annually (tons)
Add Delete current			

Delete all   **Farm Totals:** 0 Tons

Developing a plan Step 6.

Nutrient Sources

- Animal Units Calculator
  - Copies from *Production Est.* into *AU Calculator*
  - Mixed Animal Units NR 243 CAFO
  - Non-Mixed AU EPA

| Farm | Field | Soil Tests | Nutrient Sources | Cropping |

Plan year: |◄ ◄ 2009 ► ►|

| Nutrient sources | Manure production estimator | Animal Units calculator |

Livestock Animal Units Calculator

Copy From

Animal Type		I. Mixed Animal Units (current NR 243 equivalencies)			II. Non-Mixed Animal Units (federal equivalencies)		
		b. Equiv. factor	c. Number of Animals	d. Equivalent Animal Units	e. Equiv. factor	f. Number of Animals	g. Equivalent Animal Units
Example- Broilers (non-liquid manure):		0.005	150,000	750	0.008	150,000	1,200
Dairy/Beef Calves (under 400 lbs)		0.2					
Dairy Cattle	Milking and Dry Cows	1.4			1.43		
	Heifers (800 to 1200 lbs)	1.1			1.0		
	Heifers (400 to 800 lbs)	0.6					
Beef	Steers or Cows (400 lbs to market)	1.0	95	95	1.0	95	95
	Bulls (each)	1.4					
Veal Calves (each)		0.5			1.0		
Swine	Pigs (Up to 55 lbs)	0.1	150	15	0.1	150	15
	Pigs (55 lbs to market)	0.4	150	60	0.4	3070	1228
	Sows (each)	0.4	2900	1160			
	Boars (each)	0.5	20	10			
Chickens	Layers (each)-non-liquid system	0.01			0.0123		
	Broilers/Pullets (each)-non-liquid system	0.005			0.008		
	Layers or Broilers-liquid system	0.033			0.0333		
Ducks	Ducks (each)-liquid system	0.2			0.2		
Total	Animal Units		Mixed AU =	1340		Non-Mixed AU =	1228

Farm Name:

Create report ▶
View existing report...

590 Assessment Plan
Animal Units
Cropping Trends
DNR CAFO
Excess N Applications
Farm Data
Field Data
Field Data and 590 Assessment Plan
Manure Production
Soil Test
Soil Test - Sample Log
Spreading Plan
Spreading and NM Sorted By Crop

Farm | Field | Soil Tests | Nutrient Source

Plan year: | ◄ | ◄ | 2009

Nutrient sources | Manure production estimator

Nutrient Source Data

Add | Delete selected

Source Name | **Nutrient Type** | N

Snap-Plus Animal Units Calculator Report For 2009

Prepared 11/7/2008

Animal Type		I. Mixed Animal Units (current NR 243 equivalencies)			II. Non-Mixed Animal Units (federal equivalencies)		
		b. Equiv. factor	c. Number of Animals	d. Equivalent Animal Units	e. Equiv. factor	f. Number of Animals	g. Equiva Units
Example- Broilers (non-liquid manure):		0.005	150,000	750	0.008	150,000	1,200
Dairy/Beef Calves (under 400 lbs)		0.2					
Dairy Cattle	Milking and Dry Cows	1.4			1.43		
	Heifers (800 to 1200 lbs)	1.1			1.0		
	Heifers (400 to 800 lbs)	0.6					
Beef	Steers or Cows (400 lbs to market)	1.0	95	95	1.0	95	95
	Bulls (each)	1.4					
Veal Calves (each)		0.5			1.0		
Swine	Pigs (Up to 55 lbs)	0.1	150	15	0.1	150	15
	Pigs (55 lbs to market)	0.4	150	60	0.4	3070	1228
	Sows (each)	0.4	2900	1160			
	Boars (each)	0.5	20	10			
Chickens	Layers (each)-non-liquid system	0.01			0.0123		
	Broilers/Pullets (each)-non-liquid system	0.005			0.008		
	Layers or Broilers-liquid system	0.033			0.0333		
Ducks	Ducks (each)-liquid system	0.2			0.2		
	Ducks (each)-non-liquid system	0.01			0.0333		
Turkeys (each)		0.018			0.018		
Sheep (each)		0.1			0.1		
Horses (each)		2.0			2.0		
Goats (each)		0.1			0.1		
Total	Animal Units		Mixed AU =	1340		Non-Mixed AU =	1228

Developing a plan Step 7.

Cropping Screen

Rotation Wizard

Choose operation

- Add crops and applications
- Change crops or applications
- Delete crops or applications
- Edit rotational settings
- Edit MRTN

Snap-Plus Rotation Wizard

Changing data for fields in farm: Training Farm

Step 2 Select a rotation and the fields you'd like to add it to...

Choose a rotation to apply to each of the selected fields...

| c-c-cs-oab-ab-ab-ab | ▼ | Edit Rotations |

Cropping Screen
Rotation Wizard

Snap-Plus Rotation Edit...

Rotation name

| c-c-cs-oab-ab-ab-ab | ▼ | New | Copy | Delete |

Add crops &
applications

| Add crop to rotation | | Delete current crop |

Year	Crop	Yield Goal	Tillage	Irrigated
1	Corn grain	171-190	Spring	☐
2	Corn grain	171-190	Fall	☐
3	Corn silage	16-20	Fall	☐
4	Alfalfa/Brome Seeding Spring	2.6-3.5	Fall	☐
5	Alfalfa/Brome	3.6-4.5	None	☐
6	Alfalfa/Brome	3.6-4.5	None	☐
7	Alfalfa/Brome	3.6-4.5	None	☐

Nutrient applications for crop:

Corn grain

| Add application | | Delete application |

Nutrient class	Source Type	Season	Spread Method	Rate	Units
Manure/Biosolid	Dairy, solid	Winter	Unincorporat	20	tons/acr
My Fertilizer Sources	starter	Spring	Incorporated	50	lbs/acre

- Edit Rotations
- Select **New** to make rotation
- Add crop to rotation
- Add nutrient application(s) to the crop year

Cropping Screen Rotation Wizard

Add crops & applications
– Final application edits
– Add source name

Cropping Screen Rotation Wizard

Change crops or applications

Select
 – Crops
 – Applications
 – Date range
 – Select fields

Cropping Screen Rotation Wizard

Step 1 Choose what operations to do...

I'd like to

○ Add crop and application data to fields

● Change existing crop data or applications for fields

Change Applications

Step 3 Change application data where ...

Crop is	and prior crop is	and two year prior crop is
Alfalfa	Alfalfa	Any

[Check for this crop sequence in the fields and years selected]

Selected years are 2008 to 2008

Change application data to ...

☐ Delete all existing applications first

[Add application] [Delete application]

Source class	Source type	Source name	Season	Spread method	Rate
Manure/Biosolid	Dairy, liquid	Dairy Pit	Fall	Unincorporat	5000

– Select current and previous crops

– Add application source, season, method and rate of application

Cropping Screen Rotation Wizard

Step 1 Choose what operations to do...

I'd like to

○ Add crop and application data to fields

◉ Change existing crop data or applications for fields

Change crops

– **Select current and previous crops**

Step 3 Change cropping data where ...

Crop is	and prior crop is	and two year prior crop is
Alfalfa ▼	Any ▼	Any ▼

(Check for this crop sequence in the fields and years selected)

Selected years are 2008 to 2008

– **Select the change**
  - Crop
  - Yield Goal
  - Tillage
  - Soil Test Date
  - Irrigation
  - Legume Credit
  - Season Notes

Change cropping data to ...

Crop
No change ▼

Irrigation
No change ▼

Season notes
Add to existing ▼

Applied 5,000 gals. dairy manure 9-20-08 to dry soil.

Yield goal
No change ▼

Legume Credit Data
Only with prior legume crop

Stand density
No change ▼

Tillage
No change ▼

Stand height
No change ▼

Soil test date
No change ▼

| Field: 18 | Acres: 25 | Crop: Alfalfa | | N | P2O5 | K2O |
| | Year: 2008 | Field Over(+)/Under(-) Application (lbs/acre) | | 46 | -10 | -67 |

Manure / Biosolid Applications   **Fertilizer Applications**

[Add nutrient app] [Delete nutrient app]   [Add fert app] [Delete fert app]

Season	Source name	Spread method	Rate	Units
Fall	Dairy Pit	Unincorporat	5000.0	Gallons/acre

Season	Fertilizer Name	Spread method	Rate	Units
Spring	Potassium chloride	Unincorporat	250	lbs/acre
Spring	Ammonium sulfate (AMS)	Unincorporat	50	lbs/acre

	2007			2008			2
Crop:	Alfalfa			Alfalfa			Corn grain
Yield Goal:	4.6-5.5			4.6-5.5			151-170
Tillage:	None			None			Spring Chi
Soil Test Date:	4/25/2007			4/25/2007			4/25/2007
Lime Rec:	NOT MET			NOT MET			NO
Irrigation / MRTN info:	☐ Irrigated			☐ Irrigated			☐ Irrigate
Season notes:				Applied 5,000 gals.			
(lbs/acre)	N	P2O5	K2O	N	P2O5	K2O	N
Recommendation:	0	35	300	0	35	300	165
Prior years' extra:		0	0		0	0	
Adjusted recommendation:	0	35	300	0	35	300	165
1st & 2nd year legume credit:	0			0			190
Manure credits (not used):	0	0	0	0	0	0	0
This year's manure:	0	0	0	35	25	80	0
This year's fertilizer:	0	0	0	11	0	153	0
Total credits & applications:	0	0	0	46	25	233	190
Over(+)/Under(-) UW Rec:	0	-35	-300	46	-10	-67	25

Cropping Screen
Rotation Wizard

Changed
Application &
Season notes

Edit   Tools   Reports   Options   Help

rm Name: | Training Farm ▼ | Farm data directory: C:\SnapPlus-Test\MySnapPlusData\A training test

| m | Field | Soil Tests | Nutrient Sources | Cropping |

	County	Acres	Slope	Soil Name	Symbol	N Restriction	Subsoil Fertility	Soil Texture
Field Name:	12 ▼	WI-Lafayette	12	4	TAMA	TaB2	?	B	SILT_LOAM

Subfarm:

Rotation Wizard

Calculate all years

Soil Test Date: 8/30/2004

	pH	OM %	P (ppm)	K (ppm)
	6.7	3.8	80	119

First Year   Prev Year   Next Year   Last Year

Field notes:

	2007	2008	2009	2010	2011
Crop:	Corn silage	Corn silage	Corn silage	Alfalfa/Brome Seeding	Alfalfa/Brome
Yield Goal:	16-20	16-20	16-20	1.0-2.5	3.6-4.5
Tillage:	Fall MB Plow	Fall MB Plow	Fall MB Plow	Fall MB Plow	None
Soil Test Date:	8/30/2004	8/30/2004	8/30/2004	8/30/2004	8/30/2004
Lime Rec:	0	0	NA	NA	NA
Irrigation / MRTN info:	☐ Irrigated 0.05/MRTN	☐ Irrigated 0.05/MRTN	☐ Irrigated 0.05/MRTN	☐ Irrigated	☐ Irrigated
Season notes:					

Rotation Settings

| 6 ▼ | year crop rotation starting in |

2007

☐ Contoured

(lbs/acre)	N	P2O5	K2O	N	P2O5	K2O	N	P2O5	K2O	N	P2O5	K2O	N	P2O5	K2O
Recommendation:	165	0	150	165	0	150	165	0	150	0	0	105	0	0	240
Prior years' extra:		0	0		120	182		200	416		270	632		310	752
Adjusted recommendation:	165	0	150	165	0	0	165	0	0	0	0	0	0	0	0
1st & 2nd year legume credit:	0			0			0			0					
2nd year manure credit:	0	0	0	50	20	42	30	10	24	30	10	24	15	5	12
This year's manure:	180	120	332	120	60	192	120	60	192	60	30	96	0	0	0
This year's fertilizer:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total credits & applications:	180	120	332	170	80	234	150	70	216	90	40	120	15	5	12
Over(+)/Under(-) adj UW rec:	15	120	182	5	80	234	-15	70	216	90	40	120	15	5	12
Annual Total PI ☐ Details	8.9	13.0	14.8	11.6	1.7

Rotation Summary Results 2007 – 2012

Avg soil loss **5.7** t/acre/yr

Field "T" 5 t/acre/yr

Avg P Index 8.6

P2O5 balance -5 lb/acre

K2O balance -121 lb/acre

Soil test P is greater than 50 ppm so your P2O5 balance should be less than 0 lb/acre.

Soil Loss Over "T" Turns Red

Cropping Screen

Lime

Recommendations

– Add when
Lime Rec. is
NOT MET

Cropping screen

	County	Acres	Slope	Soil Name	Symbol	N Restriction
Field Name: H1 B	WI-Green	15	9	DUNBARTON	DuC2	R

Subfarm:

Soil Test Date: 11/15/2007   pH 7.1

	2007	2008	2009	2010	2011
Crop:	Alfalfa	Alfalfa	Corn grain	Corn grain	Corn grain
Yield Goal:	5.6-6.5	5.6-6.5	171-190	171-190	171-190
Tillage:	None	None	No Till	Spring Chisel, no disk	Spring Chisel, no disk
Soil Test Date:	11/15/2007	11/15/2007	11/15/2007	11/15/2007	11/15/2007
Lime Rec:	NA	NOT MET	NOT MET	NOT MET	NOT MET
Irrigation / MRTN info:	Irrigated	Irrigated	Irrigated 0.05/MRTN	Irrigated 0.05/MRTN	Irrigated 0.05/MRTN

Snap-Plus - Lime Recomondation [Dialog]

Lime Recommendation [LR]
Soil Test Date 11/15/2007

More than half of the samples do not have a lime requirement,but some do. Be aware that some parts of the field could benefit from liming. Refer to the

	NI Lime Rec Range Tons/a
Average pH 7.07	40-49 - 3
Target pH 6.8	50-59 - 2
	60-69 - 2
	70-79 - 1.5
	80-89 - 1.5
	90-99 - 1.5
	100+ - 1

Add   Delete selected   Delete All

#	Application Name	Year	Season	NI	Rate (tons/a)

2 tons/a are still needed @ NI=65

Snap-Plus - Lime Recomondation Dialog

Lime Recommendation (LR)
Soil Test Date 11/15/2007

More than half of the samples do not have a lime requirement,but some do. Be aware that some parts of the field could benefit from liming. Refer to the

	NI Lime Rec Range Tons/a
Average pH 7.07	40-49 - 3
Target pH 6.8	50-59 - 2
	60-69 - 2
	70-79 - 1.5
	80-89 - 1.5
	90-99 - 1.5
	100+ - 1

Lime Applications - (2008 to 2011)

Add   Delete selected   Delete All

#	Application Name	Year	Season	NI	Rate (tons/a)
1	Lime 1	2008	Spring	65	2

Remaining lime needed = 0

Developing a plan Step 8.
Run Reports

- *Soil Test Report* to check the acres/sample.

- *Field Data and 590 Assessment Plan Report* to review the N excess applications, PI, soil test P PPM, rotation P2O5 balance.

- *Manure Production Report* to show estimated manure generation by size category annually.

- *Cropping Trends Report* starting at the earliest year to show the manure applied annually and the acres of crops grown. *Are the rotations and application working for the farm?*

- *Spreading and NM Sorted by Crop Report* to look for consistency in nutrient applications and tillage used for the current plan year.