

Nutrient Management Planning Workbook

USDA-NRCS 590 Nutrient Management Standard for Wisconsin

SnapPlus Key

For use with Workbook Information and electronic soil test results



Additional resources available:

- SnapPlus Help (see for definitions)
- SnapPlus Prep
- SnapPlus Fast Facts
- SnapPlus “How To” Videos

Farm Screen

Farm: Hilltop Acres

Contact Name: Fred Johnson

Address: 3895 Farmland Rd

City: Oatsville

State: WI

Zip: 51515

Manure Credits: “Do not use 2nd or 3rd year manure credits”

Selected Crops: Alfalfa, Corn grain, Corn silage, Oatlage w/Alfalfa Seeding Spring, Winter Wheat

Plan Completion/Update Date: click on the small button to the right to update to today’s date

Farm Narrative: Include your own narrative here, which should include an overview of the farming operation and it is an opportunity to clarify any issues that may exist, including plans to address those issues

Concentrated flow channel protection: All concentrated flow channels are currently protected

Note: if there were issues with concentrated flow channels, notes about addressing those issues should be listed here, the soil loss equation assumes all of the concentrated flow channels are protected when providing an estimated soil loss

Selected Counties: Iowa

Soil Tests Screen

Electronic soil test results are available, download them before entering information in the field screen. Contact Kim Meyer at kjmeyer6@wisc.edu to obtain this needed file.

Field Screen

Field	Subfarm	Size (acres)	Critical Soil	Pre-Dominant Soil	Below Field Slope %	Distance to Perennial Water	Restrictions
01	Home	7.2	DhB2	DhB2	2.1-6	1001-5000	None
02	Home	9.4	DhB2	DhB2	6.1-12	1001-5000	None
03	Home	23.1	TaB2	TaB	6.1-12	301-1000	None
04	Home	25.4	DhC2	DhB2	6.1-12	0-300	SWQMA
05	Home	24.6	DhC2	DhB2	6.1-12	0-300	SWQMA, Winter, N
06	Home	21.5	DhB2	TaB	6.1-12	301-1000	None
07	Home	14.1	DhC2	TaB	6.1-12	1001-5000	Winter
08	Home	14.5	DhC2	TaB	2.1-6	1001-5000	None
09	Home	9.5	DhC2	DhB2	2.1-6	1001-5000	Winter
Rented	Rented	21.0	DgD2	TaB2	6.1-12	1001-5000	Winter, N

Nutrients Screen

1. Nutrient Sources Tab

- Manure/Bio Source Data:
 - Source Name: Dairy (or enter other name of choice)
 - Nutrient Type: Dairy, semi-solid (N, P, K analysis will appear according to book values, see step 2 below)
 - Known Annual Volume: 1,700 (total retrieved from filling out the “Manure Production Estimator” tab)
 - Value: to populate, fill in the cost of a lb of N, P, K, and S fertilizer to the right
- Dry fertilizers planned:
 - Diammonium Phosphate (DAP), 18-46-0
 - Potassium Chloride (Potash), 0-0-61
 - Starter, 9-23-30
 - click “Add”, choose “<new fertilizer>”, enter a name (ie Starter), and enter in the analysis, 9-23-30 (N-P-K)
- Liquid fertilizers planned:
 1. 28% UAN, Liquid 28-0-0

2. Manure production estimator

Animal Type and Size	No. of head	% collected and spread as solid*
Dairy Lactating Cows 1200 lbs	65	75
Dairy Dry Cows 1200 lbs	3	75
Dairy Calf 250 lbs	23	100
Dairy Heifer 1000 lbs	24	100
Dairy Heifer 750 lbs	22	70

* % collected depends on the amount of time spent in pasture where manure is not collected throughout the calendar year

Cropping Screen

Two rotations used with *some* additional adjustments (noted on page 3 of workbook):

6 year home rotation:

Yr 1: Corn Grain
 Yr 2: Corn Grain
 Yr 3: Oatlage/alfalfa seeding
 Yr 4: Alfalfa
 Yr 5: Alfalfa
 Yr 6: Alfalfa

4 year rented rotation:

Yr 1: Corn Grain
 Yr 2: Corn Grain
 Yr 3: Corn Grain
 Yr 4: Winter Wheat

Cg-Cg-OfAs-A-A-A

Cg-Cg-Cg-Ww

See chart on page 9, Fred's Manure Spreading and Cropping Plan, to determine which year in the rotation each field currently is.

Fred's Manure Spreading and Cropping Plan					
Field	Acres	Prior year		Plan year (* not yet implemented)	
		Crop (rotation year)	Manure application rate/season	Crop (rotation year)	Manure application rate/season
Field 1	7.2	Corn silage (1)	4.5 loads/acre winter	Corn grain (2)	4.5 loads/acre winter*
Field 2	9.4	Alfalfa (4)	--	Alfalfa (5)	--
Field 3	23.1	Corn silage (1)	4.5 loads/acre spring	Corn grain (2)	4.5 loads/acre winter
Field 4	25.4	Alfalfa (4)	--	Alfalfa (5)	--
Field 5	24.6	Alfalfa (6)	--	Corn silage (1)	4.5 loads/acre spring*
Field 6	21.5	Corn grain (2)	4.5 loads/acre fall	Oatlage/alfalfa seeding (3)	--
Field 7	14.1	Oatlage/alfalfa seeding (3)	4.5 loads/acre winter	Alfalfa (4)	--
Field 8	14.4	Alfalfa (5)	--	Alfalfa (6)	--
Field 9	9.5	Corn grain (2)	4.5 loads/acre winter	Oatlage/alfalfa seeding (3)	4.5 loads/acre fall
Rented	21	Wheat (4)	--	Corn grain (1)	3 loads/acre fall

Here is an example of the home rotation put into the Rotation Wizard in SnapPlus:

Rotation Editor

Rotation name: Cg-Cg-OfAs-A-A-A

Buttons: Edit, New, Copy, Delete

Rotation years: Add (after selected), Delete selected, Share, Crop Abbreviations

Year	Crop	Yield goal	Tillage	Irrigated
1	Corn grain	191-210	Fall Chisel, no disk	<input type="checkbox"/>
2	Corn grain	191-210	Fall Chisel, no disk	<input type="checkbox"/>
3	Oatlage w/ Alfalfa Se...	2.0-3.5	Fall Chisel, no disk	<input type="checkbox"/>
4	Alfalfa	6.6-7.5	None	<input type="checkbox"/>
5	Alfalfa	6.6-7.5	None	<input type="checkbox"/>
6	Alfalfa	6.6-7.5	None	<input type="checkbox"/>

1st rotation year nutrient applications for: Corn grain

Buttons: Add Application, Delete Application, Add new sources, Grazing

Nutrient class	Source name	Season	Spread method	Rate	Units

Close

Note the tillage and yield information; this is all available in the narrative in the workbook on page 3.

See the SnapPlus How To Videos on the Rotation Wizard for step-by-step tutorials

“Using the Rotation Wizard-Part 1” guidance in setting up a rotation

“Using the Rotation Wizard-Part 2” guidance in making changes in the wizard

Add manure as described in Fred’s Manure Spreading and Cropping Plan as shown on page 9 of the workbook. This can be done through the **Rotation wizard**, using the “Change existing crop data or applications for fields” OR it can be done field by field with the Nutrient Application Planner.

Adjust the legume credit for all fields according to the information on page 5 of the workbook. This can be done through the Rotation wizard, using the “Change existing crop data or applications for fields” or it can be done field by field by clicking in the 1st & 2nd yr legume credit box for a year following the last year of alfalfa.

Any field that has Corn silage listed as a crop on Fred's Manure Spreading and Cropping Plan, page 9), change the crop where applicable to Corn silage (include yield and tillage) from the cropping screen for the specific field.

If it wasn't completed in the Rotation wizard when assigning crop rotations to fields, change the rotation settings for each field, including whether or not they are on the contour or if they have a filter area.

Fields identified as on the contour include: 01, 02, 03, 04, 08
None of the fields have filter strips

After all items are updated in the cropping screen, it is recommended to run a report to determine fertilizer needs. Typically you would enter in last year's fertilizer information to ensure the fertilizer balance and carry over is accurate, but since the soil tests were taken after last year's cropping season and before the plan year, you do not need to put in last year's fertilizer as it is accounted for in the updated soil tests.

Reports Screen

Run the "*Spreading and NM Sorted by Crop*" report. The report should look the same as the reports found in the workbook on pages 12-13.

Back to the Cropping Screen

After coming up with a fertility plan, enter plans into SnapPlus using the Rotation wizard, using the "Change existing crop data or applications for fields" or field by field with the Nutrient Application Planner.

Back to the Reports Screen

Run the "*Compliance Check*" report. Any issues that arise need to be addressed which may include soil loss issues, phosphorus index issues, or issues with manure spreading or fertilizer applications. See "SnapPlus Fast Facts" for additional guidance on compliance.

When all issues are fixed, run the "*Spreading and NM Sorted by Crop*" report for the final nutrient management plan.