

Manage farm nutrients with SNAP-Plus software

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SNAP-Plus is a software package that was developed by the University of Wisconsin-Madison Soil Science Department to assist crop advisors and farmers manage nutrients. While working with new software can be intimidating and aggravating, SNAP-Plus has been designed to largely operate by “point and click”. Farmers that have been willing invest a couple of hours working with this program find that they can catch on pretty quickly. The tools within SNAP-Plus enable the user to keep detailed record, determine fertility needs, estimate manure production, plan commercial fertilizer and manure application placement, calculate soil erosion, and much more. There are three components to SNAP-Plus that make nutrient management with this software quite comprehensive.

1. The former SNAP nutrient balancer gives fertility recommendations based on University research that are automatically determined once the soil test results, crop, and yield are selected. Legume and manure credits along with commercial fertilizer applications are entered to balance crop needs with the nutrient supplied.
2. A conservation assessment (RUSLE2) calculates the predicted soil erosion based on factors such as soil series, field topography, crop rotation, and tillage.
3. The Wisconsin Phosphorous Index (PI) determines the potential for phosphorus run-off into bodies of surface water. For those farms preparing a PI based nutrient management plan, it is important the PI calculated is less than 6.

SNAP-Plus Navigation

There are five primary screens which the user will select and enter information. ‘**Farm**’, ‘**Field**’, ‘**Soil Tests**’, ‘**Nutrient Sources**’ and ‘**Cropping**’ icons are always found at upper left hand corner of the screen.

‘**Farm**’: Enter your farm name and address, county(s) in which you farm, crops you may grow, and write a brief farm narrative.

‘**Field**’: Enter your field naming system and the FSA field name. You may need assistance obtaining maps with soil series, slope % and length, and distance to water estimates. Many NRCS or County Land Conservation offices can help you obtain this information if a current conservation plan is lacking.

‘**Soil Tests**’: Soil samples should be no greater than four years old. If you have a paper copy of soil samples, you can manually enter the pH, organic matter percentage, phosphorous, and potassium by hand. Upon request, most soil testing laboratories can provide you with a downloadable SNAP-Plus file. Selecting ‘Import Soil Test Data’ will save a considerable amount of time.

‘**Nutrient Sources**’: The amount of manure produced on a farm will be calculated. If there is a current manure analysis, enter the N, P, and K credit. Select all the possible dry and liquid fertilizer sources that may be used on your farm.

‘**Cropping**’: Add the years for which you will be writing the plan. Considerable time can be saved in future years once the initial crop rotation is entered. Through pull-down menus, select the crop to be grown, yield goal, tillage, and soil sampling date. The nutrient recommendation will automatically be provided. You will then need to manually

enter planned manure and fertilizer application in the drawdown menu below. Click on 'calculate all years' to determine the average soil loss and P-index.

Anyone can obtain SNAP-Plus free of charge by downloading it off the internet at <http://www.snapplus.net/>. If you are a farm manager that uses computers anywhere in the management of your farm operation, you will quickly become comfortable working with this program. For those less experienced with computers, this can be a good program to work with in order to expand your computer skills. Throughout the year, training opportunities are offered by UW-Extension, Land Conservation offices, DATCP and Technical Colleges to help people improve their skills with SNAP-Plus. If you plan to write a 590 nutrient management plan, it is advised to participate in farmer nutrient management plan training.

Field Name: 2 **County:** WI-Clark **Acres:** 24 **Slope:** 4 **Soil Name:** LOYAL **Soil Symbol:** LoB **Subsoil Fertility:** D **Soil Texture:** SILT_LOAM

Soil Test Date: 10/27/2005 **pH:** 6.8 **OM %:** 3.3 **P (ppm):** 44 **K (ppm):** 113

| | 2006 | | | 2007 | | | 2008 | | | 2009 | | | 2010 | | |
|--------------------------------------|------|------|-----|------|------|-----|------|------|-----|------|------|-----|------|------|-----|
| | N | P205 | K20 |
| Recommendation: | 120 | 0 | 40 | 120 | 0 | 120 | 0 | 0 | 100 | 0 | 0 | 250 | 0 | 0 | 250 |
| Prior year carryover: | | 0 | 0 | | 19 | 0 | | 83 | 43 | | 90 | 52 | | 94 | 25 |
| Prior years legume credit: | 120 | | | 0 | | | 0 | | | 0 | | | 0 | | |
| Prior years manure credit: | 0 | 0 | 0 | 0 | 0 | 0 | 22 | 8 | 18 | 11 | 4 | 9 | 0 | 0 | 0 |
| Plan manure applications: | 0 | 0 | 0 | 90 | 45 | 144 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Plan fertilizer applications: | 19 | 19 | 19 | 19 | 19 | 19 | 0 | 0 | 92 | 0 | 0 | 214 | 0 | 0 | 214 |
| Total plant-available: | 139 | 19 | 19 | 109 | 64 | 163 | 22 | 8 | 110 | 11 | 4 | 222 | 0 | 0 | 214 |
| Over(+)/Under(-) UW Rec: | 19 | 19 | -21 | -11 | 64 | 43 | 22 | 8 | 10 | 11 | 4 | -28 | 0 | 0 | -36 |
| Annual Total P Index: | 2.9 | | | 7.7 | | | 2.2 | | | 0.6 | | | 0.6 | | |

Rotation Summary Results
 5 year crop rotation starting in 2006
Averages: 2006 - 2010
 Avg soil loss: 2.1 T/acre
 Field "T": 5 T/acre
 Avg P Index: 2.8
 P205 balance: -181 lb/acre
 K20 balance: -32 lb/acre