

Pennsylvania's Nutrient Management Program Newsletter

November 2006

<http://panutrientmgmt.cas.psu.edu>

Upcoming Trainings

- Plan Review Workshop (November 14, 2006)
- Certification Examination, PDA & Centre County (December 6, 2006)
- Introduction to Livestock Production Systems (February 6, 2007)
- Nutrient Management Orientation (February 13-14, 2007)
- Managing Manure Nutrients Workshop (March 14-15, 2007)
- Stormwater Management & RUSLE Workshop (March 27-28, 2007)
- Phosphorus Index Training (March 29, 2007)
- ACA Evaluation Workshop (April 10-11, 2007)
- Plan Writing Workshop (April 18-19, 2007)
- Plan Review Workshop (April 24, 2007)
- Certification Examination, PDA & Centre County (May 1, 2007)

Pennsylvania Phosphorus Index: Version 2

In September 2006, Version 2 of the Pennsylvania Phosphorus (P) Index was made available on the Pennsylvania nutrient management website. The Version 2 spreadsheet, factsheet, and user guide can be located at <http://panutrientmgmt.cas.psu.edu/> under the Planning Resources section. This updated version of the P Index has the same Part A and Part B organization, considers the same source and transport factors, requires the same inputs, and generally follows the same guidance as Version 1. There have been a few modifications made to

incorporate new analyses, technical tools, and new nutrient management program (Act 38) requirements.

Specifically in Part A of the P Index, two evaluation criteria have been added to provide clarification in identifying farms in management transition and to comply with new special protection watershed Act 38 regulatory requirements. Factors modified in Part B include: Manure P Availability, Runoff Potential, Contributing Distance, and Modified Connectivity.

Part A Modifications

Part A of the P Index now has four evaluation criteria. The soil test P level and contributing distance criteria are the same as Version 1 and two additional criteria addressing special protection watersheds and farm management status have been added. An explanation of these criteria is as follows:

1. The more detailed Part B analysis is required for all crop management units (CMUs) located within special protection watersheds.
2. Part A is only appropriate for CMUs on operations with relatively stable management systems. Generally, in these systems current, planned and historic practices are similar. If there is a significant change in farm management as defined by the following Act 38 criteria, P Index Part B must be used. The following Act 38 criteria define when a farm is undergoing a significant change in management:
 - net increase of greater than 10% in AEUs per acre

What's Inside

- **Pennsylvania Phosphorus Index: Version 2**
- **Nutrient Management Certification Revocation**
- **Amended CAFO General Permit Issued**
- **590 Conservation Practice Standard Update**
- **Commercial Manure Hauler and Broker Certification Update**

How To Contact Us

For more information on the Pennsylvania Nutrient Management Program contact:

Pennsylvania Department of Agriculture
 Nutrient Management Program
 Room G-11, 2301 N. Cameron Street
 Harrisburg, PA 17110
 717-772-5218
 717-783-3275 (FAX)
 Email: maucoin@state.pa.us
 Web: <http://panutrientmgmt.cas.psu.edu>

Address Changes

In order to receive this newsletter, we must have a current email address. Please send all email and other address changes to Michael Aucoin (contact information above).

Newsletter Contributions

Comments, contribution of articles, or suggestions of topics or issues to be addressed in the newsletter are welcome at any time.
 Jerry Martin, Editor

- change in crop management that results in a farmwide reduction of greater than 20% in nitrogen necessary for realistic expected crop yields
- alternative organic sources will replace all or some of the nutrient sources listed in the plan
- additional lands are brought into the operation (purchased or rented)

3. If a CMU has a soil test P level greater than 200 ppm P (Mehlich 3) then P Index Part B must be used.
4. If a CMU is closer than 150 ft. to a receiving body of water, as measured in the direction of water flow from the lower edge of the CMU, then P Index Part B must be used.

If none of these criteria applies, the N-based plan for the CMU is acceptable as written and no further P Index analysis is required.

In Version 2, Part A has the format shown below. The user inputs for Part A are either a "Yes" or "No" response for all but the soil test P criterion. For the soil test P criterion, soil test P in Mehlich 3 ppm P is entered directly from the soil test report.

Part B Modifications

Manure P Availability

Manure P Availability terminology has been replaced by P Source Coefficient (PSC). Both terms refer to the availability of P in organic sources to surface runoff; however, PSC provides a distinction between availability to surface runoff and agronomic availability. Additionally, since initial publication of P Index Version 1, a water extractable P test for organic P sources has become commercially available and a Mid-Atlantic P source coefficient (PSC) book value table has been developed.

PART A: SCREENING TOOL	CMU/Field ID	
Is the CMU/field in a Special Protection Watershed?	If the answer is yes to <u>any</u> of these questions, Part B must be used.	
Is there a significant farm management change as defined by Act 38?		
Is the Soil Test Mehlich 3 P greater than 200 ppm P? (enter soil test value in ppm P)		
Is the Contributing Distance from this CMU/field to receiving water less than 150 ft.?		

In response to these technical developments, the option exists in P Index Version 2 to determine a PSC using the water extractable P analysis and the PSC book value table (Table 1) in the P Index Version 2 factsheet has been updated (shown below). Any organic P source not listed in the revised table must be analyzed or use a default PSC value of 1.0.

Swine manure	1.0
Broiler, Layer, Turkey, Duck, Dairy – Liquid, Dairy – Bedded Pack, Beef, Horse	0.8
Alum treated manure	0.5
BPR and BNR biosolids	0.8
All biosolids (except BPR and BNR)	0.4

Runoff Potential

“Drainage class” replaced “Index surface runoff class” as an indicator of Runoff Potential. However, the same supporting Index surface runoff class tables used with P Index Version 1 will be used to determine Drainage class in Version 2. These supporting tables are available with the P Index Version 2 spreadsheet and documentation found at <http://panutrientmgmt.cas.psu.edu/> under the Planning Resources section.

Contributing Distance

To address new program requirements, specifically the 100 ft. setback for manure application, the top three distance categories in Version 2 have been redefined. The weighting factors are now 9, 6, 4, 2, and 0. The corresponding distances are now <100 ft., 100 to 199 ft., 200 to 349 ft., 350 to 500 ft. and > 500 ft.

Modified Connectivity

The ACRE and the CAFO programs, introduced 35 ft. wide buffer requirements; however, Version 1 of the P Index addressed only 50 ft. wide buffers. The guidance for evaluating a CMU with either a 35 ft. or 50 ft. wide buffer is explained below.

If a field is within 100 ft. of a receiving water body, it is necessary to determine if a buffer is present and the width of the buffer. The P Index Version 2 accounts for both a 35 ft. wide buffer and a 50 ft. wide USDA-NRCS buffer.

35 ft. wide Buffers: All fields within 100 ft. of receiving water that are receiving manure must have a 35 ft. wide buffer. If a 35 ft. wide buffer is present

and the field is within 100 ft. of a receiving water body, a Contributing Distance factor of 6 not 9 is selected.

50 ft. wide Buffers: Fields within 100 ft. of receiving water with buffers that are 50 ft. wide and designed to meet the sediment and dissolved nutrient control criteria of Pennsylvania USDA-NRCS Practice Standards 390 (Herbaceous Riparian Cover), 391 (Forested Riparian Buffer), or 393 (Filter Strip), should receive BOTH a Contributing Distance factor of 6 and the Modified Connectivity factor of 0.85.

Phosphorus Index Version 2 should be viewed as an update to Version 1. As research, technical tools, and program requirements change, and as users point out weaknesses or suggest improvements to the P Index, it is necessary to consider and evaluate how the P Index should be modified to best address these changes and suggestions. Version 2 which is based upon the same solid research foundation used to develop and implement Version 1 represents the result of such an evaluation.

Jennifer Weld
Project Associate
Penn State Crop & Soil Sciences
&
Doug Beegle
Soil Fertility Specialist
Penn State Extension

Nutrient Management Certification Revocation

The Department of Agriculture, based on its new regulations, has recently developed violation criteria for suspension or revocation of a specialist’s Nutrient Management Specialist certification. The following are not necessarily all the circumstances that the Department may consider as probable grounds for loss of a specialist’s certification, as some circumstances may need to be considered on a case by case basis.

- A nutrient management specialist portraying themselves as having nutrient management certification when they actually are not certified by the Department.
- Performing nutrient management certification job duties that are beyond their certification category. For example: a commercial specialist performing a plan review.

- Inconsistency and demonstration of a lack of knowledge of nutrient management plan writing and review skills.
- If a nutrient management specialist has been notified by the Department or its' designee three or more times, in writing, in a 3-year period that they are consistently making mistakes that they have been asked to correct.
- Three or more occurrences within a 3-year period of delay or non-communication with landowner or review agency during plan development or review.
- Failure to answer inquiries made by the State Conservation Commission, Department of Agriculture or their designees regarding plan development or review.
- Falsifying information. For example: providing false information to increase chances of nutrient management grant funding.
- Providing untrue information to the Department of Agriculture, State Conservation Commission, their designees or farmers about information regarding nutrient management planning and Act 38 program requirements.
- Misrepresentation of the Nutrient Management Act Program.
- Deliberately providing false information, to any person or entity, that is not consistent with Act 38 requirements.
- A violation of any program policy established by the Department, its designee or the State Conservation Commission.

Michael Aucoin
 Certification & Education Specialist
 PDA Nutrient Management Program

Amended CAFO General Permit Issued

The CAFO general permit has been amended and finalized. A notice to that effect was published in the PA Bulletin on September 16, 2006. A sample of the general permit can be found at the Department's website, along with a revised permit application package. These can be found at http://www.dep.state.pa.us/dep/deputate/watermgt/wc/Subjects/CDNM/cafo_home.htm.

The permit has been amended to be consistent with DEP's revised CAFO regulations of October 2005. The amended permit has an effective date of October

1, 2006, in conjunction with the revised Chapter 83 regulations of the State Conservation Commission.

Operations that are currently covered under the general permit have been contacted directly by DEP, with an explanation of the new requirements and a description of the phase-in period that will be allowed before they are expected to meet them.

Bob Gibson
 Nutrient Management Section Chief
 Department of Environmental Protection

590 Conservation Practice Standard Update

Natural Resources Conservation Service in Pennsylvania is currently finalizing a new Conservation Practice Standard for Nutrient Management Code 590. This update will be based on the national 590 issued in May 2006 that can be found at his website:
<http://www.nrcs.usda.gov/technical/Standards/nhcp.html>.

By definition, the 590 Conservation Practice Standard is to manage the amount, source, placement, form and timing of the application of plant nutrients and soil amendments. This practice can be applied to all lands (acres) where plant nutrients and soil amendments are applied. Its purpose is to budget and supply nutrients for plant production; properly utilize manure and organic by-products as sources of plant nutrients, and to minimize agricultural nonpoint source pollution of surface and ground waters.

The following components will be included in a 590 nutrient management plan:

1. Aerial site photograph(s) or site map(s), and a soil survey map of the site,
2. Location of designated sensitive areas or resources and the associated, nutrient management restriction,
3. Current and/or planned plant production sequence or crop rotation,
4. Results of soil, manure and/or organic by-product sample analyses,
5. Results of plant tissue analyses, when used for nutrient management,
6. Realistic yield goals for the crops,
7. Complete nutrient budget for nitrogen, phosphorus, and potassium for the crop rotation or sequence,

8. Listing and quantification of all nutrient sources,
9. Field specific recommended nutrient application rates, timing, form, and method of application and incorporation, and
10. Guidance for implementation, operation, maintenance, and recordkeeping.

It is expected that the new 590 standard will be in the NRCS PA Technical Guide around December 1, 2006.

Mark Goodson
Agronomist
Natural Resources Conservation Service

Commercial Manure Hauler and Broker Certification Update

Under the Commercial Manure Hauler and Broker Certification Act (Act 49), any person commercially engaged in the transport, land-application or brokering of manure in Pennsylvania on behalf of an agricultural operation must obtain a certificate issued by the Department of Agriculture in order to continue providing their services. The Department is in the final stages of refining regulations that establish certification program criteria and expects to release final regulations in early 2007. In the meantime, the Department of Agriculture is implementing an interim training and examination program to facilitate 'temporary' certification of individuals required to obtain certification under Act 49.

A commercial manure hauler or commercial manure broker receiving 'temporary' certification under the interim program may continue providing their services to the agricultural community. Once the Act 49 regulations are finalized, all individuals holding a 'temporary' certificate issued by the Department will receive official certification without being required to attend additional training sessions.

The Department has scheduled two winter training dates on February 21, 2007 in Centre County and February 22, 2007 in Lancaster County. These trainings are open to any person commercially hauling, land-applying or broking manure as an individual business or employee of a business. The trainings will provide the necessary coursework and examination opportunities for an individual seeking certification as a commercial manure hauler or commercial manure broker.

Persons interested in certification under the program should contact Michael Aucoin, Certification and Education specialist (717-772-5128 or maucoin@state.pa.us). Further information concerning the upcoming training dates of the Commercial Manure Hauler and Broker Certification program can be found on the Department's website at <http://www.agriculture.state.pa.us> under **Manure Hauler and Broker Program**.

Certified Nutrient Management Specialists receiving this newsletter are encouraged to forward this information to any commercial manure hauler or commercial manure broker that they know.

Johan Berger
Section Chief
PDA Nutrient Management Program

Pennsylvania Nutrient Management Education Program Certification Workshops and Training Opportunities

Registration is required for all workshops! Walk-ins not permitted!
Please register no later than one week prior to the training date.

Plan Review Workshop

November 14, 2006

PA Dept. of Agriculture, Room 309
Cameron Street, Harrisburg

9:00 am - 3:30 pm

All public nutrient management specialists must fully complete this mandatory training course in order to obtain provisional certification. It is also open to commercial specialists. Workshop focuses on Act 38 planning requirements and will provide public plan reviewers with necessary plan reviewing parameters. Upon registration attendees will receive a copy of a sample plan in the mail to review prior to the workshop. **A review of this plan must be completed and submitted at the training to receive credit for the course.** Walk-ins will not receive credit. It is assumed that participants are familiar with the calculations and material presented in the Managing Manure Nutrients Workshop. Therefore, participation in that workshop is a suggested prerequisite for this training. **Bring calculators, Nutrient Management Technical Manual, and Penn State Agronomy Guide.** Coffee and donuts provided. Lunch on your own.

Certification Examination

December 6, 2006

PA Dept. of Agriculture, Room 309
Cameron Street, Harrisburg

9:00 am - 12:00 noon

or

Centre County Solid Waste Authority
State College

Examinations for commercial, public and individual nutrient management specialists will be given. Examination fee of \$50.00 for commercial and public categories must be paid prior to the exam. Examination fee may be paid at the time of registration or the day of the Nutrient Management Orientation training. Examination study packets will be available the day of the Nutrient Management Orientation training or sent upon receipt of the examination fee. Enclose check payable to 'Commonwealth of Pennsylvania'. There is no fee for individual exams.

Advanced registration for all categories and fee payment is required. **Note: Please register for only ONE (1) of these testing locations.**

Introduction to Livestock Production Systems

February 6, 2007

Centre County Solid Waste Authority

9:00 am - 3:30 pm

This basic workshop is specifically designed to provide background training for commercial and public specialists who may not have experience in one or more livestock production systems. The workshop provides an overview of the typical production systems in Pennsylvania for dairy, swine and poultry. A major focus of these discussions will be on manure handling. In addition, topics such as contracts, marketing, economics, biosecurity issues, and dead animal disposal are also addressed.

Nutrient Management Orientation

February 13 & 14, 2007

PA Dept. of Agriculture, Room 309
Cameron Street, Harrisburg

9:00 am - 4:00 pm (2/13)
9:00 am - 12:00 noon (2/14)

All commercial and public nutrient management specialists must fully complete this mandatory training course in order to obtain provisional certification. Training provides a comprehensive introduction and overview to the Act 38 regulatory requirements for nutrient management planning. Introductory nutrient management planning resources will be provided. Coffee and donuts provided. Lunch on your own.

Managing Manure Nutrients Workshop

March 14 & 15, 2007

Centre County Solid Waste Authority
State College

9:00 am - 4:00 pm (3/14)
8:00 am - 3:30 pm (3/15)

This crucial background-training workshop provides a foundational understanding of the primary crop nutrients – nitrogen, phosphorus and potassium. **Participation in this workshop is strongly suggested before attending the Plan Writing and Plan Review workshops.** Basic soil fertility concepts are introduced – nutrient cycles and behavior, managing nutrients for crop production and environmental protection, soil sampling and analysis, and crop nutrient recommendations. Presentation of key manure nutrient management topics builds on this groundwork. This includes discussion on manure types and production calculations, manure variability, manure sampling, nutrient contents and availability factors, long term manure nutrient contributions and environmental impacts. **Bring calculators, Penn State Agronomy Guide, and Nutrient Management Technical Manual.** Coffee and donuts provided. Lunch on your own.

Stormwater Management & RUSLE Workshop

March 27 & 28, 2007

Myers Farm
Spring Mills, Centre County

9:00 am - 3:30 pm (3/27)
8:30 am - 3:00 pm (3/28)

All commercial and public nutrient management specialists must fully complete this mandatory training course in order to obtain provisional certification. This training is also mandatory for certification of specialists who write or review nutrient management for the USDA-NRCS 590 Standard. Workshop provides critical classroom instruction and field exercises on basic concepts and methods used to evaluate field runoff control practices, identify critical runoff problem areas, and select BMPs to address these areas that must be included in an Act 38 nutrient management plan. These topics will be presented in the context of overall conservation treatments systems including the basic principles of soil erosion prediction, using RUSLE to address sheet and rill erosion, considerations to address stormwater concentrated flow concerns, as well as soil quality issues. **Bring calculators, clipboards, slope measuring devices (abney hand levels or clinometers), and appropriate clothing and boots for fieldwork.** Coffee, donuts and lunch provided.

Phosphorus Index Training

March 29, 2007

Myers Farm
Spring Mills, Centre County

9:00 am - 4:00 pm

All commercial and public nutrient management specialists must fully complete this mandatory training course in order to obtain provisional certification. This training is also mandatory for certification of specialists who write or review nutrient management for the USDA-NRCS 590 Standard. Training provides critical classroom and field exercises on understanding the background and purpose of the Pennsylvania Phosphorus Index, learning how to use the Index to complete a field-by-field evaluation of phosphorus loss to water bodies, and how to incorporate the Index results into the nutrient management planning process for Act 38. **Bring calculators, clipboards, and appropriate clothing and boots for fieldwork.** Coffee, donuts and lunch provided.

ACA Evaluation Workshop

April 10 & 11, 2007

Berks County Ag Center
Reading, Berks County

9:00 am – 4:30 pm (4/10)
8:00 am – 12:30 pm (4/11)

All commercial and public nutrient management specialists must fully complete this mandatory training course in order to obtain provisional certification. Workshop provides critical training on how to identify manure management practices and animal concentration areas, how to conduct an evaluation of these areas to determine the adequacy of practices to prevent water pollution, and how to identify BMPs to address identified inadequate manure management practices that must be included in an Act 38 nutrient management plan. These approaches are introduced in the classroom and practically applied with exercises using multiple on-farm situations. **Bring calculators, Nutrient Management Technical Manual, Penn State Agronomy Guide, clipboards, and appropriate clothing and boots for field and barnyard work.** Coffee and donuts provided the first day. Must bring your own packed lunch on the first day.

Plan Writing Workshop

April 18 & 19, 2007

Centre County Solid Waste Authority
State College

9:00 am - 4:00 pm (4/18)
8:00 am - 4:00 pm (4/19)

All commercial and public nutrient management specialists must fully complete this mandatory training course in order to obtain provisional certification. Workshop prepares all plan writers in developing nutrient management plans that meet the requirements of Act 38 and provide a beneficial tool to farmers to manage their manure and fertilizer nutrients. Topics of discussion include plan requirements, BMP selection, animal and manure inventories, crop yields and nutrient requirements, maps and other program requirements. Participants will use information from a sample farm to develop a nutrient management plan. It is assumed that participants are familiar with the calculations and material presented in the Managing Manure Nutrients Workshop. Therefore, participation in that workshop is a suggested prerequisite for this training. **Bring calculators, Nutrient Management Technical Manual, and Penn State Agronomy Guide.** Coffee and donuts provided. Lunch on your own.

Plan Review Workshop

April 24, 2007

PA Dept. of Agriculture, Room 309
Cameron Street, Harrisburg

9:00 am - 3:30 pm

All public nutrient management specialists must fully complete this mandatory training course in order to obtain provisional certification. It is also open to commercial specialists. Workshop focuses on Act 38 planning requirements and will provide public plan reviewers with necessary plan reviewing parameters. Upon registration attendees will receive a copy of a sample plan in the mail to review prior to the workshop. **A review of this plan must be completed and submitted at the training to receive credit for the course.** Walk-ins will not receive credit. It is assumed that participants are familiar with the calculations and material presented in the Managing Manure Nutrients Workshop. Therefore, participation in that workshop is a suggested prerequisite for this training. **Bring calculators, Nutrient Management Technical Manual, and Penn State Agronomy Guide.** Coffee and donuts provided. Lunch on your own.

Certification Examination

May 1, 2007

PA Dept. of Agriculture, Room 309
Cameron Street, Harrisburg

9:00 am - 12:00 noon

or

Centre County Solid Waste Authority
State College

Examinations for commercial, public and individual nutrient management specialists will be given. Examination fee of \$50.00 for commercial and public categories must be paid prior to the exam. Examination fee may be paid at the time of registration or the day of the Nutrient Management Orientation training. Examination study packets will be available the day of the Nutrient Management Orientation training or sent upon receipt of the examination fee. Enclose check payable to 'Commonwealth of Pennsylvania'. There is no fee for individual exams.

Advanced registration for all categories and fee payment is required. **Note: Please register for only ONE (1) of these testing locations.**

Registration Form

Registration is required for all workshops! Walk-ins not permitted!
Registration will close one week prior to the training date.
Registrations will not be accepted after that date.

REGISTER BY FAX OR MAIL

FAX: 717- 783-3275

MAIL: Nutrient Management Section, PA. Department of Agriculture, 2301 North Cameron Street, Room G-11,
Harrisburg, PA 17110-9408

COMPLETE THE FOLLOWING

Date _____ Certification Number * _____

Name _____

Business _____

Address _____

Phone Number _____ Email _____

REGISTER ME FOR THE FOLLOWING WORKSHOPS

_____ Plan Review Workshop – November 14, 2006

_____ Certification Examination, PDA – December 6, 2006

_____ Certification Examination, Centre County – December 6, 2006

_____ Introduction to Livestock Production Systems – February 6, 2007

_____ Nutrient Management Orientation – February 13-14, 2007

_____ Managing Manure Nutrients Workshop – March 14-15, 2007

_____ Stormwater Management & RUSLE Workshop – March 27-28, 2007

_____ Phosphorus Index Training – March 29, 2007

_____ ACA Evaluation Workshop – April 10-11, 2007

_____ Plan Writing Workshop – April 18-19, 2007

_____ Plan Review Workshop – April 24, 2007

_____ Certification Examination, PDA – May 1, 2007

_____ Certification Examination, Centre County – May 1, 2007

* Individuals new to the program who do not have a certification number should complete and submit the Nutrient Management Certification Application form with this Registration Form. This application can be printed from the following website location: http://panutrientmgmt.cas.psu.edu/pdf/nm_certification_application.pdf