

Phosphorus Conference Provides Forum For Understanding

VERNON ACHENBACH JR.
Lancaster Farming Staff
STATE COLLEGE (Centre Co.) — A three-day conference on agricultural phosphorus in the Chesapeake Bay Watershed was held this week at the Penn State Conference Center in State College.

Jointly sponsored by the Chesapeake Bay Program's Scientific and Technical Advisory Committee and the U.S. Department of Agriculture's Agricultural Research Service, the conference was attended by a varied audience representing a range of interest, educational background, and practical experience regarding plant nutrients.

Overall, the conference was mostly attended by those with a working interest in nutrient management, soil science, agricultural operations and the nutrient phosphorus.

Represented were those involved with commercial fertilizer businesses, integrated livestock operations, feed companies, manure application and nutrient management businesses, state environmental and resource conservation agencies, environmental awareness and support groups, and, of course, university and government research and Extension services.

The conference objectives were clearly stated in the conference program. There were four listed:

- Determine the inputs of phosphorus to the Chesapeake Bay watershed and assess the current status of phosphorus in agricultural soils;
- Establish the relative impact and location of source areas;
- Identify and delineate what processes control the critical sources and pathways of phosphorus export over a range of scales in the Bay Watershed; and
- Discuss and prioritize future trends for phosphorus management in the Chesapeake Bay Watershed.

There is not enough space nor time to report the details of all the speakers at the conference.

There were 12 speakers making half-hour to hour-long or more presentations during the first two days, and on Wednesday, a panel of four people with practical nutrient management experience discussed their practices and concerns. That was followed by participants breaking out into four working groups to discuss soil phosphorus testing, nutrient management planning, and development of best management practices.

The proceedings of the conference are to be published later this year, after speakers follow up with formal submissions of their presentations, according to Dr. Andrew Sharpley, a soil scientist working for the USDA Agricultural

Research Service at its Pasture Systems and Watershed Management Research Laboratory in University Park.

Sharpley is considered to be one of the most knowledgeable people at the Penn State Main Campus with regards to phosphorus and its activity in soils. Though a USDA employee, he works with staff of the Penn State College of Agricultural Sciences Department of Agronomy in conducting research and in sharing information.

One of the main discussion leaders, Sharpley also served as one of several chairpeople responsible for portions of the program.

While the technical aspects of the conference were extensive, and are to be available in the published proceedings, some speakers expressed opinions, based on technical work, as to why phosphorus has become such a concern in the Chesapeake Bay (as well as other areas with high density livestock operations and water bodies suffering from eutrophic symptoms).

The personal interpretation of the issues varied from speaker to speaker, depending upon background.

Information was presented by, and shared with, representatives of the other states involved with the Chesapeake Bay restoration effort, but for Pennsylvania agriculturalists the information presented suggested that nutrient management

here will likely not become an "either/or" priority exercise.

More likely, practical nutrient management will be expanded in scope to go beyond focusing upon balancing nitrogen application levels with crop yield needs and existing soil levels.

From research demonstrating that agricultural phosphorus entering waterways comes from a small portion of a watershed, and in most cases from spot areas on a farm (generally along a stream or in a flood plain), it was suggested that perhaps the most reasonable approach would be to identify those "source" areas on the farm as part of the existing nutrient management plan and manage them for the phosphorus levels (meaning withholding phosphorus heavy manures from those areas, and using commercial nitrogen supplies until the area is suitable to again receive manure).

As currently practiced, a Pennsylvania nutrient management plan is an exercise in accounting for nitrogen available for application to land and crop needs, a description of the pathways for nutrient flow, and management practices.

Of course they are more complicated than that, but essentially it is a farm business plan that takes into account all the major characteristics, factors and products and describes how they are to be man-

aged so as to prevent pollution.

The plans also should provide an accounting of the other two nutrients of concern — phosphorus and potassium — but manure spreading decisions are not yet required to be made based upon nutrients other than nitrogen.

However, in Pennsylvania's Nutrient Management Act, which targets agricultural nutrients (because they were thought at the time to be the major non-point source of nutrient pollution to the waters of the Chesapeake) there is language that directs the state Department of Environmental Protection to conduct research into other potential sources of non-point nutrients, and make further recommendations as to the importance of other nutrients and management practices to remediate their environmental effects.

For years many farmers discounted the nutrients in manures, especially nitrogen in manure, as being especially important to commercial crop production. Instead most farmers relied on known amounts of chemical fertilizers applied to start plants, and to provide nutrients during later growth stages (side dress).

However, the discovery of high groundwater nitrate levels in high animal agricultural areas, such as Lancaster County, stirred concern for human health, and led to public

(Turn to Page A35)

Delaware Valley College Students Present A-Day

DOYLESTOWN (Bucks Co.) — The students of Delaware Valley College will present the 50th "A-Day" celebration April 25 and 26 (rain or shine), 9 a.m. to 5 p.m., on the College's campus, 700 East Butler Avenue (Route 202).

Started in 1949 by a group of students to promote agriculture, "A-Day" has become one of the area's largest events. To reflect its broadened educational program, the meaning of the "A" in "A-Day" has evolved to symbolize "all" — all activities from all programs offered by the College. More than 50,000 area residents attended the two-day event in 1997.

Open to the public, "A-Day" is a student-run event that benefits student clubs and organizations at Delaware Valley College. There is a \$5 per car parking fee, which includes a souvenir program book. For the safety of visitors to the campus, your cooperation in using only the designated "A-Day" parking lots along New Britain Road will be appreciated. There is no individual admission charge.

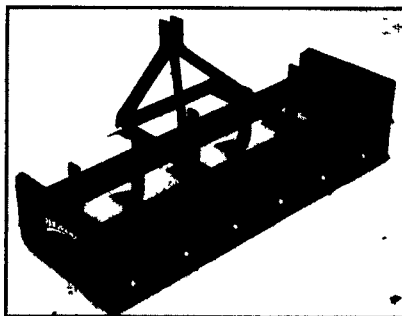
The A-Day program includes a variety of exhibits and demonstrations designed to acquaint the public with the educational experiences students enjoy at Delaware Valley College. During the weekend, the students will present agricultural and horticultural exhibitions, an equine show, livestock judging contest, a dairy show, tree climbing demonstrations, a hay ride that includes a tour of the College's farms and orchards, science exhibits, and educational displays. In addition, a variety of food is offered, as well as a craft show, plant and shrubbery sales, games for children, pony rides, a mule-drawn carousel, a petting zoo, face painting, sand art and much, much more.

Delaware Valley College, located in Doylestown, in the heart of Bucks County, is a comprehensive four-year institution of higher learning with over 1,400 men and women enrolled full time in more than 35 academic programs, ranging from agricultural, biological, and physical sciences, to business administration and computer information systems. In addition, 670 students are enrolled on a part-time basis in Del Val's Evening and Weekend Colleges, working to advance their careers.

For more information about the 50th "A-Day," please call (215) 489-2496.

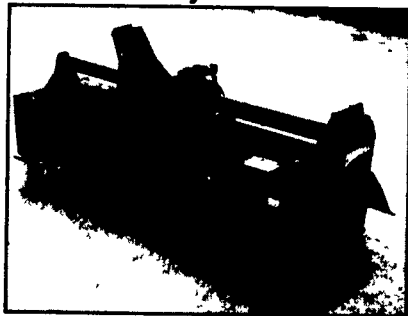
PANORAMA

Landscape Equipment



Box Blades, Rock Rakes, Tilt & Angle Blades (Most Sizes Available)

Rotary Tillers



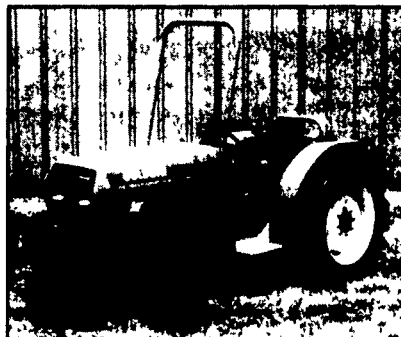
Wide Range Models to fit tractors from 20-50 HP

Post Drivers & Diggers



Make your hard fencing job easy with a Panorama post digger or driver.

Goldoni Tractors



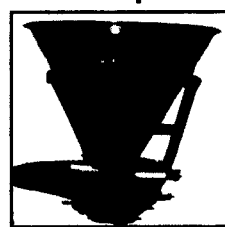
Europe's Premier Tractor
Horsepower Range 26 - 70, 4WD
Standard Quality you can see at a glance.

Finishing & Rotary Mowers



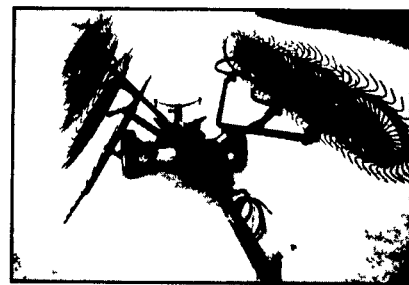
For a smooth cut, look for the Panorama mowers 4' to 7' available.

Broadcast Seeder/ Fertilizer Spreaders



If you need to spread seed or fertilizer, this will do it.

Wheel Rakes & Wheel Rake Carriers



Handles your hay gently and reduces your raking time.

Hay Tedders



Working Width - 10' X 17' Fast, even spreading and gentle with your hay.

Disc Mowers



High speed for fast, efficient cutting. Available in 7', 8' or 9' models.

RYDER SUPPLY
CO.

539 Falling Spring Road
P.O. Box 219
Chambersburg, PA 17201-0219
Phone 717-263-9111