

## No-Till

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was severe as a large gully 10 feet wide, 2 feet deep and 800 feet long had cut into the field. Soil loss from the gully alone totalled over 1,400 tons.

Water quality monitoring equipment was installed in 1982 and in 1983. This consists of 5 to 10 lysimeters, 7 groundwater wells, 1 runoff gage, and a rain gage. The period 1982 to 1984 was for base data information and before BMPs were installed. During the 21-month test time, 1,250 tons of dairy manure was applied to the 22-acre field. This equals 32 tons per acre per year.

In 1984, 6 pipe outlet terraces and a manure storage structure were installed on the farm under the guidance of the USDA Soil Conservation Service. The terraces were installed to control the soil erosion problem.

In 1985, nutrient management BMPs were implemented. Manure and fertilizer were applied as needed by the crop instead of getting rid of available manure. Application rates were cut in half p/tje 1982-84 period.

Field site #2 consists of 55 acres of which 25 are protected with 6 terraces which were installed by the farmer prior to this project. The terrace system was updated by making the terraces parallel and converting from a waterway to a pipe outlet discharge.

The farm has 100 beef cattle,

over 350 sows and boars, three batches of 500 hogs each, and five flocks per year of 22,000 broilers. This population of livestock produces as much as four times the manure needed for the crops on the farm.

Monitoring equipment was installed in the fall of 1984. It consists of 1 runoff gage, 8 wells, 5 to 10 lysimeters, and a rain gage. The BMP to be evaluated is nutrient management.

During the pre-BMP period, 1984 and 1985, 1,850 tons of manure and 3 tons of commercial fertilizer were applied to the 55-acre field. This provided more than twice the nutrients needed to grow a crop.

Starting in 1982, nutrients were applied according to test. Both soil and manure were tested. Excess manure is trucked to another farm and the commercial fertilizer applied consists only of trace minerals.

Beside the USDA Soil Conservation Service, other agencies cooperating in the study include the Environmental Protection Agency, U.S. Geological Survey, USDA Agricultural Stabilization and Conservation Service, Lancaster Conservation District, The Pennsylvania State University Cooperative Extension Service, Pennsylvania Department of Environmental Resources, and the vo-ag department of Ephrata and New Holland schools.

## Preparing For Careers In Agriculture

DOYLESTOWN — The Evolution of Excellence in educating people for careers in agriculture will be demonstrated by Delaware Valley College during the 1988 Pennsylvania Farm Show.

According to an article in Science of Food and Agriculture magazine recently, this is an exciting time to be involved in the food and agriculture system. The knowledge and technology explosion offers impressive challenges to future graduates, it was stated in the magazine. There will be more than 48,000 employment openings annually for college graduates with expertise in agriculture, natural resources, veterinary medicine, food processing, and marketing, according to the publication.

"Many students in high school may not be aware, or may have been discouraged from preparing for some of the most rewarding career opportunities that are evolving at this time," said Dr. John Avery, chairman of the Agribusiness Department at Delaware Valley College. "Biotechnology in plants, animals, food processing and health areas promise dramatic new job possibilities."

Throughout the Farm Show, which is scheduled to run Jan. 9 through 15 in Harrisburg, the College's exhibit will be staffed by qualified faculty members as well as students. They will be available to discuss career prospects, educational requirements, and college preparation with interested high school students and their parents. The College exhibit will be located at Booth 535.

Dr. Mary Palumbo, chairperson of the Food Industry Department at DelVal, will be on hand Sunday, Jan. 10 to discuss careers and training in the Food Sciences and Food Service Management. Both of these areas are currently offering advancement opportunities and

excellent compensation, according to Dr. Palumbo.

Careers related to natural resources, turf management, and field crops will be discussed by Larry Hepner, chairman of the Agronomy Department on Monday, Jan. 11.

Information on livestock, dairy, equine and laboratory animal careers and training requirements will be available on Tuesday and Wednesday, Jan. 12 and 13, from several Animal Science specialists and Dr. John Plummer, Associate Dean for Agriculture.

Agribusiness opportunities, which account for about 14 percent of our national economy, may be discussed on Wednesday, Jan. 13 with Dr. Avery, a trained career evaluator. Agribusiness provides input to farming and transforms raw farm products to the form, time and place acceptable to consumers.

Horticulture is a significant and growing industry in Pennsylvania and the mid-Atlantic region. Dr. Neil Vincent, chairman of the College's Horticulture Department, will be on hand Thursday, Jan. 14 to share information on this industry.

The College is offering \$1,000 tuition waiver, along with several smaller prizes, to high school students who register at the College's exhibit. A drawing will be held to award the prizes.

The College Admissions Department will have staff members available to answer questions about college costs, financial aid, and high school preparation requirements. Information on all majors, including Biology, Chemistry, Business Administration, Computer Information Systems Management and Liberal Arts will be provided by the College, which is located in Bucks County, Pennsylvania.

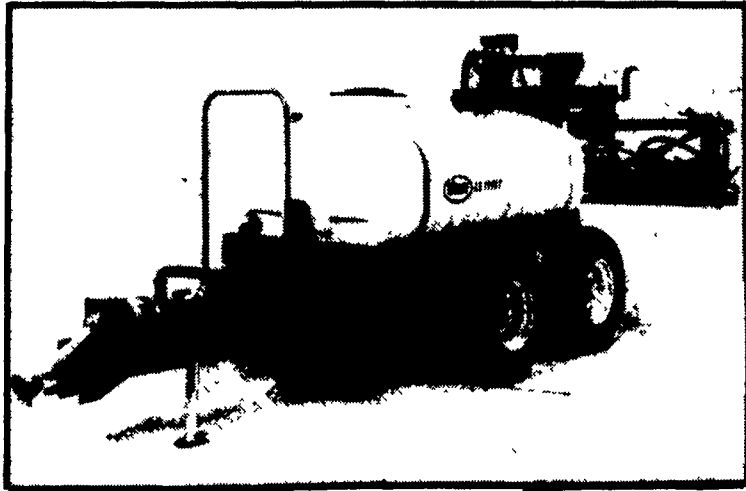
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