

Chesapeake Bay Program is underway in Chester County

WEST CHESTER — The Chesapeake Bay program for agricultural nutrient management is "full-speed ahead" in Chester County. David Pierce, Lincoln University, signed the first agreement with the Chester County Conservation District, and his manure holding facility will be completed and in use by the end of January.

The manure holding pond is the first step in his complete nutrient management program. Other conservation practices to be added over the next two years include terraces, strip cropping, soil and manure testing and a planned application of manure and fertilizer nutrients to his fields.

The program will provide Pierce with maximum crop production and maximum utilization of the manure produced on the farm. His only cost for chemical fertilizers will be to balance nutrients supplied by the 160 animals on the farm with the nutrients needed by the crops for maximum production.

"I hated to spread manure every day and know that most of the nitrogen was volatilized to the air. Research has shown that 70 to 80 percent of the nitrogen in manure is lost within the first seven days after spreading — if it is not incorporated", Pierce explained.

Pierce plans to spread manure from the holding facility in the spring and fall. The spring application will be made before the corn is planted. The fall application will be before small grains. "The manure will be chiseled or disced in immediately after spreading. Once the nitrogen is mixed in with the soil, it is held and will not be lost. This will reduce the amount of nitrogen that I will have to buy", Pierce commented.

Pierce sees other advantages to the nutrient management system. "I won't have to haul the spreader out every day on these cold winter days. It will save wear and tear on the spreader and tractor. And save even more on the guy that is now doing the spreading. The operation will save labor since it will be concentrated in a few days, twice a year".

"It will prevent losing the valuable nutrients into someone else's water supply. When manure is spread on the steep slopes of frozen ground, there is bound to be a certain amount washed off into the streams. This way, we can get it into the ground where it will be held until the plants can use it".

Pierce's manure facility consists of a large storage cell and a smaller liquid holding cell. The larger cell has a slotted, picket reservoir. Any accumulated liquid is drained to the lower, smaller cell. Milkhouse waste is also drained to this smaller pond.

"The accumulated liquid will be spread when the small cell is full. A liquid spreader will be rented for the short time that it will take when it is full. The larger cell will be spread using the conventional spreader with slurry sides," Pierce said.

Pierce rents 275 acres from five neighbors. He raises about 200 acres of corn each year. He has a year-to-year rental agreement, and all of the rented ground has conservation practices in place. The land owners understand the need for soil conservation and work with Pierce to continue the conservation program.

Pierce uses mostly minimum till for planting corn. He chisels, discs and plants. Some no-till planting is also used when conditions are satisfactory.

The farm has been in the family since 1940. "At that time, a farmer with perhaps 30 or 35 milking cows could make a livelihood. Today, 80 cows is hardly enough to pay the bills and have some left over for the family. I hope that the savings on labor and fertilizer costs of this nutrient management system will allow me to continue the way of life I have chosen", Pierce concluded.

Seventy-five percent of the cost of Pierce's nutrient management system is being paid for by his neighbors and other taxpayers as a part of the federal/state program to "Save Chesapeake Bay". A \$27 million federal study alleges that the manure and fertilizer that farmers use contributes a major part of the loss of the Bay's production of fish, crabs and shellfish. The individuals that



David Pierce, on left, describes to Charles Harris, Cochranville, chairman of the Chester County Conservation District, the operation of his manure handling facility.

made the study say that nutrients are the cause of the Bay's decline. They insist that farmer's manure and fertilizer are where the nutrients are coming from.

The lower six counties in Pennsylvania that encompass tributaries to Chesapeake Bay have been allocated \$2 million. This will be used for cost sharing the installation of best management practices (BMP's)

on selected farms. The Elks watershed (Chester Co.) received \$96,000 to be allocated by the directors of the Conservation District for the fiscal year 1984-85. Another \$4 million is promised for the year 1985-86. It is expected that selected farms in the Octorara will be eligible for a major portion of that Chester County allotment.

An assessment to determine the critical areas of the Octorara

watershed will be done during January and February, district directors have mandated. Dan Greig will be contacting nearly 35 percent of the landowners for information. Any landowner wanting to have his farming operations evaluated, should contact the Conservation District office. (696-5126). Landowners will be notified of the official sign-up period.

Management help in a box

COLLEGE MARK, MD — The best management assistant a farmer could ever have may be a machine, says an agricultural economist at the University of Maryland.

Computer technology gives farmers a chance at new efficiency, says Dick Levins, who specializes in using computers in agriculture. But, he says, farmers should be careful to select the correct system.

With the proper programming, farmers can plan their management, keep financial records, and project future expansion, Levin says. But the key is "proper programming". Without software (programs) designed specifically for agriculture, the most expensive and sophisticated

equipment is worthless, he says.

A good farm computer system should be both versatile and practical, Levins says. Record keeping can be easier when computerized, and with a special telephone hook-up, a farmer can even tap into information sources off the farm.

Despite the benefits of computerizing, some farms still may not be able to justify owning such technology.

"For some people it's not going to be most efficient," Levins says. "But the farmer who manages by information and takes the time to learn how to use it could profit at today's (computer) prices almost immediately."

Some farmers, however, manage by intuition instead of records. And they may not want to take the time to learn to use a computer. Levins says it is not worth the investment for this type

individual.

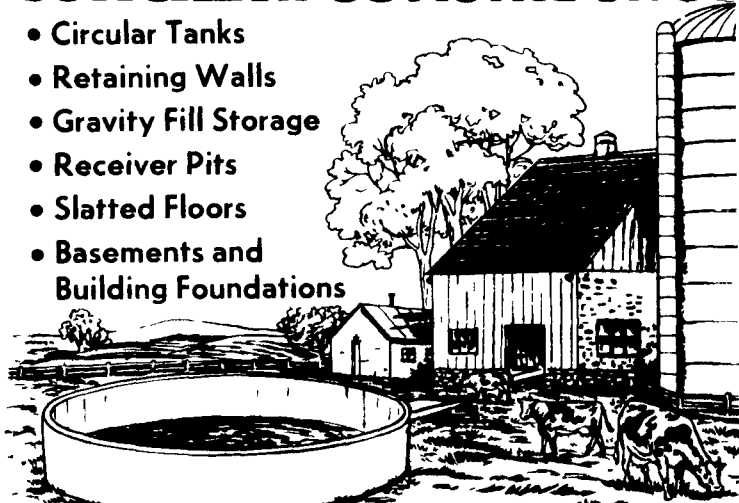
Those who can justify the purchase need five components to form a basic system, Levin says. The computer should have a random access memory of at least 64K, two disc drives to store information and programs used by the computer, a video screen with 80 columns of display, and a printer.

He adds that the fifth component is the software or programs, that act as the machine's brains. Levin says the minimum cost of this combined package should be approximately \$2,500.

A farmer can use those brains to determine the feasibility of buying a new piece of farm equipment or figure the feed ration with the lowest cost. Given the correct input information, the computer helps the farmer plan for the most efficient output.

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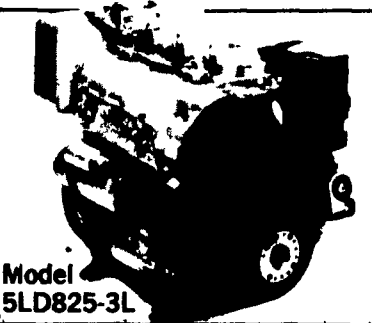
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