

Sewage sludge

(Continued from Page D27)

Assuming an average 3% N and 6% P₂O₅ content, the amount of sludge produced annually in Maryland would contain in excess of 1600 tons of total nitrogen and 3200 tons of phosphorus. This would be about 2.8% of the nitrogen and 8.9% of the phosphorus used by Maryland farmers in 1982. At \$0.30 per pound, the total nitrogen would have a fertilizer value of about \$970,000, and the phosphorus would have a value of over \$1.9 million. Assuming that 20% to 40% of the total nitrogen is available to crops the first year after application, the available nitrogen would have an annual value of about \$200,000 to \$400,000. Obviously, digested sewage sludge can be a source of valuable fertilizer nutrients.

But, there are a number of potential hazards associated with the application of sewage sludge to land. Heavy metals such as copper, cadmium, zinc, lead, nickel, etc. may be introduced into the food chain. Cadmium is particular is known to be associated with a number of human health problems. Some of the heavy metals are necessary in very small quantities for plant growth. But in excessive quantities, they can be toxic to plants, animals and humans. Heavy metals have a half-life of about 1000 years, thus they persist in the environment.

Another unknown is the significance of the possible presence of persistent toxic organic compounds in sludges. Some organic compounds from industry may prove to be toxic to animals if consumed directly from sludge-amended pastures or from physically contaminated hay crops, PCB's are just one example of this type of organic compound. Therefore, land application requires a conservative approach until adequate evidence is collected to dispel these concerns.

To help minimize the risks associated with the land application of sludge in Maryland, guidelines have been developed by scientists at the University of Maryland. These guidelines are found in Fact Sheet 336 which is entitled "Guidelines for Land Application of Sewage Sludge and Composted Sewage Sludge". These guidelines were developed for two categories of land — farmland and marginal land. For farmland, annual applications are determined by the nitrogen requirement of the crop. The maximum cumulative application is determined by the heavy metal loading of the soil.

Some soils can safely absorb more heavy metals than others. This difference between soils is currently estimated by measuring the cation exchange capacity. On marginal land, such as a worked

National Farm-City Conference planned May 23-24

SYRACUSE, NY — The National Farm-City Conference will be held

in Syracuse, N.Y. on May 23 and 24 at the hotels on Syracuse Square. Richard K. Arnold, chairman of the New York State Farm-City Council, host of the event, expects agribusiness and association leaders, educators, and communicators from a number of states to attend this combination workshop and seminar aimed at improving techniques and effectiveness in building Farm-city programs at community and state levels.

Fact Sheet 336 also makes it clear that "the implications of the uptake by plants of heavy metals and persistent organics from sludge, their intake by grazing animals and their ingestion by humans are not entirely understood. Therefore, the University of Maryland cannot predict the long-term effects of sewage sludge on the environment and does not accept responsibility for any such effects". Copies of Fact Sheet 336 are available through the University of Maryland Cooperative Extension Service offices.

Following a meeting of the National Farm-City Council board of directors, Sam Stenzel, executive director of the National Vocational Agriculture Teachers Association will conduct a workshop on Wednesday morning, May 23.

The kick-off luncheon with Anthony J. Palangi, district governor of the N.Y.S. Kiwanis as speaker will set the stage for an afternoon filled with information, ideas, and reports on current and planned programs aimed at

creating a better understanding between rural and urban people in New York State and elsewhere:

Participants will learn about a new dairy farm beautification program from Sue Reynolds of Delancey, N.Y.; Peggy Lipinski, N.Y.S. Association of Fairs, will report on changes at the county fairs and Mitzi Ayala, a rice grower and television hostess from Davis, Cal. will report on telling the farm story on television.

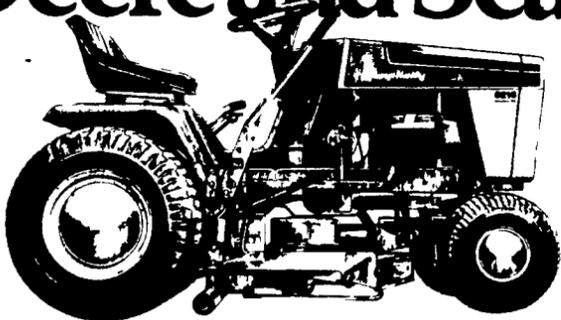
A panel moderated by Mary Lou Brewer of Cornell University's Extension Service will present ideas of expanded programs in local communities.

Penrose Hallowell, secretary of agriculture for Pennsylvania, will head a delegation describing Farm-City activities in the Keystone State.

A tour of the 500-acre Agway Farm Research Center at Tully, N.Y. is on the agenda in the afternoon for those interested.

Anyone wishing further information about attending the conference may call Sharon Hartwell at 315/477-6201.

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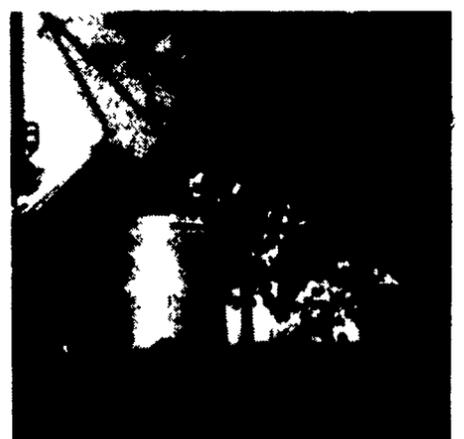
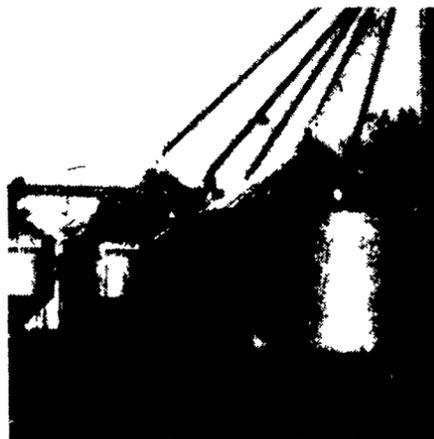
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