



Jesse Wood displays a detailed map of his father's farm showing areas approved for sewage sludge application.

Phila. sludge

(Continued from Page A1)

procedure beginning with a process called anaerobic digestion and dewatering at the company's Southwest and Northeast dewatering stations.

At 20 to 25 percent solids, the dewatered product is then mixed with woodchips and deposited in piles 100 feet long, and 12 feet high on a woodchip base at the Southwest station's compost pad.

Composting is accomplished by using a fan to draw air through a perforated pipe located in the middle of each pile. This process dries the compost and maintains temperatures of 140° or greater within the pile, sufficient to kill disease-causing organisms.

After 21 days, the compost piles are taken to a storage area for curing. Here the compost is placed in large piles for at least 30 days, rendering a drier product capable of being screened.

When curing is completed, the woodchips are screened from the finished compost and reused in the production of more compost.

Strip mine reclamation currently accounts for 60 percent of the Southwest composting pad's product, with other outlets including ballfield renovation, marketing, public giveaway and agricultural use.

Under the marketing program,

the screened compost is sold to commercial growers and retail outlets under the trade name Gardenlife. In the public giveaway program, the unscreened product is given to the public free of charge at the Northeast and Southwest plants.

But despite its wide use in mine reclamation, sewage sludge has not yet realized unanimous acceptance in the agricultural sector. Fears of unalterable industrial toxins, and heavy metal deposits have steered farmers away from sewage sludge in favor of the traditional livestock manures.

According to PWD project engineer, Jerry Vetter, such fears are unfounded.

"We control the content of the compost at the source. Only about 10 percent of municipal sewage sludge is industrial in origin, and all industrial waste must meet certain pre-treatment limits.

"Our compost piles are carefully monitored for heavy metals, percentage of total solids, nutrients and pH."

After the composting process is complete, the testing continues with samples of each farm-bound truckload being laboratory analyzed.

At the end of the growing season, Mobil Dredging and Pumping Company, the firm responsible for getting the product to the farmer, tests previously treated fields and calculates the following season's application rates.

"In most cases I'd say that sewage sludge is as good a fertilizer as livestock manure," says Brian Steager, vice-president of Ad-Soil.

Ad-Soil personnel are the first to visit the farmer after he requests the sludge treatment program. The company's agronomists outline a program based on each farm's specific requirements, and submit a permit application to the Department of Environmental Resources.

The DER then makes an on-site evaluation to confirm the data submitted by Ad-Soil, and submits the project to the county planning commission and township personnel for comment within 60 days.

The permit is then issued to PWD, who employs contractors for delivery and application.

"At the moment, land application is the least expensive use when compared to other options such as incineration, ocean disposal, landfill and strip mining," remarks Steager.

And from the farmer's standpoint, the program is indeed inexpensive. All phases of sludge disposal, from composting to incorporation into the soil, are provided free of charge to the farmer by PWD.

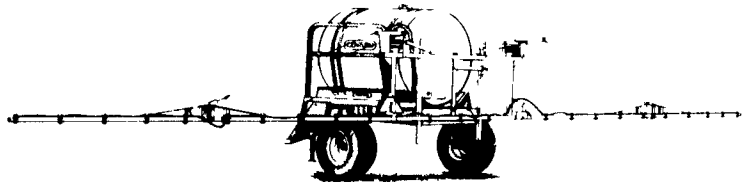
"Jesse Wood, son of James Wood, is one farmer who is convinced of the program's value.

"The cities are having a problem getting rid of sludge, and if we farmers can use it to our benefit, why shouldn't we? The only problem I foresee is getting the compost delivered and incorporated in time for planting. When it's time to fertilize, they've got to get it here."

Wood has applied for sludge permits for all three of the farms owned by himself and his father. But even though the three farms' cropland area totals 500 acres, Wood emphasizes that sludge cannot be applied to all the ground.

Regulations prohibit its use on certain soil types, and where the land's slope may create run-off problems.

In addition, sewage sludge may not be applied within 300 feet of an occupied dwelling or water source, within 100 feet of a stream or lake, or closer than 50 feet from adjacent properties or roads. DER regulations also state that sewage sludge must be incorporated into the soil with 24 hours after application.



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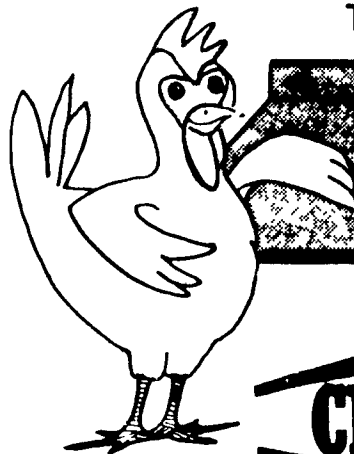
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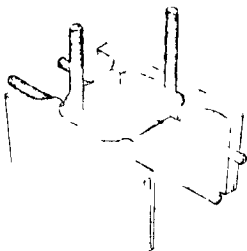
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