

Recycling — Promise or Primrose Path?

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The wastefulness of a once-only use of materials has caught the attention of a cost-conscious public. "Recycling" has become a household word. The subject of much exhortation, it simply means the recovery and reuse of solid wastes to convert them into energy or to create new products.

In Pennsylvania, individual support of recycling activities, as evidenced by the growth of recycling centers, has been excellent. Although the total quantities of materials recycled in this manner remains minimal compared to the total solid waste problem, it does represent a good deal of effort by many people. For example, Group for Recycling in Pennsylvania, the largest non-profit, volunteer-sponsored effort in the State reports that during 1972 more than 200,000 people brought in 2,270 tons of recyclable material to its 20 collection centers located in 6 Western Pennsylvania counties.

A sizeable number of municipalities have entered into contracts with private firms to

reclaim trash resources — such as paper and newspapers — or have provided facilities and services in support of volunteer recycling groups. A few, such as Cleona Borough in Lebanon County, sponsor their own programs. Cleona is unique in that an ordinance is used to mandate an annual fee for each of approximately 600 dwelling units, to help defray the cost of its municipally-administered recycling effort.

Collecting is not recycling

But nothing is recycled until it is used as a raw material to make a product. Contrasted with the enthusiasm shown by volunteer collection efforts, there has not been any regional scale adoption in the State of recycling oriented systems supported by municipalities. This is probably not surprising, since, as tax-supported agencies, municipalities are under a mandate to provide services at minimum direct cost to the taxpayer. Toward this end, the most economical route to waste disposal has traditionally been the landfill method.

The landfill as a waste disposal method is a relatively straightforward operation, with

the economics determined by the cost of transportation and dumping the waste at a particular location. However, the growing shortage of acceptable landfill sites coupled with rising interest in resource conservation, underscores the need for a better understanding of what is required to make recycling work.

Proposals to encourage recycling are generally aimed at overcoming two kinds of obstacles: those involving resource recovery technology; and those aimed at the limited market demand for recycled materials.

Obstacles relating to resource recovery technology

Most proposals centered on improving technology argue that if only we could find better ways to get paper or glass out of waste, industry would gladly receive it. This argument is partially sound for the diverse reasons discussed next.

More than 50 recycling systems currently are estimated to be under development by industry and government. They are dominated, numerically at least, by "pyrolysis" or energy conversion schemes based on the central concept of heating solid waste with little or no air to about 500 degrees Centigrade. Synthetic oil produced in this manner in the laboratories of the U. S. Bureau of Mines Energy Research Center in Pittsburgh. By "pyrolyzing" raw waste it is transformed into fuel oil estimated to be worth around \$2.50 a barrel.

There has not been any comprehensive recycling system for mixed municipal wastes in operation for several years with a daily capacity range of several hundred tons. Since many systems are still in the development stage, most experts advise that we should wait a few years until they are sufficiently advanced to guarantee success.

Although the hope exists that as resource recovery techniques are

perfected their economics will become more attractive, a few of the systems now in use claim to (Continued On Page 13)

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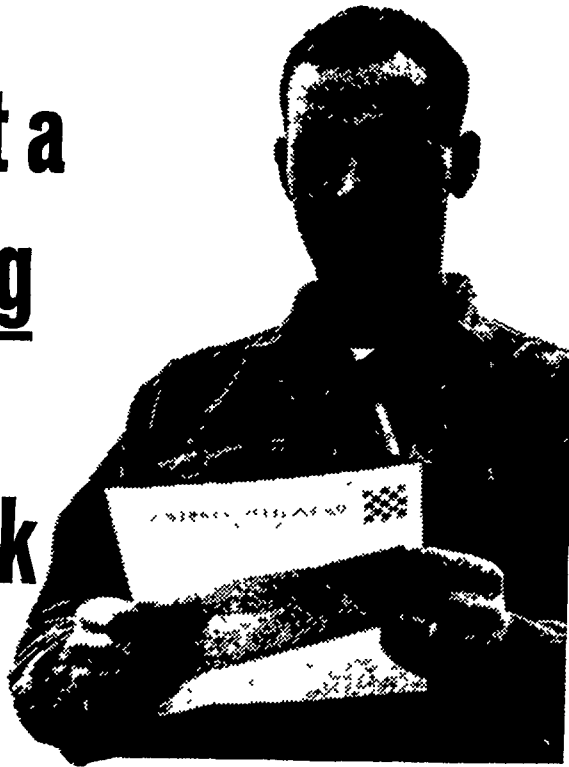
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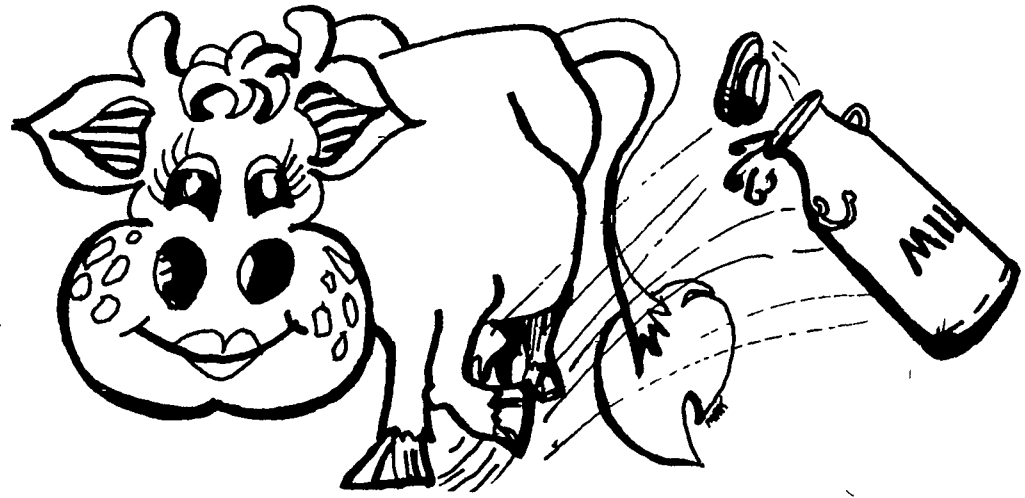
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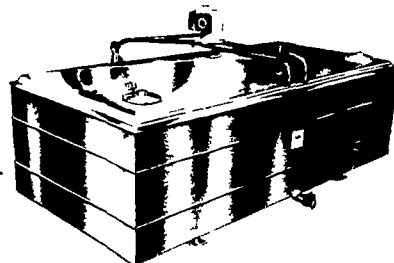
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