

Industrial waste disposal--like throwing money away

ITHACA, NY. — Dumping most industrial wastes into landfills is like tearing up wads of money and burying it. So says a Cornell University engineer who is finding new, lucrative markets for industrial residues.

Each year in the United States, millions of tons of potentially useful products—worth perhaps millions of dollars—are being wasted when they are carted away to landfills.

"Those are all missed economic opportunities," says Lewis M. Naylor, a senior research associate in agricultural engineering in the New York State College of Agriculture and Life Sciences at Cornell.

Naylor shows industries how to turn their costly waste disposal problems into profitable by-product operations. His work has convinced him that, in most cases, it is a waste to throw away industrial refuse—unless those substances contain materials that are environmentally hazardous.

"Americans don't like to deal with waste," Naylor contends. "But with a little creative thinking, many waste products can be used safely with little alteration."

Naylor has been successful in finding ways to market waste products ranging from a pharmaceutical firm's organic waste to kiln dust from a cement plant.

"Industrial wastes, especially those from agriculture-related industries, contain nutrients that

can be recycled beneficially for agricultural production," he says.

Such "waste products" contain nitrogen, phosphorus, potassium, and lime, all of which are essential to agricultural crops. Many of these elements, however, can cause pollution problems, especially in aquatic systems, and it is important to recognize those dangers, Naylor says. However, these elements, if used properly, can be utilized as fertilizers for crops.

For example, the Saratoga Race Track in Saratoga, NY, asked Naylor to find a way to make use of the mountains of horse manure collected from its stables and the dirt that is routinely scraped from the track during pre-race grooming.

Today, a mixture of composted manure and track scrapings is used in potting soil in municipal planters in downtown Albany, thanks to a study conducted by Naylor.

"We ended up growing some beautiful mums," Naylor says with pride.

In his own office, Naylor has several plants growing in media obtained from waste products. He even uses cardboard milk containers instead of clay pots for his plants.

"You have to look at waste creatively," Naylor stresses.

Scientists, planners, and engineers place too much emphasis on problems associated

with waste management, he says.

"Engineers should look ahead to solutions with the same energy that they are putting into understanding the problems. We've really got to look ahead to safe, manageable solutions to industrial waste problems."

In an industrialized state such as New York, the opportunities for conversion of waste into useful by-products are enormous, Naylor points out. A brewery in Fulton, NY, contacted Naylor several years ago about disposing a solid waste from wastewater treatment. He analyzed the material and found that it was rich in nitrogen, among other essential plant nutrients.

In tests on a hay field, fertilizer made from that brewery by-product doubled hay yields and boosted the crude protein in the hay. Today, that waste is a licensed fertilizer product that is sold as a by-product instead of being buried in a landfill.

Another example is a cement plant near Albany which created mountains of kiln dust waste. Naylor discovered that this material was an excellent substitute for lime, which is used to adjust soil pH levels in agricultural land.

In New York alone, the cement industry annually creates almost 300,000 tons of cement kiln dust; nationally, the amount is more than four million tons. The Albany

cement plant now sells the dust instead of looking for places to pile it.

Many industries ignore the potential markets for their wastes because there is no large profit involved.

"The important thing to remember is that although recycled waste may generate little income, at least it isn't a costly burden," Naylor points out.

In still another case, Naylor demonstrated that a pharmaceutical firm could distribute

the organic waste from the plant's fermentation processes as compost for home gardeners and for the establishment of turfgrass. At a dairy processing plant, Naylor showed the management how some residue collected from milk during processing could be used as feed for hogs.

"Too often, potentially valuable resources have been wasted," Naylor says. "They have been wasted because it's more convenient to throw them away in the landfill."

Delaware offers ag preservation litter bags

DOVER, Del. — Mike McGrath, manager of the Delaware Department of Agriculture's Agricultural Lands Preservation Section announced today the availability of litter bags that promote the "wise use and conservation" of Delaware's 520,000 acres of farmland.

McGrath said that "the logo on the litter bags reads 'Don't let it go... Help Delaware farmland grow' and that 10,000 bags were printed and are available to groups and activities that wish to spread the word of agriculture's importance in Delaware."

He added, "One of the main objectives of Delaware's Agricultural Lands Preservation Act of 1981 is to educate the public of the need to protect Delaware's prime farmland. We are using the litter bag campaign to help achieve our goal of public education."

To reserve a quantity of litter bags call Rachel Fields at 738-4811 or 800-282-8685 (New Castle or Sussex Counties). The litter bags are available at the Department of Agriculture building, 2320 South duPont Highway, Dover, Delaware 19901.

Kerr attends national vocational convention

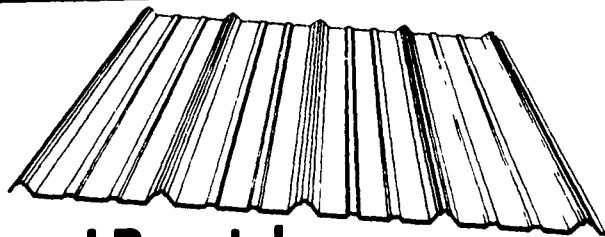
WILLOW STREET — Jim Kerr, a vocational agriculture teacher at Willow Street AVTS, joined approximately 500 agricultural educators attending the American Vocational Association National Convention in Atlanta, Ga. Dec. 6 through 10.

An estimated 6,500 vocational educators attended the 600 plus

sessions keyed to the theme, "Working Together for Excellence in Education."

Kerr, currently serving as the president of the Pennsylvania Vocational Agricultural Teachers Association, also served as a delegate and a member of the curriculum committee during the convention.

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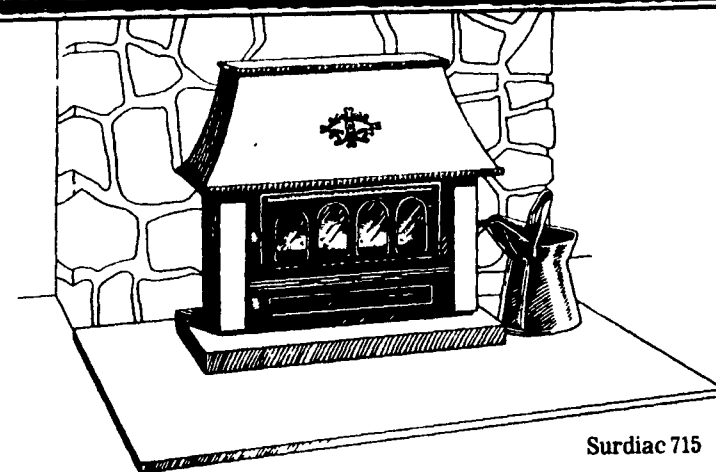
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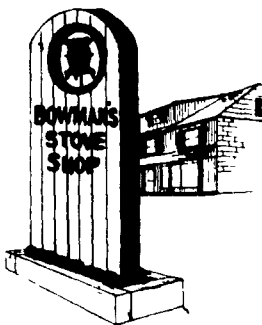


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