

Ag Plastics Headaches Mount As Disposal Problems Stymie Farmers

Part 1 of 2

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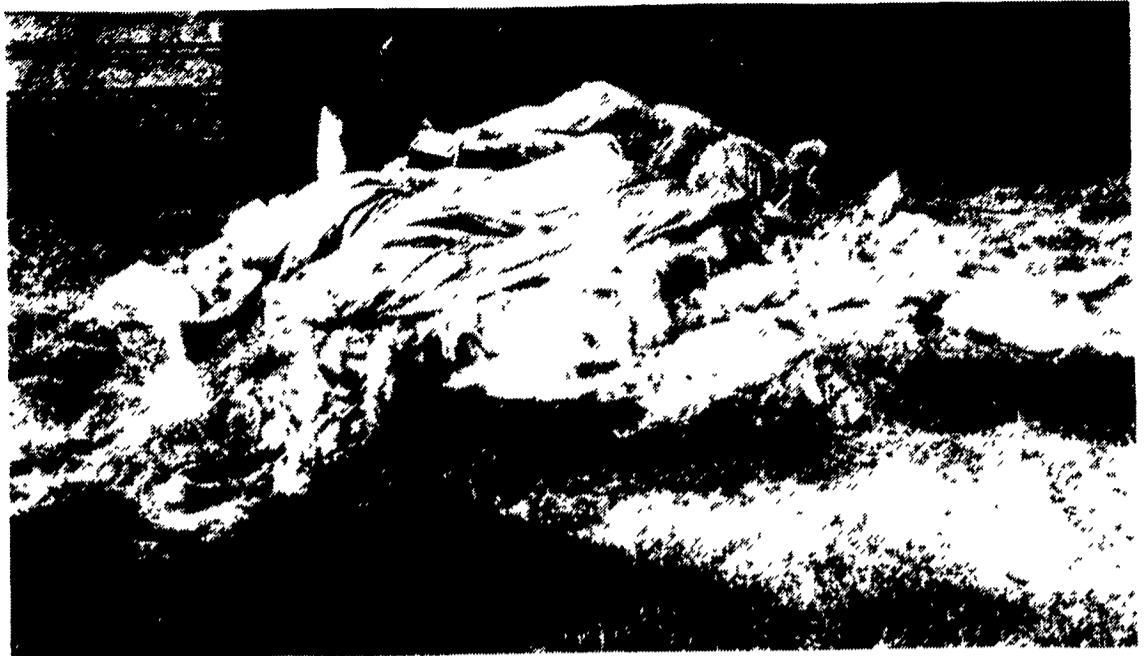
"All the farmers have a problem," said Clark Stauffer as he pulled reams of black drip tape from the garbage pile. "That's our biggest problem — how do you get rid of it?"

At the fencerow in back of his vegetable farm in Ephrata, Clark

visiting Penn State plastics expert and an area young farmer adviser were discussing options for disposal of the plastic.

Trouble is, ways of getting rid of the used, soiled film are few and far between.

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Used ag plastics: You can't burn them. You can't bury them. They're hard to recycle. How do you get rid of them? Producers look for answers.

Stauffer showed visitors the piles of mulch plastic and plastic drip tape he has accumulated.

Stauffer maintains about 25 acres of vegetables on his diversified operation northeast of Ephrata. He uses thin plastic polyethylene mulch film measuring about one millimeter thick (one thousandth of an inch, or one mil, as it is commonly known) in different colors.

Of the 25 acres, 20 are in sweet corn — and the first two early season acres are covered with the clear plastic film.

On the morning of a November day, after the plastic was pulled from the long rows in the field, a

And farmers are worried that their options for getting rid of ag plastics continue to evaporate.

Ag plastic disposal "will become more of a problem," said Dale Hershey, Manheim dairy farmer.

Together with his brothers Clair and Steve, Dale operates a 400-acre dairy on his farm and manages 200 cows with an additional 300 replacement calves.

Like most dairy farmers, the Hersheys make extensive use of forage plastics, including a popular ag plastic wrap bag, and plastic bunker silo covers.

During an interview in November at his farm, Dale said his only

option for disposing of plastics is to burn the material twice a week in an open, caged incinerator on his farm.

But producers who find them-

feet, another 30 feet by 180 feet, and one 55 feet by 125 feet.

Many boroughs and townships, including Ephrata Boro, restrict homeowners and businesses from

tions in human genes. The Clean Air Act lists seven criteria, or standard, pollutants, including air-suspended particulate matter, sulfur dioxide, carbon monoxide, nitrogen oxides, two classes of hydrocarbons, and airborne lead.

In a paper presented at two in-service training sessions at Penn State in March this year, according to Garthe, the effects on human health from toxins in the area can be widespread and devastating. In the 1948 incident in Donora, Pa., and the 1952 killer smog in London (where there was an increase in death 1,600 times greater than normal), the long-range effect on human health from the pollutants

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selves nearly enveloped by development are feeling the pressure to stop the burning in open pits or burn barrels.

Dale said, "I wouldn't be surprised if there aren't regulations coming that will restrict how we burn, when we burn, and what we burn. Open burning is going to slowly come to an end in developed areas."

Twice a week, the Hersheys take plastic materials to their open pit caged incinerator. That includes plastics from 10 plastic wrap bags per year, a thick white plastic with a black lining measuring nine mils thick. The bags measure 8 feet in diameter by 200 feet.

open burning. But they exempt farmers in most cases.

However, some townships can challenge the exemption and put restrictions on time when burning can take place. For the Hersheys,

'I got piles of that stuff. It's a big problem.'

no open burning is allowed after sundown for fear of problems resulting from an unattended fire.

At the recent Animal Housing Expo in North Cornwall, Penn State's Ag and Bio Engineering

could be even more pervasive.

Carbon monoxide can create conditions that can suffocate a person. Sulphur dioxide can cause permanent injury to the respiratory system. Photochemical oxidants can cause eye irritation, asthma attacks, and other problems. Particulates can cause lung lesions, respiratory disease, and damage to other organs.

Steel corrodes quicker in areas affected by particulate and sulfur pollution. Buildings deteriorate. Particulates soil clothes, cars, houses, and buildings.

The pollutants raise the ire of neighbors and can turn townships against farming.

Garthe stressed the importance of looking at those products of incomplete combustion. He said that an eminent human toxicologist — a scientist who studies how toxic these products can be to

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The plastics also include bunker silo covers, measuring about nine mils thick placed over three silos. One silo measures 40 feet by 200

Department featured a display advising farmers not to "cook your own goose."

"You shouldn't have to use a burn barrel approach to getting rid of your ag plastics," said James W. Garthe, Penn State ag engineer. "Unfortunately that ends up being the only one that works."

According to Garthe, the trouble lies in the products that aren't completely burned, or combusted, in an

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open pit.

Temperatures in a typical burn pit or burn barrel reach only between 400-500 degrees Fahrenheit — enough to burn paper trash — but resulting in poor enough burn conditions that products of incomplete combustion are emitted into the atmosphere. At these low temperatures, plastics cannot be sufficiently combusted.

Those "products of incomplete combustion," said Garthe, "are either carcinogenic or mutagenic." Simply put, those products can cause cancer in humans or muta-

humans — made the point that ALL products of incomplete combustion are carcinogenic or mutagenic.

"It's a pretty strong statement," said Garthe. "If enough farmers are out there burning this stuff, you're getting enough of these products of incomplete combustion going into the air. I think the public has reasons to be concerned."

During the Animal Housing Expo, Garthe said that a producer came up to him and said the "solu-

(Turn to Page A29)



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"What plastic I use for the whole year I put in that pickup truck, wrapped, when I buy it," said Clark Stauffer, right. "But to unload it, with used plastic, it would take about five pickup trucks. We need to find a solution. We need to put our heads together and come up with something that the farmer can live with."

James Garthe, left, and others at Penn State agree. "That puts it on your shoulder," he said. "It's everybody's problem."