

Farmers Should Understand The Risks Of Silo Gas, Molds

Part 2 Of A Series

Editor's Note: The first of this series detailed farmers' experiences with deadly silo gas and

a Lancaster County Amish farm about five years ago in which two boys, ages 8-10 years old, ended up in the hospital because of silo gas exposure. Nothing was said. Murphy wonders, how often

ties in Lancaster County from 1980-1992, farm accidents are not required to be reported. How many could have involved silo gas exposure?

"For farmers, it's not that they're hiding it," Murphy told *Lancaster Farming*. "But there's no required reporting of incidences like that, or cases like that, and it's just a part of farming."

Murphy said that farmers just accept the hazards. Farmers also ignore the fact that safety equipment — particularly self-contained respirators and ear/eye protection — just aren't being used.

He told those at the safety conference, "A lot of people have a difficult time being able to understand the difference between a nuisance dust mask, a toxic dust mask,

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mold exposure. In part 2, farmers should be aware of the risks involved when they are exposed to silo gas and should take steps to ensure safety.

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How many illnesses and deaths as a result of exposure are attributed to 'sudden heart attacks' and simply 'ill health'?

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MILLERSVILLE (Lancaster Co.) — Nowhere on the "Summary of Fatal Farm Accidents" report for 1993, compiled by Penn State University, does it indicate how many farmers may have been exposed to deadly silo gas from leveling off silage.

That's because exposure to the gas — which can cause flu-like symptoms ranging from a cough to difficulty breathing — is often thought of as merely the onset of a cold. It goes unreported.

Many farmers ignore the fact that, after filling a silo and opening the doors, they walk away from the chute feeling lightheaded or drowsy. They think, *ah well, all in a day's work*. They go into the house, have supper, go to bed, and try to forget about it.

The more severe cases can't forget about it. They end up in the hospital.

Dr. Dennis Murphy, Penn State professor of agricultural engineering, said he had heard of a story of

dangers of filling silos and exposure to "nitrogen dioxide," the result of fermentation of haylage or corn silage. In the May 29, 1993 issue of *Lancaster Farming*, a story detailed how filling silos is a dangerous job. The article spoke about how "silo gases can cause unconsciousness, injury, and even death, especially in the first 48 to 60 hours after filling. Dangerous levels of silo gas may persist for two to three weeks after filling."

So the word is spread from farm to farm and from family to family. Is it heeded?

In many cases, it isn't, according to Murphy, who spoke at the recent 1994 Workplace Safety Conference at Millersville University, sponsored by the Lancaster Chamber of Commerce. While there have been at least 43 fatali-

a chemical cartridge mask, or an air-supplied respirator."

But Murphy remembers stories, told anecdotally, about how farmers got exposed to "a little gas" and how they got out of it OK. They ignore the long-term affects. It's just a part of farming.

Farmers are often exposed because they don't understand that the silo needs to be ventilated "right after filling." Farmers often don't fill all at one cutting, "so they're in there, in and out, a lot of times, doing lots of different things. So that's why they get exposure to the silo gas."

Across the state, according to Murphy, there are about 7,000 work injuries a year in agriculture. Of those, about 40 are fatal.

Of the 7,000 injuries, about 71 percent are disabling for at least



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one day or more, according to the ag engineer.

Little is known how many are the result of silo gas exposure. How many farmers build up, over time, a long list of exposures that could put them at risk of developing a disabling lung condition, such as farmer's lung, later in life?

Many experts agree that farmers should carefully examine how they

manage their silo filling and unloading operations.

What is needed is a more persistent amount of education.

Right now, extension is working on a broad-based, three-to-four year study on a model program to examine farmer safety. Included in that model program will be descriptions of on-farm hazards and a thorough examination of the risks farmers take, and what protective measures can be used, according to Murphy.

According to Dr. Robert Gillio, a specialist in lung diseases at Lancaster General who treated a silo gas victim in May this year, the patient was the first of such for the year treated at the hospital. There will be more.

Overall, according to Gillio, the number of victims has decreased steadily over the years, perhaps because of more farmer education.

He knows of a Minnesota farm where a father was killed because of silo gas exposure.

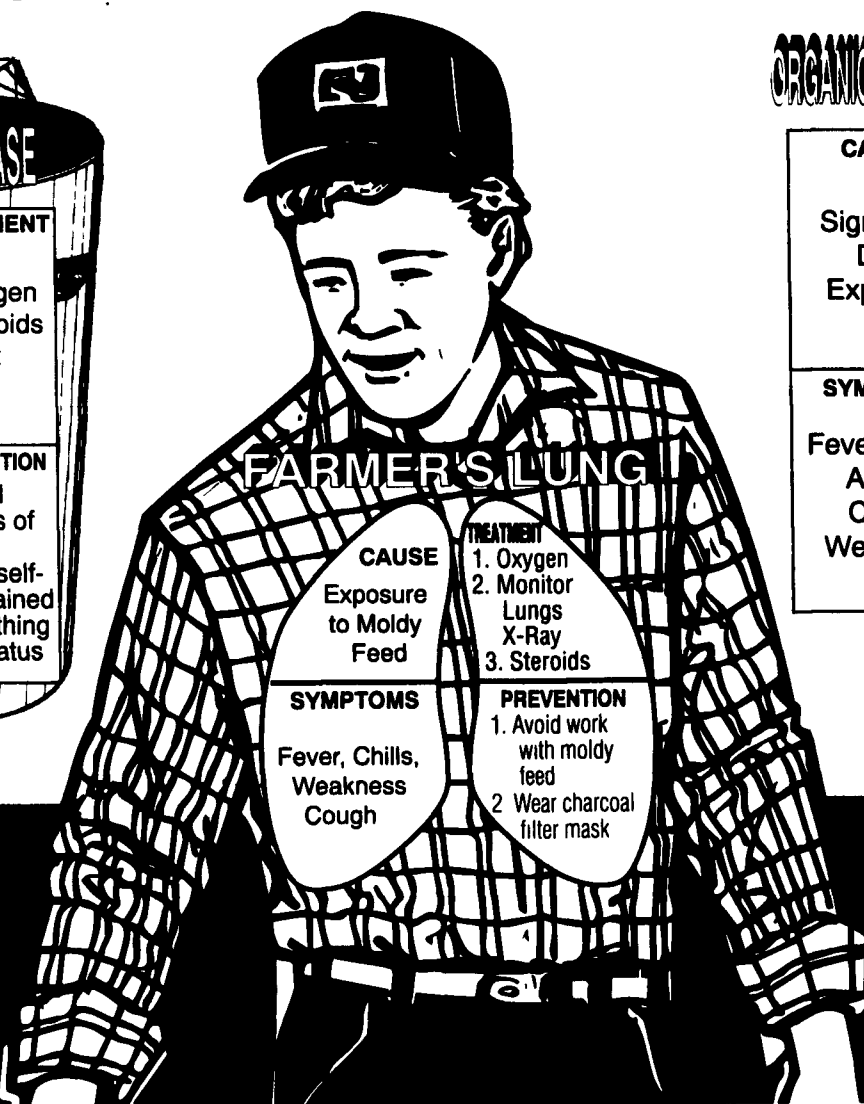
Murphy said the number of accidents related to silo gas are dropping, "but we're less comfortable with the level of accidents that are still occurring. They're really holding about the same."

Because of more education, farmers are becoming aware of the dangers and are taking steps to avert personal disaster. Preventative measures, such as making sure blowers are installed right after filling and the use of respirators around silos, have decreased the number of injuries through the years, according to the ag engineer.

Editor's Note: The final part of the series provides tips for preventing silo gas exposure and other breathing troubles.

AGRICULTURAL LUNG DISEASES - CAUSES & CURES

SILO FILLERS' DISEASE	
CAUSE	TREATMENT
Silo Work, Often Levelling Late	1. Oxygen 2. Steroids 3. Rest
SYMPTOMS	PREVENTION
Mild Cough to Severe Respiratory Disease	1. Avoid areas of gas 2. Use self-contained breathing apparatus



ORGANIC DUST TOXICITY SYNDROME

CAUSE	TREATMENT
Significant Dust Exposure	1. Oxygen 2. Monitor Lungs X-Ray 3. Rest
SYMPTOMS	PREVENTION
Fever, Chills, Aches, Cough Weakness	1. Avoid work with moldy feed 2. Wear charcoal filter mask

This "symptoms chart" gives an indication of severity of certain types of exposure as a result of working around the silo.