FARM SHOW®

Editor's Notebook

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Exploding Toolbars: Truth Or Hoax?

A recent notice posted on the Internet warned about the danger of "exploding toolbars". At first glance we thought it was a hoax. After looking into it, we're not so sure.

Here's what the original message said:

"Two New York farmers were severely burned on portions of their upper body and face in separate incidents when gases under pressure blew out through holes they were drilling in sealed frame members of tillage equipment. The explosions threw both farmers 25 to 30 ft. away from the equipment.

"Each farmer was drilling holes to install accessory equipment. In both cases, the toolbars had been filled by the manufacturer with ballast material consisting of small metal punchings to add weight to the tillage tool. Many manufacturers do this.

"Both toolbars were subjected to physical and chemical analysis after the explosions. Other sealed frame members on the same tillage equipment yielded gas samples shown to be under pressure within the frame. The predominant gas was hydrogen. The percent of hydrogen in the gas mixture ranged from 60 to 90 percent. The volume of gas varied in each frame member sampled. Hydrogen is very flammable and could have been easily ignited by electric arcing from portable hand drills.

"Analysis of the metal wafers and disks inside the toolbars showed a composite of iron, titanium and zinc. This combination in the presence of water will produce hydrogen.

"Not all toolbars are filled with ballast and not all ballast will produce hydrogen. For example, concrete is used as ballast by at least one manufacturer. It is often difficult to determine if a sealed member contains ballast and it's virtually impossible to determine, in advance, if hydrogen gas has been generated within a sealed frame member.

"As a precaution, treat all sealed frame members of tillage equipment as having the potential to be storing gas under pressure.

"While one of the exploding toolbars was only about one year old at the time of the incident, the other piece of equipment was considerably older. Therefore, there may be a considerable number of tillage tools currently in agricultural use that have this potential hazard."

The writer of the message was identified only as "Engineer@factory.com". When we tried to E-mail him at that address, we did not get a response. So we decided to call the president of one of the top manufacturers of tillage equipment in the country. The well-known manufacturer, who is one of the most innovative ag equipment designers in the world, asked not to be identified.

"I saw the same item on the Internet and was puzzled by it," he told FARM SHOW. "I'm not saying it's impossible for a toolbar to explode, but I've never personally heard of it happening. Our company, along with many others, fills our toolbars with metal filings and punch-outs because they weigh 2 to 3 times as much as concrete.

"The big question is: How could water get inside the toolbar? It would have to be through a gap in a weld. Just to be safe, you should probably check over your toolbars for cracks. If they look solid, you probably don't have anything to worry about."

If you've heard anything about exploding toolbars, or have ideas about how to safely open a toolbar without creating a potentially dangerous spark, call us at 1-800-834-9665 or write to: FARM SHOW, P.O. Box 1029, Lakeville, MN 55044. **(Jim Houtsma, Associate Editor)**

"Unquenchable" Silo Fire Frustrates Farm Couple

"We're frustrated but we don't know what to do," says Sharon Pumper, a Millador, Wis., farm wife. She and her husband, George, have been forced to live with an "unquenchable" silo fire that has been burning continuously since last December 31st.

That's when a series of explosions rocked their 70-ft. tall, 20-ft. dia. concrete stave silo, destroying the silo unloader and blowing out four staves and two doors.

"It burned up 40 ft. of the silage in the first three weeks, so it was fairly fast-moving. We were concerned it might spread to the barn and then possibly to the house, which is close by," Sharon told FARM SHOW. "Since then it has continued to smolder in the remaining 30 ft. of silage and we've been told it could continue to do so for up to a year."

When the fire started the local fire department tried to put it out by soaking it with water. But they couldn't put too much water on the fire for fear of toppling the weakened structure. They also tried putting oxygen-limiting foam over the top of the forage and patching the holes blown out of the sides of the silo, but there was apparently enough oxygen reaching the fire through the sides of the silo that it had no effect.

The Pumpers have received suggestions for putting out the fire, such as soaking the fire with liquid nitrogen, but all ideas have been rejected either because they weren't cost effective or because they wouldn't work on the type of fire they have.

After the fire started, their insurance company - Seneca-Sigel Mutual Insurance Co. - notifed the Pumpers that their policy would be cancelled on March 13. The company assured the couple that they would pay damages on the silo but would not cover damage to any other structures that might be damaged later. No other insurer is likely to insure the farm at this time unless the silo fire - and whatever damage results from it - is exempted from coverage.

Any readers with suggestions for how to put out the fire can contact the Pumpers at: George & Sharon Pumper, 10427 Cty. Rd. N., Millador, Wis. 54454 (ph 715 457-6769).

Using Plastic To Grow Crops

There's money to be made using plastic to grow crops, say researchers at the "Center for Plasticulture" in Pennsylvania who are probably the world's experts at using plastic in various ways for agriculture.

For example, the Center recently brought in an experimental vacuum planter from Ireland to plant sweet corn under a layer of specially-formulated plastic that degrades completely over the course of the growing season. The planter has been used in Ireland to lengthen the growing season for corn. The planter punches holes in plastic to plant seeds as the plastic is unrolled.

Experimental planter from Ireland has been used by the Center for Plasticulture to plant corn under a layer of plastic. The plastic disappears by season's end.

Other research projects at the Center include walk-under portable tunnels for starting vegetable or other specialty crops in the field. The Center also studies plastic wrap for silage bales, greenhouse covers, plastic mulch, drip irrigation tape and tubing, row covers and many other ag plastics.

Contact: FARM SHOW Followup, Center for Plasticulture, Department of Horticulture, Pennsylvania State University, University Park, Penn. 16802 (ph 814-863-2251; fax 814 863-6139; E-mail: mdol@psu.edu).

He Turned Egg Shells Into Valuable By-Product

Thanks to a researcher at Penn State University, thousands of tons of unwanted egg shells generated each year by food-processing plants will be transformed into valuable products. What used to cost hundreds of thousands of dollars to dispose of will now generate a new profit stream for manufacturers.

Joseph H. MacNeil, professor of food science, patented a method of separating shells from the egg membrane (the thin layer inside the shell). Both materials can then be turned into valuable products.

"Eggs are in lots of products: mayonnaise, noodles, shampoos, cake mixes and fast foods," MacNeil explains. He says the volume of shells has been growing but until now there has been no good use for them.

MacNeil tried idea after idea to separate the fragile shell from the sticky membranes. He tried crushing, acids, boiling and even sandpaper. Finally he tried running the shells through a special-built meat-processing machine - and magic happened.

"It's not just a grinder. It peels and strips, scraping rather than crushing," MacNeil says. The system proved near perfect, separating shell from membrane with great speed. Because a patent is pending, MacNeil will not reveal any more details of the process but he has built a full-size prototype that will be up and running in months.

Shells can be turned into a source of calcium for everything from animal feeds to toothpaste to orange juice. The egg membrane may be even more valuable since it is an excellent source of raw collagen, a bio-medical product in high demand for production of skin graft and tissue replacement products, as well as other uses. Purified collagen sells for up to $1,000 a gram. ***(The Farmer's Friend)***

Walkie-Talkies Saved Wisconsin Farmer's Life

A $25 set of walkie-talkies may have saved the life of Wisconsin farmer Al Moos when his clothes got caught in a silo unloader, according to a story in *Country Today.*

Moos had climbed up into a silo to free a stuck unloader while his wife, Phyllis, stood by the control box down below. "I heard him yell to turn it off in a voice I'd never heard before. He was just screaming, 'Shut it off!' I shut it off and he said, 'It's got me. I'm caught.'"

The unloader had caught his coveralls and started dragging his leg into the auger. It took 45 minutes to cut himself free with a pocketknife.

Both Moos and his wife believe the walkie-talkies saved his life. They bought them after putting up the silo 5 years ago when they discovered they couldn't hear each other by voice alone. At the time of the accident, Moos was 50 ft. off the ground.

From an anonymous wife: "A husband is a creature who can wait three hours for a fish to bite but can't wait 12 minutes for his wife to dress."

Two elderly farmers were discussing the ravages that time had wrought on their bodies. Said one, "My arthritis has gotten so bad I can hardly grip anything and my cataracts seem to get worse every day. I can't hear, and I have gout in my right leg so bad I can't bend my knee. But thank God, I can still drive."

Do Your Friends A Favor!

One thing we've learned over the years is that FARM SHOW readers like to share good things with others.

If you know someone who doesn't get FARM SHOW but might like it, send us their name and we'll send them a free, no obligation sample copy of this issue.

Just give us the complete name and address of each recipient on a sheet of paper, or use the form on page 42. Send to: FARM SHOW, P.O. Box 1029, Lakeville, MN 55044.