



**Western  
New York**

**CROP MANAGEMENT**



**Main Office: 5242 Curtis Road, Warsaw NY 14569**

**Randolph Office: 91 Jamestown Street, Randolph NY 14772**

**October 5, 2012**

## Fall Residue Management

**By Dave Shearing**

Next spring's cropping will be affected by how we handle the corn residue this fall.

**1. Residue that comes out of the combine is the first challenge.** If it is left in a windrow, several problems are encountered. If you no-till or zone-till, a lot of nitrogen will be tied up, causing yellow corn, beans, or alfalfa everywhere there is a windrow. **THIS IS IN ADDITION TO THE FACT THAT IT IS AMOST IMPOSSIBLE TO PLANT INTO A WINDROW.** The other problem is that the nutrients in the leaves and cobs won't be evenly spread. It is a good idea to get your residue spreader in good repair early. Farms using twelve-row heads need to take special pains to get adjustments correct, but it can be done.

**2. Stalk residue is the next challenge.** We have heard of many solutions.

Do nothing and plant between the rows next year. Quite a few people do this very successfully, especially those with the three-coulter system.

Spray with liquid fertilizer or a new chemical to help bacteria break it down. This works well if the temperature stays above 55 degrees between October and May. **THIS DOES NOT WORK IN NEW YORK STATE!!**

Use a disc or turbo till and mix them into the soil. There are close to 10 turbo till disc combinations on the market. Some are good. Some are really good. Some are not so good. This should not be used when fields are wet. Compaction by a disc is a real issue here!

Have the combine head equipped with a stalk cutter, shredder, cruncher-type device. I believe every combine manufacturer and many independents have these available. They work well when properly adjusted and are becoming popular, but they do require more power. Since this is done in one step, it reduces labor and compaction caused by the turbo till, disc or flail machine.

Prepare now for optimal crops next year.

## **Beware of Toxic Gases From Manure Storages**

A recent scare at a dairy farm in Montour County reminds us about the dangers from gases that are present in and around manure storage facilities.

### **Reprinted from Penn State Live:**

A narrowly averted farm tragedy this month has a farm safety expert in Penn State's College of Agricultural Sciences renewing his warning about the dangers of toxic gases emanating from manure-storage facilities.

The stark reminder of the serious hazards lurking around manure pits came to light once again Sept. 17 on a Montour County farm, explained Davis Hill, senior extension associate in the University's Agricultural Safety and Health Program. Two brothers, ages 2 and 4, were found unresponsive next to the family farm's manure storage just minutes after their father and grandfather began agitating the manure in the tank. The brothers were riding their bikes on a roadway that runs next to the structure.

"Their dad explained that he had just started the tractor that operated the agitator," Hill said. "He checked the connections for leaks and then decided to walk around to the back of the structure so he could see into the top more easily to make sure it was mixing correctly. As he walked around the side toward the back, he found his two sons. The youngest was blue while the other one was very pale. Both were unresponsive. He immediately told his dad to shut down the agitator and call 911 while he moved both boys to fresh air. The older son revived quickly. The younger boy remained unconscious for nearly 20 minutes."

The manure-storage structure is 124 feet across and 12 feet deep, Hill noted. The tank was partially buried and partially above ground. It was nearly full and covered with the typical crust that forms on top of liquid-manure storages. It was the first day for agitating the storage.

"The first day of agitation or mixing of the manure is when we often see higher levels of manure gas," he said. "When you break up that crust and stir around the manure, gases that are contained below the crust are allowed to pour out of the storage."

The back side of the structure is mostly buried, with only a foot or so above ground level. The gases "boiled over" the wall and settled next to the structure, where the children were found.

"No one really would have suspected that until this incident happened, and now, it is very clear to see," Hill said. "Being heavier than air, the toxic gases would accumulate right where the children were riding their bikes."

There are four predominant toxic gases that are produced during manure storage and released during agitation. The most serious of these, from a health standpoint, is hydrogen sulfide. This gas is colorless and has a rotten egg smell at very low concentrations, but people are not able to detect this odor at high concentrations. Hydrogen sulfide is heavier than air, which means it will stay close to the surface or settle in low areas. As the manure in this structure was being agitated and stirred, high levels of this toxic gas would have been released when the crust of the manure was broken, Hill pointed out. As the amount of gas built up on the surface of the manure, it likely spilled over the top of the wall and rolled to the ground.

"At high levels, this toxic gas can cause loss of consciousness and stopping or pausing of breathing and can lead to death," he said. "At extremely high levels, breathing will cease and death can occur within minutes."

**Cont. from pg. 2**

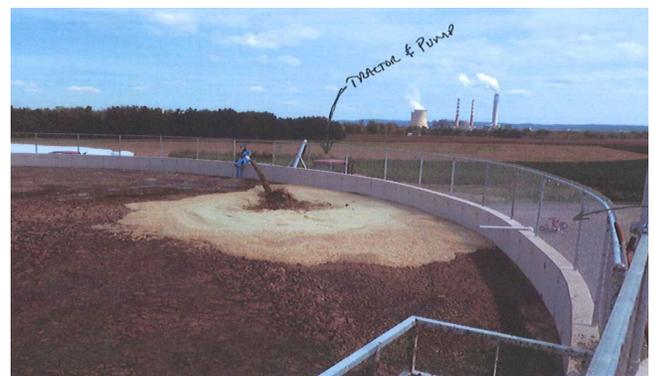
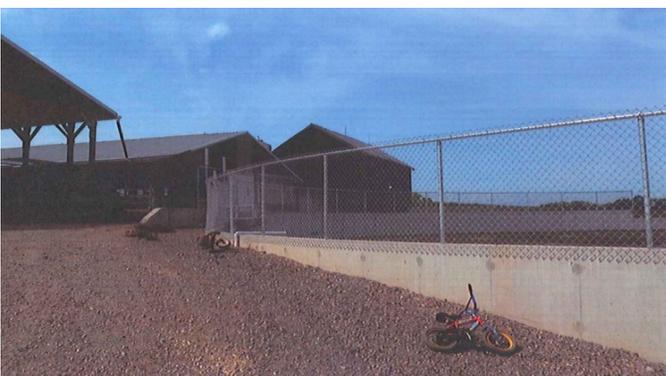
Federal and state agriculture officials have raised concerns about the possibility of higher-than-usual levels of hydrogen sulfide gas being emitted from manure pits containing gypsum-based animal bedding, such as was used on this farm. Hill said he plans to work with the USDA Natural Resources Conservation Service and others on research to determine if there is a connection between gypsum bedding, elevated hydrogen sulfide levels and manure-pit incidents. He is looking for farmers using gypsum bedding who are willing to participate in this research. Interested farmers can contact him at 814-865-2808 or by [email](#).

Hill said carbon dioxide also is released during manure agitation. This gas, which is heavier than air, is also colorless and odorless. "Carbon dioxide displaces oxygen and, at high levels, can cause a person to quit breathing," he explained. Ammonia, another manure gas, is lighter than air, which means it normally will rise once it's released, according to Hill. "This gas is colorless but has a very pungent odor which will get stronger at higher concentrations," he said. "This property will cause anyone exposed to this gas to vacate the area immediately."

Methane is the other gas people often relate with manure storages. This is another colorless and odorless gas. Like ammonia, it is lighter than air, which means it will dissipate outside. This gas will asphyxiate, which means it will displace breathable oxygen in high enough concentration. This gas also is very flammable and explosive in the right concentration.

The recent incident should be a warning to other farmers that have manure storages where toxic gases can be released, Hill stressed. He offered the following recommendations regarding these structures:

- Make sure everyone who needs to be near manure-storage structures understand the hazards, including how the various gases can affect them.
- Make sure there is no access to low lying areas next to these structures during manure agitation. Consider a buffer zone of at least 20 feet around the structure during this time.
- Especially keep children well away from all hazardous farm operations. Lower concentrations of toxic gases can have serious effects on them.
- Bystanders and nonessential workers should stay away during agitation and manure pump-out operations.
- When agitating manure storages located below animal living areas, realize that dangerous levels of toxic gases can be pushed up through slotted floors into the animal housing. Make sure these spaces are well ventilated before and during agitation. In some cases, people and animals should be removed before agitation of the manure.
- If you must be near spaces that are being agitated, wearing a portable gas detector would offer an early warning if toxic gas is present. This device is relatively inexpensive and can measure a single gas (hydrogen sulfide is suggested) or multiple gases and can give warning by sounding an audible alarm when dangerous levels of gas are being released.



## A QUICK NOTE ON FALL MANURE SPREADING

It is important to remember that manure is best spread at low to moderate rates and applied to fields with a growing crop, low P and K soil test levels, or a cover crop to insure nutrient stability. This fall could turn out to be wet, one never knows with the odd year we have had. Low to moderate rates of manure will be best to reduce the chances of run off and leaching.

## CMA Q&A

By Nick Youngers

### **Q: When should Calcium or Magnesium Lime or Gypsum be used?**

**A:** The first thing to do is look at the soil sample for the base saturation number. This notes the calcium to magnesium ratio, which should ideally be 4 to 1 (base saturation = 4). One ton of gypsum can be used to raise the calcium level on fields where the pH is acceptable but the base saturation is lower than 4. If the pH is too low and the base saturation is above 4, a dolomitic lime should be used. If the base saturation is below 4, a calcium-based lime should be used to raise the pH. I contacted Frank at County Line Stone Company, Inc. He said that calcium lime availability is very good this fall. However, they are not stockpiling as much over the winter so the availability will be low in the spring prior to the beginning of May. The lime analysis at County Line Stone Company, Inc. is 75% ENV, 31.6% Calcium and 1.2% Magnesium. The lime analysis at Shelby Crushed Stone, Inc. is 86% ENV, 20% Calcium and 11% Magnesium. This information is available at <http://www.agriculture.ny.gov/PI/commodities/Lime.pdf>

### **Q: Is it too late to fall kill sod?**

**A:** As long as the temperature is above 60 degrees and things are actively growing, we can fall kill sods. For alfalfa sods, we recommend Glyphosate 4L at 1.5 quart/acre, 2,4-D at 1.0 pint/acre and 1 pint of Banvel/acre. For a grass sod, we recommend Glyphosate 4L at 2.0 quart/acre and 2,4-D at 1.0 pint/acre. Also, be sure to include the AMS and non-ionic surfactants as required.

## PROTECTING YOUR FARM FROM ILLEGAL TRESPASS

By Greg Tessmann

Protecting your farm from illegal trespass with proper posting can be a very important aspect of your farming operation. Steps can be taken to control issues such as public trespass, unwanted ATVs and snowmobiles, illegal hunting, and theft. It is important to legally post your property to protect against these situations. Posted signs must be a minimum of 11" x 11" and placed no more than 660 feet apart. They also need to be on each side of all corners and the boundaries of the protected area. They should be conspicuous, high enough and spaced close enough to be seen, without being an eyesore by using more signs than are necessary. They must bear the name of the owner, lawful occupant, or other person or organization authorized to post the property. The words on the sign must cover a minimum space of 80 square inches (about 9" x 9") and have specific language pertaining to unauthorized entry. The sign must consist of the word "POSTED" or warn against entry for specific purposes or all purposes without the consent of the person whose name appears on the sign. Illegible or missing signs must be replaced at least once per year. It is worth noting that whether the property is posted or not, the General Obligations Law protects landowners from liability for non-paying recreationists on their property. This protection does NOT apply in cases of willful or malicious failure to guard or warn against dangers. Please do not booby-trap your property against trespassers. The best evidence when there is an issue is motion activated "trail" cameras, eyewitness information and working directly with law enforcement to eliminate the unwanted activity. It is illegal for people to remove or destroy the signs and the offence of trespass is a violation with penalties of \$250 and up or up to 15 days in jail.

Some producers may want to privately open their property to leasing for hunting, fishing, trapping and other activities. Dividing the hunting season by deer, turkey, and pheasant/small game can provide additional income. If you do charge for these access activities, the liability protection granted to landowners by the General Obligations Law no longer applies. Insurance policies are readily available and strongly encouraged for private landowners. The NYS DEC has an excellent program called the ASK Permission Program, supported by the NYS Fish and Wildlife Management Board, which provides yellow signs for land access. If you have any questions on land protections and NYS Environmental Conservation Law, contact the NYSDEC in your local region.

## **WORLD FORAGE ANALYSIS SUPERBOWL ANNOUNCES**

### **2012 WINNERS**

**Congratulations to our prize-winning members!**

**Atwater Farms**  
**Champion First Time Entrant**

**Co-Vista Holsteins**  
**1<sup>st</sup> Place BMR**

