



JEFFERSON COUNTY  
CONSERVATION DISTRICT

*Conserving Natural Resources for Our Future*

## *Agriculture Newsletter* 2016

# Winter

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Management Workshop

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Manure Storage Gases  
& Safety Tips

19<sup>th</sup> Annual Northwest PA  
Grazing Conference  
"Options Equal Opportunities"

New CREP Website

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Meetings

### **Barnyard & Pasture Management Workshop**

**Tuesday, February 2<sup>nd</sup>**  
6:30 pm - 8:00 pm

#### **At the Jefferson Conservation District**

Located ¼ mile North of Exit 81 (Hazen) of  
I-80 on Route 28 in front of the Jefferson County  
Fairgrounds

Join us for an evening workshop on barnyard &  
pasture management with a specialized  
presentation for horse owners by NRCS Equine  
Specialist, Suzette Truax. An overview of farm  
plans required by the state will be discussed by  
JCCD Agriculture Technician, Megan Whitlatch.  
In addition, NRCS and the Penn State Extension  
will discuss their programs & services.

Free to attend; refreshments provided.  
Free soil test kits available.

**To register, please contact the District by  
January 29<sup>th</sup> at (814) 849 – 7463**



*Financial support for this project is provided by the  
Pennsylvania Department of Environmental Protection  
through the Clean Water Fund.*



1514 Route 28 • Brookville, PA 15825 • Tel (814) 849-7463 • Fax (814) 849-0825 • [www.jeffersonconservation.com](http://www.jeffersonconservation.com)

## Hazardous Manure Storage Gases & Safety Tips

Whether you have an enclosed or an open-air manure storage, gases produced through the decomposition of manure have the potential to reach toxic levels; sometimes resulting in death.



Circumstances in which this can occur include agitating the manure before or during pumping from the storage, a malfunctioning of the ventilation system via a power outage or other failure, and through the accumulation of gases over time in the absence of adequate air circulation.

Gases of concern include Hydrogen sulfide (H<sub>2</sub>S), Ammonia (NH<sub>3</sub>), Methane (CH<sub>4</sub>), and Carbon dioxide (CO<sub>2</sub>).

### Hydrogen sulfide (H<sub>2</sub>S)

- Smells like rotten eggs; however, at high levels, it can numb the sense of smell.
- Accumulates in lower lying areas as it is heavier than air.
- In humans, lower levels (10 ppm) can cause intense irritation of the lungs, throat, and eyes. Higher levels (50-100 ppm) can cause vomiting and diarrhea, while levels of 600 ppm or more can result in unconsciousness/death.
- In animals, consistent long-term exposure of H<sub>2</sub>S in low levels result in nervousness, loss of appetite, and a fear of light.

### Ammonia (NH<sub>3</sub>)

- Strong, overpowering smell. However, long-term exposure to low levels of the gas can decrease a person's awareness of the gas as the olfactory system becomes adapted to the gas (olfactory adaptation).
- Heavier than air; accumulated in low-lying areas.
- Lower levels cause eye and respiratory tract irritation.
- Levels of 0.5% (1000 ppm) can result in asphyxiation of humans.
- Long-term contact can lead to greater vulnerability to illnesses of the respiratory system.

### Methane (CH<sub>4</sub>)

- No odor.
- Lighter than air.
- Hazardous when accumulated in levels that cause oxygen depletion.
- Main risk is explosion.

### Carbon dioxide (CO<sub>2</sub>)

- No odor.
- Heavier than air; accumulates in low-lying areas.
- Moderate levels can cause dizziness, breathing difficulties.
- Higher levels can cause suffocation.



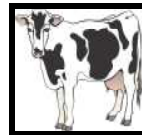
## Safety TIPS

Listed below are a few safety tips to help protect yourself, others, and your animals from the toxic buildup of gases.

- ✓ Post warning signs to caution others of potential hazardous gases near manure storage areas.
- ✓ Never work by yourself; always be accompanied by another person that can quickly summon help in the event of an emergency.
- ✓ Keep unnecessary personnel away from manure storage areas; especially during manure agitation.
- ✓ When agitating manure, locate yourself upwind of the storage; be sure others (especially children) stay clear of nearby low lying areas as gases heavier than air can accumulate in these areas.
- ✓ As some manure gases are flammable, do not permit smoking, open flames, or anything that could spark when agitating or pumping a manure storage.
- ✓ Avoid using gypsum (calcium sulfate) for bedding material as there is a significantly high risk of H<sub>2</sub>S being released at dangerous levels during the movement and/or mixing of manure.
- ✓ Be sure there is adequate air circulation in manure storage areas.

### Resources

- Safe Manure Removal Policies Factsheet (National Pork Board, 2009)
- Manure Gas Dangers Factsheet (Farm Safety Association, Inc., 2002)
- Manure Storage Safety (articles.extension.org, 2015)
- Hazardous Agricultural Gases (Commonwealth of PA, 2015)



### 19<sup>th</sup> Annual NW PA Grazing Conference

This year's conference, "Options Equal Opportunities", will be held on Thursday, March 17<sup>th</sup>, 2016 at the Zion Church in Clarion, PA, featuring Kathy Voth, founder of Livestock for Landscapes, LLC. Registration is required by March 4, 2016. Cost is \$40.00 (payable to Headwaters RC&D Council) and includes a continental breakfast and a hot buffet lunch. For more information or to register, contact Headwaters RC&D Council at 814 – 503 – 8653 or visit their website at [www.headwaterspa.org](http://www.headwaterspa.org).

### New CREP website



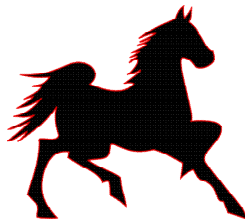
The Pennsylvania Association of Conservation Districts (PACD) recently revamped the Conservation Reserve Enhancement Program (CREP) website. Administered by the Farm Service Agency (FSA), CREP is a program that provides an annual payment to producers and landowners that establish and maintain specific practices on their land for 10-15 years. Up to 100% of the costs to install the practices may also be reimbursed, along with cash incentive payments. Visit [www.creppa.org](http://www.creppa.org) for more information.

## Pesticide Recertification Meetings

**Jefferson 2+2 Meeting** – February 16, 2016 1 - 3 pm, Punxsutawney Area Community Center, 220 N Jefferson Street, Punxsutawney, PA 15767  
*Topics:* Pesticides & Groundwater, Weed Control Update.  
*Register @* extension.psu.edu or by calling 814-274-8540  
*Fee:* \$10 2 core and 2 private category and categories 01, 10, 18, 25\*

**Jefferson Farm Bureau Meeting** – March 10, 2016 10 - 1pm, Jefferson County Fairgrounds, 1514 Route 28, Brookville, PA 15825  
*Topics:* Weed Control Update.  
*Register* by calling Farm Bureau at 814-849-5092  
*Fee:* TBD 2 core and 2 private category and categories 01, 18, 25\*

## Barnyard & Pasture Management Workshop February 2, 2016



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