



## *Agriculture Newsletter* *Spring 2014*



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### **Predictions of Harsh Winter's Effects on Crop Pests this Spring**

This winter has been relentless in its delivery of snow, ice, and arctic-like temperatures. Is there a good side to all of this? Maybe. The extent of damage to pest populations following a cold

winter depends on how tolerant the pest is to cold weather, and where the pest overwintered. Many pests protect themselves from the cold by taking cover under leaf litter, in the soil, or under tree bark, and also possess a substance in their body that acts like anti-freeze. For some insects, however, this might not be enough protection in subzero weather. Dr. John Tooker, an entomologist from Penn State, predicts a decrease in populations of pests such as slugs, cereal leaf beetles, and bean leaf beetles this spring as these species overwinter in Pennsylvania and are adversely influenced by cold temperatures. However, insects like the brown marmorated stink bug, while also influenced by the cold, tend to overwinter in homes, and therefore it may matter very little what conditions are like outside their hibernating spot. It is challenging to predict the impact of winter on migratory pests such as armyworms, black cutworms, and potato leaf hoppers as they overwinter in the south. Given the uncertainty that remains, it's best to scout your fields this spring to see what detrimental pests your crops may face this year.

### Resources

"Cold temperatures and pest populations" John Tooker, Entomologist PSU (Feb 5, 2014)

"Do cold winters kill pests?" Jaime McLeod Web Content Editor for the Farmers' Almanac

<http://www.farmersalmanac.com> (Feb 17, 2014)

"Does a cold winter kill pests?" [www.pctbugfree.com](http://www.pctbugfree.com)



## How to Calibrate Your Manure Spreader



Michele Tremaine Illustration

Knowing how much manure your spreader is capable of applying will help you determine whether or not adjustments need to be made in order to meet your crop's nutrient requirements and to avoid applying more than is needed.

Two methods of calibration include the Swath (Load-Area) Method and the Tarp (Weight-Area) Method. The Swath Method is best used for liquid manures and involves calculating the amount of manure in a full spreader load and the land area covered by one full spreader load. The Tarp Method is best used for solid manures and involves weighing the manure spread over a tarp and computing the amount of manure applied per acre.

### Swath (Load-Area) Method

- Determine the amount of manure in one full load by calculating the spreader volume or weighing the spreader. Record the amount in gallons (liquid manure) or tons (solid manure).  
To convert cubic feet to gallons, multiply by 7.48, to convert cubic feet to tons of solid manure multiply by 0.0275.
- Spread one full load in a rectangular pattern and record the following information: spreader settings, tractor settings, length & width of the area covered.
- Determine the size of the area covered in square feet, and convert to acres. (Area = Length X Width, 1 acre = 43,560ft<sup>2</sup>).

- Divide the volume of the spreader load by the acres covered to determine the manure application rate (gallons/acre or tons/acre).
- Repeat the process a couple times to ensure there isn't significant variation, and to determine the average application rate.

### Tarp (Weight-Area) Method

- Measure the length and width of the tarp and record the tarp's area in square feet (Area = Length X Width), and record the weight of the tarp itself.
- Place the tarp securely in the field where manure can be spread on it.
- Spread the first pass of manure directly over the center of the tarp, and spread two additional passes on opposite sides of the center of the tarp. Be sure that these passes are applied at the normal spreader overlap spacing, and record the spreader settings and tractor settings.
- Determine the weight of manure on the tarp in lbs. (subtract the weight of the tarp).
- Divide the amount of manure collected (in lbs) by the tarp area (in ft<sup>2</sup>).
- Multiply this value by 21.8 (43,560ft<sup>2</sup>/acre ÷ 2000 lbs/ton), and this will be your manure application rate in tons/acre
- Repeat the process a couple of times to ensure there isn't significant variation, and to determine the average application rate.

For more detailed information, see Penn State's Fact Sheet on Manure Spreader Calibration (Agronomy Facts 68) at [www.extension.psu.edu](http://www.extension.psu.edu)



## Upcoming Events

### Getting a Handle on Lameness

Where: Penn State Extension Clarion, 8 Grant Street, Clarion PA 16214.

When: April 8, 2014, 8:30 AM - 10:00 AM

The design and management of both the flooring and resting area have a direct influence on overall foot health of the dairy herd. Causes of lameness will be discussed along with ways facility design features and management can minimize hoof health issues will be led by Dr. Ernest Hovingh, Penn State Extension Veterinarian, and Dan McFarland, Penn State Extension Engineer.

To register for this free event, contact the extension at [www.ClarionExt@psu.edu](mailto:www.ClarionExt@psu.edu) or (814) 223 – 9028.

### PA Agriculture: Local Planning, Regulations & Policies Workshop

Where: Belmont Complex Conference Room 415 Butler Road Kittanning, PA 16201

When: April 10, 2014, 7:00 PM – 9:00 PM

Agriculture has been and continues to be an integral part of Pennsylvania’s landscape, economy and culture. However, changing communities and land use patterns provide operational challenges for farmers as well as regulatory and community planning challenges for local elected and appointed officials.

This workshop will educate participants on the availability and interrelationship of land use related programs and protections for farmers as well as planning and policy tools that are available to local municipalities.

Register for this free event by April 7 by contacting John Turack (724) 837-1402 or (724) 548-3447.

### Sheep Field Day

Where: Baytree Farm, 2265 Rockland-Nickleville Road, Emlenton, PA 16373

When: April 26, 2014, 9:00 AM – 2:30 PM

The Baytree Farm has a large flock of sheep in which lambs and hay are produced and sold. The field day will feature a tour of the pasture facilities and will include information on how to manage weaning for less stress on both the lambs and the ewes. A final discussion will focus on how to select replacement females that will perform well on pasture.

Register by April 21<sup>st</sup> by contacting Extension Registration Support at (814) 445-8911 ext. 141 or by email: [ExtensionRegistration@ag.psu.edu](mailto:ExtensionRegistration@ag.psu.edu). Cost is \$20. For more information, visit [www.extension.psu.edu](http://www.extension.psu.edu) and click on ‘Upcoming Events’.



### 2014 Farm Bill NRCS Financial Assistance Programs

The 2014 Farm Bill was passed February 7, 2014. The Natural Resource Conservation Service has three financial assistance programs available, including the Environmental Quality Incentives Program (EQUIP), the Conservation Stewardship Program (CSP), and the Agricultural Management Assistance Program (AMA). Each of these programs provides financial and technical assistance to help agricultural producers make and maintain conservation improvements on their land. To see recent changes and updates to each of these programs, visit the Natural Resource Conservation Service website at <http://www.nrcs.usda.gov> or contact Gary Swope, the local NRCS District Conservationist, at 814-375-2125 (ext.3).



## Manure Management Manuals

Still need a manure management plan? If you missed the workshop this winter on how to fill out a manure management plan to be in compliance with manure management regulations, the district has plenty of copies of DEP's Land Application of Manure Manual. Stop at the District office to pick one up for yourself or for a friend. If you would like assistance completing one, contact Megan Whitlatch at (814)849-7463.



# *Jefferson Conservation District Agriculture Newsletter Spring 2014*



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