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April 2007

## LPE Center News, April 2007

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# LPE Center News



April, 2007

Connecting Experts With Those Advising Producers

<http://lpe.unl.edu>

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LPE Learning Center Webcast Series

## Value of Manure in Land Application Systems to be Presented in the May Webcast

Manure has long been known to be a valuable fertilizer and soil amendment. Despite all of its positive characteristics, it is often regarded as a waste product that many livestock and poultry producers give away. How can producers capture some of that value? What knowledge is required to effectively market manure?



Dr. Ray Massey



Dr. John Lory

Dr. John Lory will discuss the characteristics of manure and benefits for the cropping system. The second presentation, by Dr. Ray Massey, will focus on how the economic value of manure is affected by form, plant available nutrients, and the need for characteristics contributed by the manure. Both speakers are with the University of Missouri. [More...](#)

*Date/Time:* Friday, May 18, 2007 at 2:30 pm Eastern, 1:30 pm Central, 12:30 pm Mountain, and 11:30 am Pacific.

*How to Attend:* Go to <http://lpe.unl.edu/webcast2.html> for directions. A schedule of upcoming webcasts is available at <http://lpe.unl.edu/webcast.html>.

**April 20, 2007 Webcast Reminder**

“Lessons Learned from the Smithfield Project”  
[More information](#)

What's Going On in the LPE Learning Center?

## What's New on the LPE Website?

- Several new FAQs and educational resources have been added to the LPE Learning Center pathogen topic. <http://lpe.unl.edu/pathogen.html>.
- The integrated nutrient management page has also been updated with several new educational resources and a new category “Small Farms”. <http://lpe.unl.edu/nutrient.html>.
- The March webcast “Nitrogen Availability from Organic Sources” has been archived and is available at <http://lpe.unl.edu/archive2.html>.

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## Value of Manure Topic Coming Soon

The LPE Learning Center manure value team will be posting resources on the website in mid-May. This team is working to identify resources and tools available to producers and their advisors for identifying new markets, valuing manure, highlighting species and location variations, and co-processing with other wastes. If you have resources to suggest for this site or a question to include in the FAQ database, please contact Jill Heemstra at [jheemstra@unl.edu](mailto:jheemstra@unl.edu).

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## Small Business Innovation Research (SBIR) Program Encourages Research Into New Technologies for Manure Management

When will we measure ammonia levels in a building with just a glance? Is manure a reliable source of electricity?

In an effort to assist small businesses with big ideas, but small research budgets, USDA offers the Small Business Innovation Research (SBIR) program. Grants are available in 12 agriculture topics areas, including the topic of animal manure management. The objective of this topic is to support high quality, advanced research that could lead to the development of new or improved technologies and environmentally sound approaches for managing animal manure.

The next round of proposals is expected to open in July, 2007 with Phase I proposals due in September, and Phase II proposals due in early 2008. According to Dr. Richard Hegg, SBIR Manure Management Topic National Program

*“The dynamic SBIR program facilitates the ability of small businesses (less than 500 employees) to develop value-added products and new processes or services to create new economic opportunities. SBIR projects often target technology transferred from university or other publicly funded research institutions (e.g. USDA-ARS), with the goal of reaching commercial application in the private sector.”*

*--Dr. William Goldner, USDA CSREES SBIR*

Leader, “In the past two years we have awarded 14 Phase I and four Phase II grants. Some of the funded projects have researched control and detection of air emissions, water quality control, treatment, nutrient recovery, and energy recovery”.

More information, links to applications, and abstracts of funded projects are available at: <http://www.csrees.usda.gov/fo/fundview.cfm?fonum=1221>

### Spotlight On...

## Promising Treatment Technology Removes Phosphorus from Manure

It is no secret that manure, when land applied to meet crop nitrogen needs, contains far more phosphorus (P) than the crop can remove. Over time, soil P levels increase and represent a potential water quality risk.

Raw manure is a wet, bulky material that is expensive to haul far from its source. So, how can a farm balance its nutrient inputs and nutrient outputs without breaking the bank?

One possible solution was pilot tested by Multifarm Harvest Inc., at a Washington dairy farm. The project, supported with grants from the USDA Small



Business Innovation Research (SBIR) program and Washington Technology Center, used a fluidized bed to crystallize phosphorus from lagoon water into struvite (P + magnesium). The granular struvite can be marketed for use in inorganic fertilizers. The second output, reduced P lagoon water, can be utilized in the farm's cropping system.

By the end of the project, total P removal reached 50%, with 70+% removal of orthophosphate, as struvite. In Washington State University studies, struvite compared favorably with commercial fertilizer as a P source for crops.

“We hoped to demonstrate that this new technology, originally developed for swine, could be applied to dairies. Since dairy wastewater differs from swine wastewater in several ways we expected, and made, several adaptations. Overall, the technology reached its technical goal. The next step is to scale the adapted process up and demonstrate its commercial feasibility,” says Keith Bowers, project director.

For more information: <http://cris.csrees.usda.gov/cgi-bin/starfinder/0?path=fastlink1.txt&id=anon&pass=&search=R=19521&format=WEBLINK>



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