

Dairy Feed Management

Manure Expo coming to PA on July 15

The 2010 Manure Expo: Balancing Production and Conservation will be hosted by the Penn State College of Agricultural Sciences at the Rock Springs Ag Progress Days site on July 15, 2010.

The Manure Expo is an annual national event previously hosted in the Midwest. The expo will feature an industry trade show, manure technology demonstrations, and educational events, including continuing education for certified haulers.

The audience is expected to include professional manure handlers, applicators and brokers; dairy, livestock and poultry producers and professionals; handlers of both liquid and solid manures; crop consultants and nutrient management specialists; compost managers; custom operators; members of the agricultural support industry; and Extension and agency personnel.

The Expo is supported in part by a consortium of land grant universities and conservation agencies from the northeast, mid-Atlantic, and mid-western regions of the United States. This is the first time it is being held in Pennsylvania. Previous Manure Expos have been held in Wisconsin, Minnesota, Michigan, Ohio, and Iowa.

More information is available at <http://das.psu.edu/manure-expo>



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EPA finalizes rule for reporting greenhouse gas data

The EPA will begin requiring the collection of greenhouse gas (GHG) data from large emitters on Jan. 1, 2010, under a new reporting system, covering approximately 85% of the nation's GHG emissions and applying to roughly 10,000 facilities.

One of the significant changes from the proposed rule is the size of facilities required to report emissions. EPA will require annual reporting if the average annual inventory is:

- **Beef cattle:** 29,300 head
- **Dairy cattle:** 3,200 head
- **Swine:** 34,100 head
- **Poultry:** layers - 723,600 head; broilers - 38,160,000 head; and turkeys - 7,710,000 head.

Additionally, the EPA defined many of the inputs to GHG calculations, such as nitrogen excretion rates, maximum methane potential, and nitrous oxide emissions.

The first report, which will cover emissions for calendar year 2010, will be due March 31, 2011. The goal of the new reporting system is to provide a better understanding of where GHGs come from and to guide development of policies to reduce emissions. Agriculture generates 7% of GHGs in the U.S.

The final regulations, which total more than 700 pages, on the new reporting system and reporting requirements can be accessed by going to <http://www.epa.gov/climatechange/emissions/ghgrulemaki>



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Study will determine cows' greenhouse gas emissions

(Source: *Bovine Veterinarian at www.bovinevetonline.com*)

Any calculation of the carbon footprint of a gallon of milk needs to include fuel used by tractors and trucks, as well as electricity consumed by milking machines and refrigerators. But how much gas is coming from the cows themselves?

That's the question Purdue University researchers are investigating as they start a new study aimed at measuring greenhouse gases from dairy cows. Albert Heber, principal investigator and a professor of agricultural and biological engineering, said the study is part of an industry-wide effort to reduce greenhouse gas emissions related to fluid milk.

"The dairy industry understands that in order to adopt best practices that will help lower greenhouse gas emissions in the dairy supply chain, it must first know where the mitigation opportunities exist," Heber said.

The study is being funded by the Innovation Center for U.S. Dairy and is one of several studies that will be used to measure the entire carbon footprint of fluid milk - from the farm to the glass. Researchers from the University of California Davis, Cornell University, the University of Minnesota and Washington State University are collaborating on the project.

"Measuring the greenhouse gas emissions of dairy cows will help determine the extent to which the dairy industry contributes to U.S. greenhouse gas emissions," said Rick Naczi,

the group's executive vice president of strategic industry analysis and evaluation.

"Preliminary scan level research was conducted last year that showed the dairy industry accounts for less than 2 percent of total U.S. greenhouse gas emissions. Now, we are expanding our efforts by partnering with respected academic institutions like Purdue and engaging in extensive research to assure that our efforts are based on sound science as we address the environmental, economic and social impor-

Tubes will draw air from each of several exhaust fans and background locations. The air will be fed into a series of analyzers that measure the concentrations of the gases. Those concentrations can be used to determine the amount of each gas emitted for a particular time period and per animal. Data will be updated every minute.

Heber said the gas comes from both the cow and the manure. Manure gas is easiest to address. Different manure management practices may increase



tance of reducing our carbon footprint."

Carbon dioxide, methane and nitrous oxide will be monitored at five barn sites and two manure lagoons in Indiana, Wisconsin, California, Washington and New York. Mobile labs set up for the National Air Emissions Monitoring Study, of which Heber also is principal investigator, are being used to take the measurements. "We began collecting some greenhouse-gas data as early as 2007, but now we have all the equipment we need and we've been getting data on all parameters of it for about a month," said Bill Bogan, operations manager.

or decrease total emissions, he said. "The type of storage and handling procedures may contribute to how much gas is escaping from the manure," Heber said.

Most of the previous studies on dairy greenhouse gas emissions were done in Europe and Canada and don't reflect U.S. climate and management practices. This study will provide country- and region-specific greenhouse-gas emission rates from U.S. dairy operations, which can be used by the Intergovernmental Panel on Climate Change for modeling emissions.

Don't miss this...

NY Times "Toxic Waters." To date, the series has run features on three sources of water pollution: herbicides, industrial runoff and agricultural runoff, with a focus on livestock. To access the articles, click the link: <http://projects.nytimes.com/toxic-waters>

Online series focuses on carcass management

Management of routine and catastrophic mortality in the livestock industry has become more challenging with bans, changing markets and environmental concern. This series will address a few of the challenges faced on a daily basis by farmers and Vets.

Penn State University, University of Maine Cooperative Extension and Cornell Waste Management Institute are hosting this series of webinars on Carcass Management. Seminars are sponsored in part by NE Sustainable Agriculture Research and Education (SARE) program. Webinars will be archived for future use in teaching contact Mark Hutchinson Markh@umext.maine.edu for links.



October 8th: Management of Poultry Carcasses:

10:30 – noon EST Hosted by: Craig Williams: Penn State Cooperative Extension

<http://connect.extension.iastate.edu/nesarepoultrycarcasscomposting/>

- Presentation 1: Mortality Composting Issues for Poultry Farms by Greg Martin DVM: Penn State University.
- Presentation 2: Virginia's Response to Zoonotic Disease Outbreaks in Poultry Flocks by Gary Flory: *Virginia* Department of Environmental Quality.

November 12th: Overview of Carcass Management Policies

10:30 – noon EST Developing Risk Communication Skills

Hosted by: Mark Hutchinson: University of Maine Cooperative Extension

<http://connect.extension.iastate.edu/nesareriskmanagementcarcasscomposting/>

- Presentation 1: Overview of National and International Policies Related to Carcass Management by Dr. Dale Rozeboom: Michigan State University.
- Presentation 2: Developing Risk Communication Skills by Don Klingborg DVM: University of California Davis.

December 10th: Management of Livestock Carcasses:

10:30 – noon EST Hosted by Jean Bonhotal: Cornell Waste Management

<http://connect.extension.iastate.edu/nesarelivestockcarcasscomposting/>

- 10:30-10:50 Dealing with Unwanted or Neglected Horses in Difficult Economic Times by Dr. Ann Swinker: Penn State Univ. Coop. Extension.
- 10:50-11:30- Leachate Potential: A Comparison between Carcass Compost and Carcass Burial by Dr. Thomas Glanville: Iowa State University.
- 11:30- noon Geochemical Implications of Mortality Burial by Dyan Pratt: University of Saskatchewan.

This publication available in alternative media on request.

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