

2009 Upper Midwest Manure Handlers Expo  
Central Iowa Expo Center, Boone, Iowa  
July 22, 2009

***Extension Education Sessions***

**9:00 – 10:30; Sessions 1 & 2 held Concurrently**

**1:15 – 2:45; Sessions 1 & 2 held Concurrently**

**Session 1**

**Managing Biosecurity on Swine Farms During Manure Removal**

Dr. Rodney Baker - Iowa State University, Vet Diagnostic & Production Animal Medicine

Biosecurity of modern swine farms is increasing in significance as farm sizes have increased and as profitability per pig have decreased. Health maintenance and health improvement are critical issues for pig producers and in most years determine bottom line financial performance. A practical approach to current biosecurity methodologies with an emphasis on manure handling management will be presented.

**H<sub>2</sub>S Management During Manure Removal from Swine Deep Pits**

Dr. Jay Harmon & Mr. Randy Swestka – Iowa State University, Ag. & Biosystems Engineering

Hydrogen sulfide can be a killer during manure pumping events. Attendees will learn about the symptoms of hydrogen sulfide exposure and the keys to reducing H<sub>2</sub>S production during pumping. A discussion of ventilation protocols and pumping strategies to limit H<sub>2</sub>S risks will be included as well as information about a new monitoring system being developed at ISU which could alert users of a potential problem before it becomes a tragic loss.

**Advances in Subsurface Application of Solid Manures**

Dr. Thomas Way – USDA-ARS National Soil Dynamics Laboratory

The presentation will cover equipment for subsurface band application of solid manure. The presentation will focus on the prototype subsurface band applicator implement developed at the USDA-ARS laboratory at Auburn, AL. Information about performance of the implement will be presented and the information will include effects of subsurface band application of poultry litter on crop yield, on the potential for reducing nutrients from manure in runoff water, and on emissions of greenhouse gases from land-applied manure. Also, the presentation will include information about a prototype subsurface band applicator implement developed at the USDA-ARS at Booneville, AR and a prototype subsurface applicator implement developed in Saskatchewan, Canada.

## **Session 2**

### **Iowa CAFO / AFO Regulation Update**

Mr. Jeff Prier & Mr. Gene Tinker – Iowa Department of Natural Resources

*Certification requirements and Existing Land Application Requirements* – Iowa law requires persons acting as commercial manure applicators and confinement site applicators to meet certification requirements. Applicators will learn what the required separation distances are and what information must be kept to comply with recordkeeping.

*New regulations for manure storage and application in Iowa* – Recent changes in state law have altered the requirements for Iowa producers. These changes include determination of which operations should apply for a NPDES permit, stockpiling requirements for dry manure from confinement operations, manure application on frozen or snow covered ground and requirements for dry bedded cattle or swine confinement operations.

### **Research Review of Solid and Liquid Manure Application on Frozen Ground**

Dr. Jeff Lorimor- Curry-Wille & Associates

This session will present research results from an ISU study of runoff from corn and bean stubble plots that received winter application of liquid swine manure at different times throughout the winter. It will also present a summary of water quality research results from several different projects in the Midwest that examined the effects of winter application of solid (bedded) manure.

### **Managing Manure Application Over Tile**

Dr. Matt Helmers – Iowa State University, Ag. & Biosystems Engineering

In many areas where liquid manure is applied over tile lines there is a concern about rapid movement of liquid to the tile lines and subsequent movement to downstream waterbodies. This presentation will discuss application conditions that are conducive to this rapid movement and ways to manage manure application to minimize the risk of direct movement to tile lines.