Webcast Presentation "Conserving Manure Nitrogen in Animal Housing"
February 20, 2009

Archived presentation is at:
http://www.extension.org/pages/Conserving_Manure_Nitrogen_in_Animal_Housing
The q&a session starts at: 46:26 on the time slider.

When measuring Nitrogen hauled off of the open lot, was the N measured when the manure was removed from the lot, or when it was removed from storage?

Galen: We measured lots of different places, but most was when it was removed from the lot.

Does OM/C bind N by physical, chemical, or other means?

Galen: We believe that in anaerobic storage that when you add organic matter you may cause some bacterial fermentation which will increase the acidity of the manure. I think the extra organic matter increases microbial growth and those microbes bind the nitrogen into microbial protein. I guess it's more physical than chemical.

How does the low N emission diet affect the meat quality?

Wendy: When we reduce nitrogen emissions we don't reduce it to the extent that performance is affected. I wouldn't expect a change in meat quality either.

Have there been any studies on how less volatilization affects N loss from runoff and groundwater leakage when the manure is spread?

Rick Koelsch: Land application losses of N will be dependent upon how well the nutrient management plan is implement and is the extra N in the manure accounted for in the application rates selected.

Wendy: If you are sampling your manure prior to going on the field, and applying manure based on the nutrient content, I would not anticipate run-off or leakage would be any larger an issue than if the N did not volatilize.

On the alum with litter, were emissions higher at 4% inclusion than 2%? Why?

Wendy: Graphically that is how it appears, but I didn't show the standard error bars. 2 and 4 percent inclusion were less than the control but not different from each other.

Are there other suspected means of diverting N from urine to feces?

Galen: One other way to increase the % N excreted in feces is by feeding less protein, as all excess protein as a general rule ends up in urine. But, that won't increase the total in feces, only the relative percentage between the two.

Why is more N lost in flush systems than in scrape systems?

Wendy: The act of flushing causes stirring of manure that's present and we see more N lost in dilute systems. In the scrape system we are pulling the manure to a central holding area that has less surface area for N to be lost during long term storage.

Comment: Does flush imply recirculated water...Would there be any difference if using fresh water?

Wendy: Effect is the same. If using recycled water there may be more N there so the loss might be greater.

Are we seeing any trends in construction of new housing or storage systems that will conserve N?

Galen: We didn't present anything of deep bedded barns. We've seen more being built. I don't know of info available comparing N flow available between systems. We may see more confinement in the future because this will be an issue in the future.