

Detecting trace levels of swine antibiotics in the environment

A simple method to quantify two types of antibiotics in animal manures, surface water and groundwater has been developed by scientists from the University of Minnesota's Department of Soil, Water, and Climate. Chlortetracycline and tylosin antibiotics are commonly used for growth promotion in swine production.

Up to 90 percent of antibiotics fed to food animals are excreted unchanged in animal feces and urine. Researcher Kuldip Kumar explains that these animal wastes, when applied to fields, can potentially spread antibiotics in the environment via non-point source pollution.

According to Kumar, there's not much information about the concentration of various antibiotics in manure or surface and ground waters. That's probably due to lack of simple methods to analyze these antibiotics at very low concentrations.

In this study, the researchers developed a simple method for ultra-trace determination of chlortetracycline and tylosin antibiotics. Tests of a few swine manure samples showed that they contained as high as 7.9 mg/L chlortetracycline and 5.2 mg/L tylosin.

The method developed by these researchers is very sensitive and can pick up antibiotics in surface or ground waters at parts per billion levels. The study is published in the January/February 2004 issue of the "Journal of Environmental Quality," published by the American Society of Agronomy-Crop Science Society of America and Soil Science Society of America. See <http://jeq.scijournals.org/cgi/content/abstract/33/1/250>.

This study was part of the research project led by Satish Gupta on fate and transport of manure-applied antibiotics on land. In this project, Gupta and his team quantified the extent of antibiotics losses in rainfall and snowmelt runoff as well as through drainage from manure applied lands.

There's increasing concern that sub-therapeutic feeding of antibiotics in animal agriculture is increasing microbial resistance in the environment. Gupta says that small amounts of antibiotics generally aren't toxic to plants and aquatic life, but on repeated manure application there is some potential for an increase in antibiotic-resistant bacteria in the environment. This is another facet that Gupta and his team are quantifying as part of an NCR-SARE research and education grant.

For more information, contact Satish Gupta: gupta002@umn.edu or Kuldip Kumar: kumar025@umn.edu.

MISA partnership with 'The New Farm'

The Minnesota Institute for Sustainable Agriculture (MISA) has entered into a content share agreement with The New Farm, a program of The Rodale Institute. The New Farm website, www.newfarm.org, is an outlet for agricultural research conducted by Rodale Institute researchers and others. Under the content share agreement, MISA's website will include a permanent link to The New Farm website. In return MISA will receive regular updates of new material from The New Farm, and permission to use their current and archived articles on the MISA website.

The MISA website, www.misa.umn.edu, has a link to The New Farm website in the “Related Sites” section; under the heading “Other Sustainable Agriculture Organizations.”

Besides research information, The New Farm website features:

- Profiles of people and groups involved in organic and sustainable agriculture, in the “1000 stories” section.
- OPX, the Organic Price Index, which reports weekly prices on organic fruits, vegetables, grain, dairy, meat, and herbs; with comparisons to prices for conventional products.
- News reports on issues impacting organic and sustainable agriculture, gleaned from a variety of media.
- Scintillating commentary by nationally-known columnists such as Alan Guebert (“The Final Word”), and Klaas and Mary-Howell Martens.

Another major feature of The New Farm website is The Farm Locator. This free marketing service allows farmers to develop their own web page featuring their products. Potential customers can search for types of products, such as dairy or vegetables; types of markets such as CSAs or farmers markets; and by state or province and county. On the MISA website, we feature a link to The Farm Locator (along with a number of other marketing services) on our “Marketing Resources” page. You can find this page in our “Resources” section, under the heading “Other Resources.”

The Farm Locator can also be found in our new “Food and Farm Directories” section, near the top of MISA’s home page. MISA has added this consumer-oriented section to help people find fresh food directly from the farmers who grow it; both in Minnesota and nationwide. We want to keep this section useful and up-to-date, so if you know of any local food directories that we have missed, please inform us by e-mail: misamail@umn.edu or by phone: 800-909-MISA.

Beth Nelson is new Minnesota NCR-SARE sustainable agriculture coordinator

If you are an agricultural educator in Minnesota, chances are you’ve seen Bill Wilcke’s name attached to sustainable agricultural publications or events. Perhaps you’ve attended one of those events, or taken advantage of travel scholarships offered by Sustainable Agriculture Research and Education (SARE) for professional development in sustainable agriculture. Or, you may have consulted with Bill about potential SARE professional development grants.

In addition to other duties in Extension and in the Department of Biosystems and Agricultural Engineering at the U of M, Bill has been the professional development coordinator in Minnesota for the NCR-SARE program for the past seven years. With his new responsibilities as the regional coordinator for NCR-SARE, those Minnesota duties are being passed on to Beth M. Nelson, a program associate with the Minnesota Institute for Sustainable Agriculture (MISA). This passing of the torch also coincides with a decision by the NCR-SARE administrative council to increase funding for states and to expand the duties of state coordinators.

Since 1988, USDA’s SARE program has worked to advance farming and ranching systems that are profitable, environmentally sound and good for communities. SARE publishes informative, free bulletins and provides grants to farmers and ranchers, agricultural educators, researchers and nonprofit organizations. Grants for producers enable farmers and ranchers to experiment with different production and marketing strategies; grants for education/extension help spread knowledge about sustainable concepts and practices among agricultural professionals; grants for research involve scientists, producers and others in interdisciplinary research and education.

Beth will continue to work with Extension and other educators in Minnesota, providing travel scholarships and information about new SARE publications and events, and working with grant applicants in the professional development program. She will also work with applicants in the producer grant and research and education programs, as well as with past recipients to assist in disseminating information gleaned from those grants.

Minnesota has a wealth of knowledge from SARE-funded research. Did you know we’ve had over 60 producer grants and nearly 50 research and education grants funded in the last 10 years? We’re looking forward to letting you know more about those projects in future issues of this newsletter. You can contact Beth at (612) 625-8217, or schre002@umn.edu. For more information about SARE publications and grant programs, you can also check out www.sare.org.

Extension has new Farm Information Line

A new Farm Information Line is the latest way to get information from the University of Minnesota Extension Service. The new toll-free number, (800) 232-9077, is staffed Monday through Friday, from 8:30 a.m. until 1:30 p.m. After hours, callers can leave voice mail messages regarding their questions. The new Farm Information Line will supplement—not replace—the ways that farmers can access Extension for farm-related information and education. See <http://www.extension.umn.edu/extensionnews/2004/farmline.html> for more information.

Job opening in Alternative Swine Production Systems at Morris

The search has started to fill the Alternative Swine Production Systems faculty position at the West Central Research and Outreach Center in Morris, Minn. The minimum academic preparation is a Ph.D. in animal science or a related discipline, or a D.V.M. /Ph. D., required by date of appointment. For more information, contact Lee Johnston at (320) 589-1711, fax (320) 589-4870 or johnstlj@mrs.umn.edu.

NCR-SARE preproposals due June 15

The NCR-SARE program announces their 2005 call for Research and Education grant preproposals. You can download the information from www.sare.org/ncrsare/cfp.htm.

The deadline for receipt of preproposals is June 15, 2004. For more information or to get a hard copy or e-mail file of the call for preproposals, contact North Central Region SARE, University of Nebraska, 13A Activities Bldg., 1734 N 34th St., Lincoln NE 68583-0840. The phone is (402) 472-7081; e-mail ncrsare@unl.edu.

Amy Bacigalupo elected to NCR-SARE administrative council

Congratulations to Amy Bacigalupo of Montevideo, Minn., who has been elected to the NCR-SARE administrative council. She is an employee of the Land Stewardship Project's western office and a beginning farmer.

A season-long series of grazing and pasture events is on tap

"Managing the Spring Flush" is the topic for the first monthly pasture walk May 12 at the West Central Research and Outreach Center (WCROC), Morris. Pastures grow rapidly in the spring and create challenges for farmers with rotational grazing systems, says Dennis Johnson, dairy scientist at the Morris center.

The program starts at 12:30 p.m. at the office building one mile east of Morris on Highway 329. Other programs in the pasture walk series:

- June 9, Forbord Farm, Starbuck, "Developing Pastures for Grass-Fed Beef"
- July 14, WCROC, "Avoiding the Mid-Summer 'Browns'"
- Aug. 11, Dan and Rosie Middendorf farm, Verndale, "Irrigation in the Pasture System"
- Sept. 8, WCROC, "Storing Forage for Winter Feeding"
- Oct. 13 (location to be announced), "Extending Grazing into the Fall"
- Nov. 10, WCROC, "Preparing Pastures and Livestock for Winter"

In addition, a two-day event, "Effective Grazing Workshop" will be held at the WCROC June 8-9. The goal of this workshop is to develop more effective pasture systems through a highly interactive workshop focused on the learner's goals. "Every question brought by a registrant will be addressed by the end of the workshop," Johnson says.

Presentation topics include whole farm planning and goal setting, economics of grazing systems, forage species and management, soil and water considerations, animal health and management, and putting it together in a grazing plan. Farmers, researchers and educators are the resource people. Preregistration is required and the registration charge is \$100. For more information and a registration form contact Jean Spohr at (320) 589-1711 or spohrjm@mrs.umn.edu.

Another grazing event is the "Upper Midwest Grazing Conference," LaCrosse, Wis., July 27-29. Contact Larry Tranel at (563) 583-6496, ext. 14 or tranel@iastate.edu.

For more information on the WCROC events, contact Dennis Johnson, West Central Research & Outreach Center University of Minnesota, Morris, MN 56267. Telephone (320) 589-1711 or e-mail dairydj@mrs.umn.edu.

Upcoming events

LSP Field Days to Cover Grazing, Vegetable Production, CSA, On-Farm Processing, Swine Production & Organics To attend a field day, you are asked to RSVP by calling LSP's southeast Minnesota office at 507-523-3366, or our western Minnesota office at 320-269-2105. LSP members can attend these field days for free. The fee for nonmembers is \$5 per person and \$10 per family. If you choose to become a member of LSP the day of a tour, an immediate benefit will be free admission.

Field day dates and locations (additional dates throughout the summer – more info will be available in the June issue):

- Saturday, May 8, Delano, Minn.—Vegetable production and direct marketing to restaurants
- Saturday, May 8, Postville, Iowa—Community Supported Agriculture vegetable production, vegetable handling and cooperative ventures
- Thursday, May 20, New Prague, Minn.—On-farm dairy processing
- Saturday, June 12, Clearwater, Minn.—Organic beef grazing

Watch for our special June issue

Hey, we had so many good articles stacked up we couldn't crowd all of them into this issue. We knew this was a potential problem when budget cuts forced us from a monthly to bi-monthly publishing schedule.

However, we're doing a special June issue that will have lots of field day listings and timely summer stories. Watch for it in early June.

What we're about...

This newsletter is supported by the Minnesota Institute for Sustainable Agriculture (MISA)—a partnership between the Sustainer's Coalition and the University of Minnesota College of Agricultural, Food, and Environmental Sciences (COAFES); the University of Minnesota Extension Service; the North Central Region Sustainable Agriculture Research and Education (NCRSARE) Professional Development Program (PDP); and the Minnesota Department of Agriculture (MDA).

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You can find more University of Minnesota Extension Service educational information at www.extension.umn.edu. Also check MISA's home page at www.misa.umn.edu.


Our mission statement: To help bring people together to influence the future of agriculture and rural communities to achieve socially, environmentally, and economically sustainable farms and communities.

To stimulate thinking and discussion about sustainability, we try to present items that reflect different points of view. This being the case, we aren't promoting and don't necessarily agree with everything we publish.

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