



# The Food Safety NETWORK

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A quarterly newsletter from Food Safety Net Services

## CAUGHT 'N THE NET

### Use of Antimicrobials in Beef Production

By Dr. Gary C. Smith

When calves or cattle are sick with a bacterial infection, they are given therapeutic doses of antimicrobials — just as are sick humans, pets and other farm animals. Antimicrobials (e.g., tetracycline, tylosin) are also fed to cattle, at subtherapeutic levels, to reduce consequences of subclinical illness. Preventing clinical or subclinical illness in farm animals is a moral and ethical responsibility of husbandmen; caretakers who administer antimicrobials should not be vilified simply because animals that “feel better” also gain more rapidly and efficiently. However, there is concern that use of these health aids in animals contributes (along with overprescription of antibiotics by medical doctors and failure of persons to fully complete their antibiotic-remediation regimen) to development of antimicrobial-resistance in human pathogens.



The National Academy of Sciences, in 2003, proposed a ban on use, in animal production, of those antimicrobials that are used in human medicine. Cattlemen then developed “A Producer’s Guide For Judicious Use Of Antimicrobials In Cattle” in which is stated “Subtherapeutic Antibiotic Use Is Discouraged-Antibiotic Use Should Be Limited To

**Antimicrobials are fed to cattle to reduce consequences of subclinical illness.**

Prevention Or Control Of Disease, And Should Not Be Used If The Principle Intent Is To Improve Performance.” The volume of antibiotics produced for use in farm and companion animals fell nearly 8% from 2002 to 2003, and has continued to decline (Smith et al., 2005). Research by LeJeune and Christie (2004) found no difference between Conventional vs. Natural/Organic beef (from animals “raised without antibiotics”) in analysis for Vancomycin-resistant Enterococci or percentages of pathogens that were multi-drug resistant (to 2, 3, 4, 5, 6 or 7 antimicrobials). Additionally, Hurd et al. (2004) concluded that use of two macrolide antibiotics (tylosin and tilmicosan) does not adversely affect the safety of the food supply; risk of a person acquiring a resistant *Campylobacter* or *Enterococcus faecium* infection from beef, pork and poultry, that results in a difficult-to-treat foodborne illness, is less than 1 in 10 million and less than 1 in 3 billion, respectively. Very recently, an IFT Scientific Review Panel reported that “While prudent use of antibiotics should be practiced to limit resistance selection and maintain maximum benefit, responsible use is not necessarily reduced use-antimicrobials offer valuable benefits when used appropriately. There is evidence that there are significant human health benefits from antibiotic use to prevent subclinical disease in food animals” (Doyle, 2006). ■



Doyle (2006). Food Technology (August Issue) pp. 22-29; LeJeune and Christie (2004). J. Food Prot. 67:1433-1437; Hurd et al. (2004). J. Food Prot. 67:980-992; Smith et al. (2005). Mimeograph Report. Colorado State University, Fort Collins, CO.

## In This Issue

- Big News from FSNS!
- AOAC Task Force Update
- First PAACO Auditor is Certified
- FSNS Named #34 in Aggie 100

## First PAACO-Trained Auditor Gains Certification

**Jarrold Miller**, an FSNS Audit Specialist, has become the first individual to complete all phases of training under the meat plant welfare auditor certification program sponsored by the Professional Animal Auditor Certification Organization (PAACO) and is now a fully certified PAACO Meat Plant Animal Welfare Auditor. After attending a two-day PAACO-sponsored instruction course in February, passing an examination and completing three shadowed audits with a PAACO foundation auditor, Miller earned his certification and is now also qualified to assist with shadowing audits for other trainees.

PAACO is an organization of five animal industry organizations with extensive expertise on best management practices and current science in animal agriculture. The organization's purpose is to promote the humane treatment of animals through education and certification of animal au-

ditors and to promote the profession of animal auditors. Founding and current organizations are the Federation of Animal Science Societies (FASS), American Registry of Professional Animal Scientists (ARPAS), American Association of Swine Veterinarians (AASV), American Association of Bovine Practitioners (AABP) and American Association of Avian Pathologists (AAAP). For more information, please visit [www.animalauditor.org](http://www.animalauditor.org). ■

### Stop By and Visit Our Booth at These Upcoming Trade Shows!

**January 24-26, 2007**

International Poultry Expo :: Atlanta, GA

**February 18-21, 2007**

National Meat Association's MeatXpo '07 :: Las Vegas, NV

**March 1, 2007**

Longhorn IFT Supplier's Night :: Grapevine, TX

**March 6-8, 2007**

Food Safety Summit & Expo :: Washington, D.C.

## Big News from Food Safety Net Services

**Food Safety Net Services has recently been awarded a new baseline study for young chickens to reestablish the national prevalence of *Campylobacter* spp. and other key microorganisms.**

Currently FSNS is working with USDA scientists to optimize the methodology that will be used to detect and enumerate levels of *Campylobacter* spp. for young chicken carcasses. Establishment and re-assessment of microbial baseline data by the USDA-FSIS for meat and poultry is critical to the development of food safety policies and microbial hazard prevention programs based on scientific and risk-based principles. For more information on other services provided by FSNS please visit our website at [www.food-safetynet.com](http://www.food-safetynet.com). ■



**Food Safety Net Services co-sponsored with the National Meat Association and HACCP Consulting Group, LLC, a process validation seminar for ready-to-eat products in Phoenix, AZ.**

Participants were updated on current regulatory requirements and process validation considerations. A laboratory tour, including tutorials on pathogen screening technology, process validation experimental design and approach, and pathogen inoculation and recovery techniques was provided by the FSNS facility in Phoenix. These sessions allowed participants to take a closer look at how an ISO 17025 accredited food laboratory supports pathogen testing, including specialized validation testing. ■



## AOAC Task Force on Pesticide Residues in Soft Drinks

By Dr. Jim Bell



In a public report titled Poison vs. Nutrition (August 2006), the Centre for Science and the Environment (CSE) in India documented the presence of hazardous pesticide residue levels in soft drinks

and challenged the government of India to set regulatory standards for pesticide residues in carbonated beverages. In response to this issue, the soft drink industry requested that the AOAC International form a Task Force to focus on the determination of pesticides in soft drinks. The Task Force consisted of representatives of the Indian government, industry stakeholders, expert review panelists and volunteer methods experts. As a member of the *AOAC Methods Committee on Residues and Related Topics*, **Jim Bell** was invited to participate in the Task Force meetings, the first of which was scheduled in Minneapolis, Minnesota on September 21-22, 2006. The Task Force was asked to develop, evaluate and validate an analytical method through the AOAC Official Methods program that could become the Indian standard method of the analysis for pesticide residues in soft drinks. This process led to

a second Task Force meeting, held on November 29-December 1, 2006 in New Delhi, India, with the intention of helping to bring India's industry and government stakeholders to a consensus on methods to be used for low level (PPB) detection of pesticides in soft drinks.

India is currently the world's largest democracy and is the second fastest growing economy. The GDP growth is at 8% per year with 1.6 million jobs created annually in IT alone. Consumption is booming and foreign investment by large multinational firms is strongly encouraged. There is a new interest in "green" technology in India due to the rapid economical growth and consumers are more conscious of agricultural practices (i.e.: pesticide use). Consequently, the consumer is gaining awareness of the environmental impact of food processing and how foods and ingredients are tested for food safety issues.

In light of the continuing controversy in India over pesticides in soft drinks, where the performance of analytical methods is a central part of the discussion, the AOAC has helped to forge the process for an international consensus for the determination of pesticide residues. In addition to that, it was a rewarding opportunity for FSNS to collaborate with the Indian scientific community to develop international standards that protect the public health and are beneficial to both regulators and industry. A third meeting in India will be scheduled in January, and the AOAC Task Force will finalize its recommendations for the performance criteria of the methodology to be validated, as well as the scope of the method, laboratory selection and study design. ■



# Food Safety Net Services Named 2006 Aggie 100 Honoree

Food Safety Net Services is among the firms selected for the Second Annual “**Aggie 100**” list of the fastest-growing companies owned and operated by Texas A&M University former students. Food Safety Net Services was recognized as number 34 on the list. The 100 companies with the highest compounded annual revenue growth from 2003 to 2005 were recognized at a formal luncheon at The Zone Club on the Texas A&M campus. The honorees are also featured in the November 2006 issue of *Texas Aggie Magazine* published by The Association of Former Students.



“We are pleased to honor our successful former students and highlight their accomplishments,” explained Richard M. Scruggs, Director, Center for New Ventures and Entrepreneurship. Food Safety Net Services has achieved a great deal in its history and we’d like to think that has a lot to do with the work ethic, integrity and knowledge gained from their leaders’ association with Texas A&M University.”

For more information about the Aggie 100 and to view the complete list, visit [www.aggie100.com](http://www.aggie100.com). ■

## Welcome Jay Hinkens

Food Safety Net Services welcomes **Jay Hinkens** as the new Laboratory Manager for our Grand Prairie facility.

During his 17 year career in the laboratory testing industry, Jay has served as a Consultant, Laboratory Director, Technical Sales Manager, and Laboratory Manager. He received his Bachelor of Science in Bacteriology and his Master of Animal Sciences from the University of Wisconsin in Madison. Jay also earned his Executive MBA from the University of Wisconsin in Madison in 2006.

Please join us in welcoming Jay to the Food Safety Net Services family! ■



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