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ANFSScratchings

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Message from the Chair

Welcome to the first issue of the Department of Animal and Food Sciences Newsletter, **ANFSScratchings**. We hope to reach out and stay in touch with alumni and friends of our Department on an annual basis with this publication.

The University and the Department are moving forward with many changes; people have retired and new folks have come on board. Our teaching programs remain much the same; however, we are developing a new combined undergraduate major in Animal and Food Sciences for students interested in both areas. We still have separate majors in Food Science and Animal Science, including the ever-popular Pre-Veterinary Medicine major. Study abroad programs have never been more popular and take our students to many places around the world. Our undergraduate and graduate students continue to amaze us, as they always have, with remarkable achievements.

Major facility projects are in various stages of completion. The new equine teaching facility and foaling barn has been completed, a new dairy manure management and composting facility and a new state-of-the-art milking parlor

are going to be operational near the end of this year.

Our Faculty and research professionals are dedicated to excellence. Many have received significant recognition from their peers in teaching, research and extension/outreach. You'll read more about all of these on the following pages.

We hope this newsletter will become a "two-way street". Let us know what you think and send us ideas you have for future issues. We look forward to hearing from you and learning of your professional, personal or other accomplishments. We will also use the newsletter to seek information of you via surveys from time to time.

We wish you the best and look forward to hearing your comments. Please email us at ANFSnewsletter@udel.edu with any comments or news. Also let us know if you prefer receiving this newsletter via email.

Sincerely yours,

Jack Gelb, Jr.

New Equine Teaching Barn Completed Emphasis on Safety and Animal Welfare

It goes without saying that accidents can happen when animals weighing more than 1,000 pounds are willing or unwilling participants in a course. This is especially true in a class on equine reproductive physiology when libido must be aroused to successfully collect the genetic material of stallions.

The new Equine Teaching and Extension Barn was built with the students' and the animals' safety in mind. The facility is handicapped-accessible. Students can observe from behind strong wooden barriers, yet be near the animals when the instructor or other students handle the horses. The teaching facility is spacious so as to allow sufficient room for the movement of the animals, ventilation and heating provide a comfortable teaching environment, and the concrete floor is covered with rubber tiles for safe

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The new Equine and Extension Barn on the Webb Farm The stables (foreground) are attached to the teaching facility



Inside the barn. To the left is the examination stock. The room with windows houses the semen processing facility.

footing of man and beast. This type of floor also allows a more hygienic semen collection, since no dust clouds are generated as happens in barns with dirt floors. A room for semen processing is housed under the same roof, and once a mare has been impregnated, the progress of the pregnancy can be monitored by leading the mare into an examination stock for ultrasound examination. The barn also features a floor-level scale for easy weight monitoring.

Most of the time, the University's herd of hardy Haflingers stays out in the pasture, but when necessary to bring them indoors, for example for foaling, modern stalls await them. The stalls were built with the well-being of the horses in mind. Rubber-matted floors, facilitated air movement, and above all only as much solid wall as necessary to allow the horses to see each other when confined. Automatic drinkers provide water at the touch of a horse's mouth, and a volumeter records the animals' intake.

The foaling stalls in the new Equine Barn



"This is a state-of-the-art facility", says David Marshall, who teaches the equine courses, "and it has the potential to be not only a student teaching facility, but also a place for Extension activities. The facility is hard-wired from end to end with computer and internet networking infrastructure that will permit us to utilize the latest electronic and web-based teaching tools to enhance the quality of instruction and learning."

David Marshall and Bob Alphin (Animal and Food Sciences) spent many hours over several years guiding the planning and construction to completion. Gary VanWicklen (Bioresource Engineering) provided key structural and engineering recommendations, and Tom Sims and Jerry McDermott (College of Agricultural and Natural Resources) and the University's Facilities Planning and Construction group spearheaded administrative efforts.

"Delaware Model" forms the basis of an international certificate program in Emergency Poultry Disease Response

The **Avian Biosciences Center (ABC)** at the University of Delaware, supported by funding from the USDA and USAID (US Agency for International Development), developed a program that emphasizes the importance of coordination among governmental agencies, universities and the poultry industry to improve their capacity to plan and respond to avian influenza outbreaks.

The certificate program was offered to USDA Borlaug Fellows from Bulgaria who visited Delaware from November 7-17, 2007. The important elements of planning for, and responding to, a poultry disease outbreak, such as including federal, state and local policies, indemnification agreements, incident command management systems, required animal diagnostic laboratory infrastructure, media relations, and multi-jurisdictional cooperation were discussed. Personnel and technical requirements to humanely depopulate and safely dispose of infected flocks, and to effectively clean and disinfect poultry farms after an outbreak were also on the agenda. Last but not least, the use of tools to improve biosecurity on farms were introduced to the participants.

Target audiences for the Emergency Poultry Disease Response certificate program are veterinarians, flock and biosecurity managers of poultry companies as well as government officials from the USDA and state departments of agriculture. Continued interest from other nations is also anticipated.

The University of Delaware will seek to have the Emergency Poultry Disease Response certificate program ap-

proved for continuing education credits for veterinarians and other professionals. The program would be offered in cooperation with the Division of Professional and Continuing Studies at the University. The Division provides continuing and distance education programs for adult learners, who combine study with their careers.



Bulgarian veterinarians Dr. Marin Marinov (right) director of the regional veterinary service in Varna, and Dr. Dimitar Tzvetanski (center), government veterinarian with the Gorna Oriahovitza Municipality, learn sampling techniques for avian influenza surveillance from UD technician Colby Smith at UD's Lasher Laboratory in Georgetown, DE.

ANFS People, Groups and Events

New faculty studies the cow's internal clock

Dr. Tanya Gressley, a specialist in dairy cow nutrition and immune function, seeks to uncover the role that circadian rhythms play in maintaining dairy cow health and preventing disease. She has already begun to investigate circadian patterns of gene expression in white blood cells taken from healthy animals and animals with compromised immune systems. Future research projects will focus on the natural changes in white blood cell function that occur during the course of a day. Ultimately, understanding what keeps cows healthy will help cows live longer, be more productive and increase dairy profitability.

Dr. Gressley will be teaching two courses: Dairy Production, a hands-on lab course that provides students with basic knowledge and understanding of management and production of dairy cattle, and Lactational Physiology, a course that teaches the fundamentals of physiology and metabolism involved in initiation, maintenance and cessation of lactation.

Dr. Gressley joined the department in January 2007 as assistant professor.



Growing, Organizing and Competing: The Food Science and Animal Science Clubs had an Eventful and Successful Year

The year 2006/2007 was very successful for the **University of Delaware Food Science Club**. The club organized **field trips** to the Herr's Chip Factory, the Neuchatel Chocolate Factory and the Yuengling Brewery, and at each site, members learned that what they are learning inside the classroom is being applied outside.

We hosted food scientists from Campbell's Soup and DuPont Qualicon who spoke about their **internship programs**. Club membership increased this year and many of our members decided to join the Institute of Food Technologists (IFT) as well. For the first time in eight years, the club participated in the **Chapter of the Year competition** of IFT's Student Association, and for the second time in four years, we competed in the **North Atlantic College Bowl**.

This has also been a very busy and productive year for the **University of Delaware Animal Science Club**. Early in the Spring we participated in the annual **Northeast Student Affiliate Division College Bowl** at Penn State University. This fall the club hosted two outside speakers, a representative from the North Carolina State University to discuss application and admission to their School of Veterinary Medicine, and a speaker from Paws for People, a pet-assisted visitation service in New Castle County, DE.

Field trips were organized to Milburn Orchards and Longwood Gardens along with a behind-the-scenes tour of the Adventure Aquarium. As part of the College's annual **Ag Carnival** held in October, the club raised \$500 for AgrAbility, a national project that assists farmers, ranchers and farm workers with disabilities. The funds were given to animal science alumnus, Steve Cook, whose farm club members visited later in the semester. The club also held a fund raising car wash and participated in Newark Community Days by hosting a booth on The Green.

Awards and Honors



C. Pope (left) received award from Wayne Evans, vice president of the DPI.

Conrad R. Pope, professor of veterinary pathology, is the 2007 recipient of the **Delmarva Poultry Industry's Medal of Achievement**. The award is presented to a public servant for outstanding achievement and service on behalf of the poultry industry. Recipients are honored for their contributions to the poultry industry and for participation in civic work and other community activities.

Mark Parcels, associate professor of avian molecular virology received the **Josef Marek Award** in recognition contributions to the fundamental understanding of Marek's Disease Virus (MDV), a cancer-causing virus in chickens. Mark also received a **USDA-NRI grant** for the study of "Mutations in Glycoprotein L and Meq and Their Effect on Marek's disease virus (MDV) Virulence".



Carl Schmidt, associate professor, received a **USDA-NRI grant** for \$1,000,000 for "Knowledge Extraction and Annotation in a Grid Based Bioinformatics Environment". The work is a collaboration between UD and Arizona, Mississippi State, and New York University. The project aims to provide a computer infrastructure for rapid analysis of chicken genomics data.

Lesia Griffiths, professor and director of UD's Center for International Studies, received the Distinguished Teaching Award from the Division of Professional and Continuing Studies for her outstanding contribution to teaching and serving students in a distance format. Lesa was also one of four faculty selected to serve on a panel for "Best Practices in Undergraduate Teaching: Swine Production" at the ASAS meeting in San Antonio, TX.

Renato Schmidt, Ph.D. candidate in Dr. Limin Kung's lab, took second place in the American Dairy Science Northeast Graduate Student Paper Competition at San Antonio, TX. with his paper "The effect of *L. buchneri* 40788 with or without *P. pentosaceus* on the fermentation and aerobic stability of corn silage made at different locations".

The following **Food Science students** received awards or were nominated for awards: **Christie Ledeker**, National IFT and Philadelphia IFT Section Scholarship; **Matthew Sullenberger**, IFT Sophomore Scholarship Alternate; **Tracy Jaico** and **Hudaa Neetoo**, nominated for IFT-Campbell's Soup Leadership Award; **Kirsten Hirneisen** and **Hudaa Neetoo**, Philadelphia IFT Section Scholarship; **Andrea Laycock**, Avian Biosciences Center and Institute for Soil and Environmental Quality Fellowship; **Hudaa Neetoo**, IFT Graduate Fellowship Alternate.

The following **Food Science students** participated in internships: **Julia Leventry**, **TIC Gums**, Belcamp, MD. Effects of different types and concentrations of phosphates on the texture and body of sour creams. **Tracy Jaico**, **TIC Gums**. Stabilization of coffee beverages. **Christie Ledeker**, **Dynamac Corp.**, a NASA Contractor, Cape Canaveral, FL. Effects of growth regulation on production of bioprotectants.

Brewster Kingham, associate scientist, was recognized as the "Outstanding Scientist and Technologist" by the Association of Biomedical Resource Facilities at the ABRF Annual Conference in Tampa, FL in April for his work on genetic analysis systems.

Jennifer Puttress, ANSC, received a Certificate of Excellence for her presentation "Effects of Mega Doses of Phytase on Broiler Chick Body Composition" at the 96th Annual Meeting of the Poultry Science Association in San Antonio, TX in July.

Alumni News

Marcus Lynch, BS 2002, ANSC, Science and Engineering Scholar (SES), completed a Ph.D. in Microbiology from Ohio State U. and is now a medical writer for AlphaBioCom in Radnor, PA.

Christy Taylor, BS with Distinction 2001, ANSC, SES, completed her MS degree in Ruminant Nutrition and Metabolism from Michigan State U. in 2003 and is currently finishing her Ph.D. at the U. of Kentucky in Ruminant Physiology.

Colleen Mulrooney, BS 2006 ANSC, SES, is currently working on her MS degree in Dairy Nutrition at South Dakota State University.

Department Office

Mari Eileen Keane, previously Associate Treasure's Office, joined us in November 2006 as Office Coordinator. "Missy" took **Carol Oberlander's** position after Carol became Assistant to the Chair after the retirement of **Betsy McMullen**.

Margaret Hall, secretary and bookkeeper at Rising Sun Elementary School, became our new **Senior Secretary** in March, 2007. "Meg" took over from **Renee Watson** who became Staff Assistant in the Department of Civil and Environmental Engineering.

Elizabeth Appleby, previously from the Procurement Office, joined the Department in November as **Senior Secretary**. She fills the position of **Sharon Lucabaugh** who moved to Cooperative Extension.

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