

Dairy Section of Veterinary Diagnostic and Production Animal Medicine (VDPAM)

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Summary and Implications

The College of Veterinary Medicine at Iowa State University has responded to the shortage of veterinarians in food animal practice by hiring new faculty in the Veterinary Diagnostics and Production Animal Medicine Department as well as expanding its curriculum offerings in large animal species that encompass species electives from freshman through senior year. In the past four years there has been the addition of 13 full and part-time faculty members to address the needs to teach beef, dairy, small ruminant, and swine production medicine and also embryo transfer and animal welfare.

VDPAM Dairy Section : New Faculty

The Dairy Section of VDPAM has grown recently with the additions of Dr. Pat Gorden, Dr. Bruce Leuschen, Dr. Suzanne Millman, Dr. Paul Plummer, and Dr. Jim West. These appointments fulfill a variety of needs and their responsibilities include clinical work, extension, research, and teaching.

Dr. Pat Gorden received his DVM in 1993 from Iowa State University and is a diplomate with the American Board of Veterinary Practitioners. He was in private practice in Wisconsin for seven years and then recently in Arizona for seven years in a dairy exclusive practice. Dr. Gorden has developed several Dairy Production Medicine courses and has put together a team of instructors to teach them. He does field case investigations as well as ongoing clinical work on some dairies. He has helped to establish a Milk Quality Lab at the ISU Veterinary Diagnostic Lab.

Dr. Bruce Leuschen received his DVM in 1983 from Iowa State University. He was in private practice in NE Iowa for twenty-three years prior to coming to Iowa State. He is the University Veterinarian in charge of the health care at the University's livestock farms. He is a guest lecturer in some courses to veterinary and animal science students and has an ambulatory medicine course for senior students. He also does some field case work on some dairies and serves as the Fair Veterinarian for the Iowa State Fair.

Dr. Suzanne Millman has a PhD in Applied Ethology from the University of Guelph. She serves as Associate Professor of Animal Welfare in the Veterinary Diagnostic and Production Animal Medicine and the Biomedical Sciences Departments. Dr. Millman leads an active research

program in food animal welfare, coordinates animal welfare instruction within the DVM curriculum, and provides expertise in animal behavior and welfare for producers, veterinarians and the public.

Dr. Paul Plummer received his DVM in 2002 from the University of Tennessee and is board certified in large animal internal medicine with the American Academy of Veterinary Internal Medicine. He is currently working on his PhD in Microbiology and has a variety of research projects in place. Dr. Plummer is a guest lecturer in courses involving dairy medicine and also co-instructor in a small ruminant medicine course.

Dr. Jim West received his DVM in 1971 and MS in 1975 from Iowa State University and practiced in NE Iowa. He has extensive expertise in the area of Veterinary Theriogenology and Embryo Transfer. He teaches a course in Embryo Transfer to senior veterinary students and is a guest lecturer in other courses. He has established an embryo transfer lab at Iowa State University where he does commercial embryo transfer work. His lab has the ability to determine the sex of an embryo prior to its transfer into a recipient cow.

VDPAM Dairy Section : New Courses

New course offerings have been put together to teach students dairy production medicine. These courses complement the bovine medicine and management courses already established at Iowa State University and currently being taught by Dr. Karl Kersting, Dr. Jim Thompson, Dr. Steve Hopkins, Dr. Leo Timms and other faculty in the College of Veterinary Medicine. These new courses include:

VDPAM 309- Informatics: This new course provides an introduction to production records and spreadsheets, and gives the student information on how the data is collected and used. The course covers materials in swine, dairy, cow-calf, and feedlot.

VDPAM 340- Clinical Foundations: This course provides an opportunity for veterinary students to receive basic understandings of the domestic farm livestock species on an individual animal basis and the issues and industries that they are involved in.

VDPAM 402- Dairy Records: This new course is designed to give the veterinary student an in depth study of dairy records and their use. Dairy Comp 305 and PC Dart are used in the course to look at the various production indices and how they impact production on the dairy farm.

VDPAM 310 – Intro to Production Animal Medicine:

This new course focuses on developing and understanding principles and techniques that serve as a basis for food animal health management programs and the critical role of veterinarians in implementing these programs.

VDPAM 451- Clinical Embryo Transfer: This new course is designed to give the students clinical experience and understanding of embryo transfer in the ruminant animal (mainly bovine). Students are also instructed on caesarian section in the bovine and are allowed to do the surgery on a cow.

VDPAM 476- Field Service: This new course involves ambulatory medicine to the university farms as well as some farms serviced by the department. Students are instructed in truck-side pharmacology, vaccination programs, and dystocia correction/fetotomy in the bovine.

VDPAM 484- Advanced Dairy Production Medicine: This is an established course (developed by Leo Timms) that is designed to give an in depth look at the dairy farm and study various production systems on the farm. Topics include biosecurity, milk quality, cow comfort, records, heifer development, nutrition, welfare, and reproduction. Several farm visits are conducted and trouble shooting on those farms is expected with a written report back to the farm.

VDPAM 491- Ruminant Nutrition: This new course is an applied course designed to look at both dairy and beef nutrition and ration balancing. Basic ruminant nutrition, physiology, and requirements as well as ration balancing are the focus.

VDPAM 494- Advanced Dairy II, Dairy Nutrition and Milk Quality: This new course is designed to give students a more in depth look at nutrition and udder health and milk quality issues. The students will collect data related to these subjects and analyze and compare that data to benchmarks in the industry. Students will learn how to analyze a milking system based on current NMC protocols. Students will also balance rations and be able to make nutritional recommendations.

Hoof Trimming Wetlab: A basic hoof trimming wetlab was conducted by **Dr. Jan Shearer** for 75 veterinary students in January, 2008 using the Dutch trimming method. He also instructed farm personnel at the ISU Dairy Farm on proper hoof trimming and methods to control hoof disease and lameness.