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> For questions or comments, please contact Maurice Pitesky at 530-752-3215 or mepitesky@ucdavis.edu

### Alternative Manure Management Program in California

The Alternative Manure Management Program (AMMP) from the California Department of Food and Agriculture (CDFA) has received great interest among dairymen and the dairy industry around California. The application period (2017-2018) was closed on October 16, 2017. More than 50 applications were received for a total funding request of \$29,534,167. CDFA plans to allocate \$9-16 million for



AMMP from the total \$50 million funds available for manure management to mitigate greenhouse gas emissions in California through implementing programs such as AMMP and anaerobic digestion of dairy manure. A team involving a group of faculty members from UC Davis is assisting to provide technical expertise, among other organizations such as the California Dairy Campaign, Earth First Construction, and the Institute for Environmental Management.

Accompanied by this team of organizations, Dr. Pramod Pandey (Extension Specialist/AES Faculty), Department of Population Health and Reproduction, School of Veterinary Medicine, has held a series of over six workshops in Modesto, Tulare, Madera, and Hanford between September and October, 2017 to provide technical and scientific understanding of alternative manure management. Participants included consultants, equipment manufacturers, media personnel, CE advisors and specialists, dairymen, and representatives from industries involved in the dairy business. Funding for both AMMP and Dairy Manure Digester programs are likely to be available for the next fiscal year, too. In addition to the dairy industry, livestock operations including poultry, goats, sheep, swine and horses are also eligible to obtain the funding as long as the proposed work involves implementing the proven technologies, which results in the reduction of moisture and anaerobic conditions of livestock manure.



# Colostrum *Jmmunoglobulin G* Concentration in First and Second Milking From Multiparous Jersey Cows

Providing newborn calves with adequate immunoglobulin G (IgG) supply from colostrum is recognized as an essential management practice in calf rearing. Calves that fail to reach serum IgG levels above 10 g/L within the first 2 d of life are considered to undergo failure of passive transfer (**FPT**). Economic losses associated with FPT have been estimated to average \$65 per calf when accounting for calf mortality, morbidity, and decrease in average daily weight gain.

Industry standards define colostrum as high quality when IgG concentration is greater than 50 g/L (measured with radial immunodiffusion assay). Parity, pre-partum diet, season, breed, dry-period length, vaccination of the dam, and delayed colostrum collection are factors associated with colostrum quality. In a recent survey, almost 30% of maternal colostrum failed to reach IgG concentrations above 50 g/L. Thus, to prevent FPT, it is essential to know the IgG concentration of colostrum and to restrict the first feeding to colostrum that meets the standard of quality. On-farm Brix refractometry, which measures colostrum IgG as a percent (%Brix), can be successfully used to estimate IgG concentration.



Brix refractometer, Image courtesy of Golden Calf Company

In a recent extension meeting, a dairy producer asked me if %Brix readings on second milking colostrum will be an appropriate method to estimate colostrum IgG. After evaluating multiparous Jersey cow colostrum samples from first and second milking, we were able to provide an answer: YES. In our study we also found that nearly half of the second milking colostrum samples from cows on their 3<sup>rd</sup> or greater lactation (42.7%) met industry standards for desirable IgG concentrations. This warrants %Brix readings on second milking colostrum from mature cows, especially during colostrum shortage periods.

By Noelia Silva-del-Rio Veterinary Medicine Teaching and Research Center, Tulare, CA nsilvadelrio@vmtrc.ucdavis.edu

# Vet Med Cooperative Extension Bringing *Science* to the *People* of California

nside every fresh egg, every glass of milk, and every head of lettuce is a network of research, ideas, and hard work. Veterinary Medicine Extension at UC Davis is part of that network, linking basic and applied scientific research with people and communities in California. They are supported by the University of California's Division of Agriculture and Natural Resources (UCANR), and the United States Department of Agriculture (USDA). Together they work hard to keep the environment of California clean, its food and food animals safe, and families healthy.

Emily Kunz, Heather Johnson, and Gregory Wlasiuk comprise the design team at the Western Institute of Food Safety and Security (WIFSS), and working under the direction of Veterinary Medicine Extension, they have developed a <u>video</u> which highlights the role of cooperative extension in the health of California's people, animals, and the environment.

The video highlights the team of CE specialists, AES faculty, county advisors, and researchers at UC Davis Veterinary Medicine Extension that is on the forefront of research and outreach related to food safety, disease prevention, animal health and well-being, production management, public health, biotechnology, and more. Working directly with producers, industry groups, local officials, 4-H and the public, they find solutions for animal and human health.



Dr. <u>Rob Atwill</u>, Director of Veterinary Medicine Extension and WIFSS, emphasizes the positive impact of veterinary extension on California's agriculture as he explains, "It just makes sense to insure that our farmers have the best available information, best technology, and best adult educational opportunities to keep California livestock agriculture at the top of its game. That's what we do here."

Medicine Extension relies Veterinarv on laboratories at UC Davis, where researchers use the latest technology to unearth and solve the problems facing California farmers and communities. Cooperative Extension Specialists harvest new innovations from the labs and apply them to the specific problems facing farmers and food processors in the field. The work of UC Davis researchers focuses on critical areas of agriculture, like animal health and welfare, food safety, agricultural waste management, and youth agricultural science programs.

Beyond the UC Davis <u>School of Veterinary</u> <u>Medicine</u> campus laboratories specialized faculty do research through Agricultural Experiment Stations across the state. They design experiments to find solutions for California's farmers and ranchers.



Country advisor Josh Davy consults with a California Rancher

By continuing to build teams of motivated farmers, dedicated scientists, and supportive government agencies, and staying focused on agricultural innovation and sustainable production, Veterinary Medicine Extension will be positioned to further strengthen California agriculture and improve consumer's access to some of the best and freshest food anywhere in the United States.

Dr. <u>Maurice Pitesky</u>, Assistant Director of Veterinary Medicine Extension and an assistant CE specialist with a research focus on poultry health and food safety epidemiology believes that what makes veterinary extension so useful to everyday Californians is that its network is not just University based. They are on farms and in classrooms as well as in labs doing research. "We are literally extending information from our labs to everyday farmers, 4-H participants and the public at large," says Pitesky.

UC Davis Veterinary Medicine Extension helps bring science to the people of California.

By Chris Brunner<sup>1</sup> and Jasmin Bardales<sup>2</sup> <sup>1</sup>Western Institute for Food Safety and Security <sup>2</sup>UC Davis School of Veterinary Medicine cmbrunner@ucdavis.edu

# Backyard Poultry Workshop

# Invite 4-H Volunteer Leaders to Attend!





# Saturday, January 27, 2018

UC Cooperative Extension San Joaquin County 2101 E. Earhart Ave., Suite 200, Stockton, CA 95206-3949

8:00 am to 2:30 pm Lunch included

#### Space is limited. <u>Online Registration</u> is required!

This Backyard Poultry Workshop is geared towards 4-H Volunteer Leaders who work with youth in raising poultry. Poultry experts will share valuable information and tips on raising and maintaining healthy poultry flocks. This full-day workshop offers training for you, and educational activities to use in your group meetings. Questions for the presenters are encouraged!

Topics include:

- Poultry Behavior
- Backyard Biosecurity
- Disease Transmission, Risk Assessment
- Disease Transmission Activities
- Poultry Pests and Management Techniques
- Using the California Animal Health and Food Safety Lab (CAHFS)

**Speakers include:** Dr. Rodrigo Gallardo, UC Davis; Dr. Maurice Pitesky, UC Davis Extension; Dr. Richard Blatchford, UC Davis Extension; Dr. Amy Murillo, UC Riverside

Questions? Call or email Monica Della Maggiore (209) 576-6355 or monica@cpif.org

California Poultry Federation 4640 Spyres Way, Suite 4 Modesto CA, 95356 (209) 576-6355 www.cpif.org



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# UC Davis *Pastured Poultry Farm*: Working with the Community and the Campus



n addition to being a training, outreach and research hub for commercial free-range and pastured poultry producers the <u>UC</u> <u>Davis Pastured Poultry Farm</u> is focused on working with the community and the University.

The farm donated 250 dozen eggs to the Yolo County Food Bank during the holiday season and plans to continue donating about 400 eggs every month. In addition, the farm recently donated 20 dozen eggs to the Woodland Masonic Lodge as part of their annual pancake breakfast fundraiser. All proceeds from the Woodland event were given directly to the Woodland Volunteer Food Closet, which has provided emergency food resources to Woodland residents since 1968.

At the campus level, the farm sells a portion of their eggs to the UC Davis campus dining services to support their efforts to provide healthy local food options.

In addition, at the campus level, the farm has been a training facility for over 40 undergraduate students with the majority of the students being either pre-vet students or engineering students. Students gain practical experience in poultry production, medicine and design and building. A list of innovations designed at the farm can be found <u>online</u> at our website. Research done at the farm can also be found on our <u>website</u>.

If you would like to support the UC Davis Pastured Poultry Farm please visit our <u>crowdfunding page</u> or contact Dr. Maurice Pitesky at mepitesky@ucdavis.edu.

By Maurice Pitesky UC Davis School of Veterinary Medicine Cooperative Extension mepitesky@ucdavis.edu



*Trivia:* How many glasses of milk does the average dairy cow produce per day?

Answer from last edition: POTATOES were the first vegetable to be grown in outer space



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