



- 2** Foothill Abortion Comes Full Circle
- 4** Drive-Thru Extension: 4-H Style
- 3** 2021-2023 Eggsercise Book!
- 5** Survey on Dairy Herds in California
- 7** 'The Sitch', our new Youtube Series!



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

Foothill Abortion Comes Full Circle

By Gabriele Maier, Assistant Specialist in Cooperative Extension, Beef Cattle Herd Health and Production

The availability of a new vaccine for cattle that protects from abortion due to infection with a tickborne disease, brings to a close a long journey for a solution to this problem that is unique to California and neighboring states. The disease, Epizootic Bovine Abortion (EBA) or commonly known as “Foothill abortion”, was one of the reasons the livestock industry pressed for establishment of a school to train veterinarians in California back in the 1930s. The push from industry helped establish UC Davis School of Veterinary Medicine. However, despite much effort that went into studying the disease, the causative agent proved to be very elusive.

The disease affects cattle grazing in the foothills of California, Southern Oregon and Nevada and leads to late term abortions or births of weak calves which often die. Heifers or cows that spend their first breeding season in an area that is endemic to Foothill abortion will lose their calves at alarming rates, which can be devastating to the profitability of a herd. Once exposed, abortions are rare in cattle during subsequent seasons with continued exposure to the causative agent. Adult cattle do not become systemically ill from the infection.

Establishing a tick vector, *Ornithodoros coriaceus*, commonly known as Pajaroello tick, was the first major step in solving the puzzle of what causes Foothill abortion and was accomplished in 1976. The habitat of the tick coincides with the areas where cattle are affected, which gave researchers a clue to its possible involvement. Experiments with heifers that were exposed to Pajaroello ticks from endemic areas that



resulted in abortions while heifers that were not exposed to those ticks had normal calves, provided the needed evidence to support the hypothesis.

However, it took until 2005 to identify the causative agent now known as the *Deltaproteobacter Pajaroellobacter abortibovis*. The bacterium is very slow growing, which is why it could not be detected through bacterial culture and is also the reason why abortions happen so late during pregnancy. While many researchers have worked on Foothill abortion over the decades and have made significant contributions, Dr. Jeff Stott and his

Did you know?

The term veterinarian comes from the Latin word veterinae which means 'working animals'

team at UC Davis School of Veterinary Medicine were instrumental in the discovery of the bacteria and the development of a vaccine.

In September of 2020, during a year with little to celebrate, the approval of the Foothill Abortion Vaccine by the USDA comes as a long-awaited relief to California's cattle herds. After going through the necessary safety and efficacy testing, the vaccine is now commercially available. It must be stored in liquid nitrogen and can only be administered through trained veterinarians. Although it is a relatively expensive vaccine, it is estimated to be over 98% effective in preventing Foothill abortion. Given the financial loss that can be prevented through vaccination, it is considered by many a well worth investment.

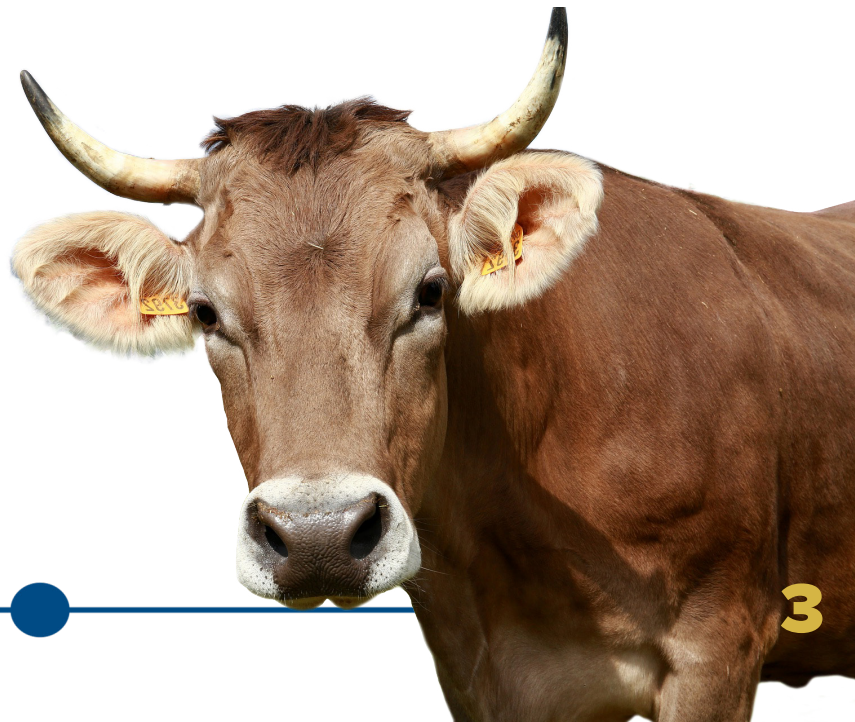
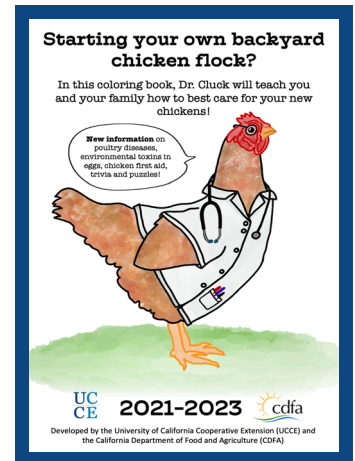
2021-2023 Eggsercise Book Now Available

The 2021-2023 Eggsercise Book by the UC Davis School of Veterinary Medicine-Cooperative Extension and the Animal Health Branch of the California Department of Food and Agriculture (CDFA) is now available on line here (<https://ucanr.edu/sites/poultry/files/302032.pdf>).

New sections in the 48-page booklet include virulent Newcastle Disease and Infectious Bronchitis (aka chicken COVID), PCBs in chicken eggs and chicken first aid. We have also updated the trivia and puzzles (apologies for the new and 'improved' chicken puns...)

Over 130 paper copies were distributed at the Youth Animal Science Drive-Thru on February 20th at the Sonoma-Marín Fairgrounds in Petaluma, CA. Feel free to share and or print with all your eggcellent poultry peeps!

Note: IF you print out, print out in using the booklet format. Even better if you print out more than 20 take it to a print shop (it's a pain to get the staples in the correct spots...)



Drive-Thru Extension: 4-H Style

On Saturday, February 20th the UC Cooperative Extension and the Sonoma-Marín Fairgrounds and Event Center co-hosted a “Youth Animal Science Drive-Thru” event at the Sonoma-Marín Fairgrounds. What is a “Youth Animal Science Drive Thru?” It is a drive-thru where adults drive and youth (any age), including those from youth organizations who provide animal science education such as 4-H and Future Farmers of America (FFA), get the opportunity to learn about educational topics from the safety of their vehicles.

The drive-thru format, the brain-child of the Napa County 4-H Program Coordinator, Suzanne Amaral and Sonoma-Marín Fairgrounds CEO, Dr. Allison Keaney, allows for extension with appropriate physical distancing and without Zoom. This event, the first of its kind, had over 130 participants.

There were 4 different tracks (poultry, beef cattle, dairy cattle, and small ruminants). Each of those tracks had 5 interactive stations designed to highlight various topics including biosecurity, production, husbandry, welfare, ecosystem services, nutrition, food safety, and an additional station covering fire preparedness. Speakers included members of UC Cooperative Extension, Santa Rosa Junior College, Sonoma Marin Cattlemen, North Bay Dairy Women, Sonoma-Marín and Napa County Young Farmers and Ranchers, Halter Project, Top of the Hill Show Stock, Two Willows Club Lambs, and various Sonoma County 4-H leaders and senior 4-H members.



Members of 4-H and Dr. Pitesky from UC Davis School of Vet Med Cooperative Extension at the Drive-thru extension event at the Sonoma-Marín Fairgrounds Event



Ph.D Student Recieves Award for Survey on Dairy Herds in California



By Sejin Cheong (Pires Lab), Alda Pires (Associate Specialist, Urban Ag and Food Safety, Vet Med Extension)

Sejin Cheong is a first-year Ph.D. student in Graduate Group in Epidemiology (GGE) and a Graduate Student Researcher in Dr. Alda Pires' lab (Urban Agriculture and Food Safety Laboratory) at the University of California, Davis. Sejin received a 2020 Association for Veterinary Epidemiology and Preventive Medicine (AVEPM) student award at the Conference of Research Workers in Animal Disease (CRWAD) (<https://crwad2020.preseria.com/home>), which was held virtually on December 4-8, 2020.

Sejin presented "Survey of management and animal health practices on organic dairy herds in California," a study on the husbandry practices and animal health care status of organic dairy farms in California with survey results ranging from November 2018 to July 2019. California is one of the biggest organic dairy producers in the US. Since recent guidelines for organic certification of dairy livestock (USDA) prohibit the use of synthetic substances in cattle feed as well as drug use in the absence of illness, the guidelines highlight the importance of preventive management.

The survey results show that preventive methods such as vaccinations and use of supplements (Iodine products, Selenium, Vitamin A, D, and E) were being used in most of the participating farms. However, mastitis, respiratory and digestive diseases were still frequent, with some disease frequencies being correlated to age, even in vaccinated cows. The questionnaire also included pasture and housing management practices, and education level of workers on the farms. The results of this survey provide direction on where we should place efforts for effective preventive management of organic dairy herds in California



Sejin Cheong

To learn more about these research projects, visit https://ucanr.edu/sites/Small_Farms_/

Survey of management and animal health practices on organic dairy herds in California

Sejin Cheong¹, Kyuyoung Lee², Richard Pereira¹,
Randi Black³, Betsy Karle³, Melissa Lema⁴, Alda Pires¹

Department of Population Health and Reproduction, UC Davis ¹

Center for Animal Disease Modeling and Surveillance (CADMS), UC Davis²

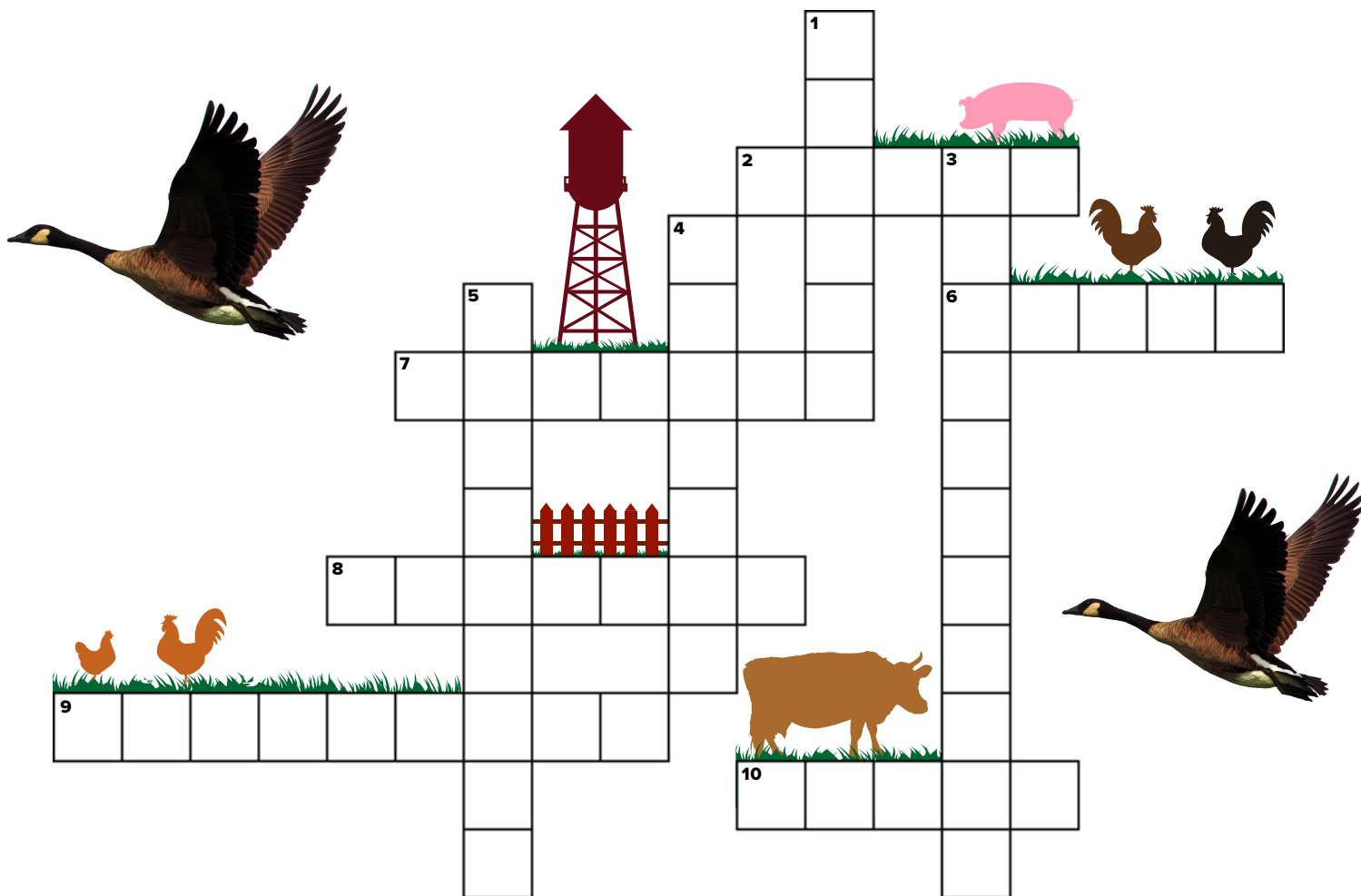
Cooperative Extension, Division of Agriculture and Natural Resources, University of California³

North Coast & Organic Field Services, Western United Dairies⁴





Dr. Cluck's Farmhouse Crossword



Across

2. A type of influenza
6. Usually eaten with a salad
7. Rhymes with "faster"
8. A popular insurance group
9. Producers of milk, eggs, meat
10. Got Milk?

Down

1. Related to "Cattle"
3. Related to "Agrarian"
4. Domestic fowl
5. Ducks, Geese, Swans, etc.

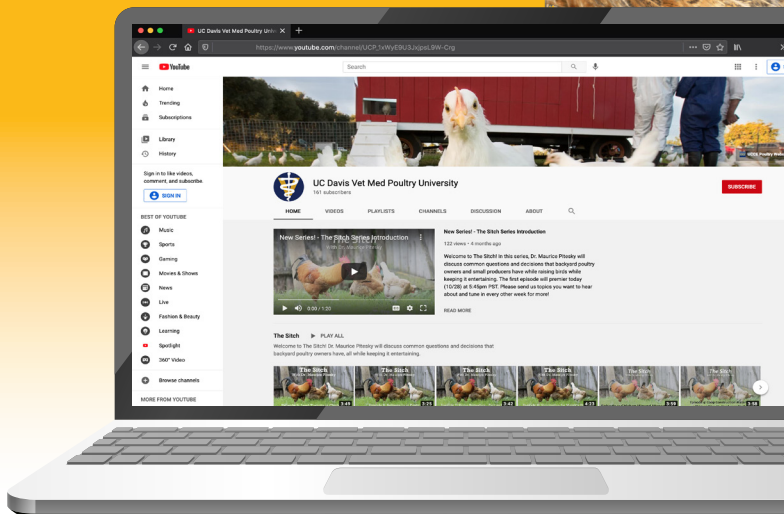
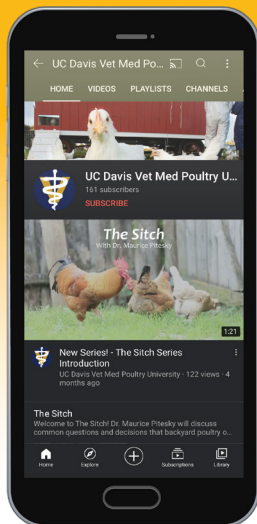


Have you seen our new series, 'The Sitch'?

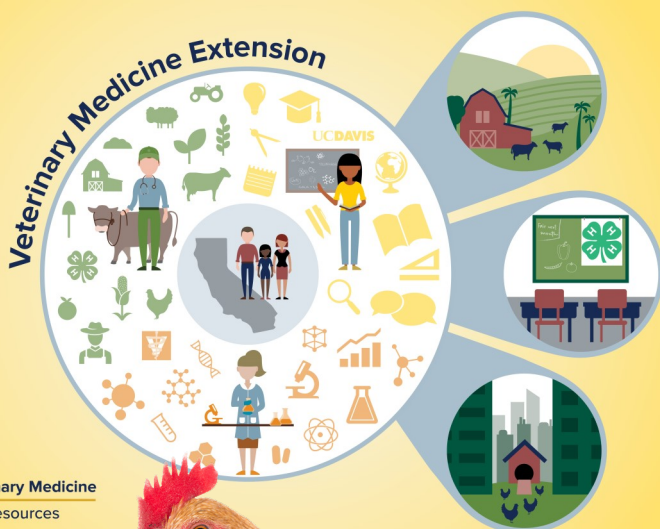
Sit down with Dr. Maurice Pitesky as he answers the most common questions for new and experienced backyard poultry owners alike. Get insightful and accurate information on the best practices for raising your own birds.

Visit our channel at:

<https://www.youtube.com/c/UCDavisVetMedPoultryUniversity>



Visit <https://vetext.vetmed.ucdavis.edu/> to learn more about us and our programs!



UC Davis School of Veterinary Medicine
UC Agriculture & Natural Resources

www.vetmed.ucdavis.edu/vetext/

School of Veterinary Medicine
University of California
One Shields Avenue
Davis CA 95616

Connection is a publication of the University of California Davis, Veterinary Medicine Cooperative Extension.

Maurice Pitesky, editor in chief

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