Mission Statement

The Animal Health Branch is the State's organized, professional veterinary medical unit that protects livestock populations, consumers, and California's economy from catastrophic animal diseases, disasters that impact animals, and other health or agricultural problems. The Branch addresses diseases and other problems that cannot be successfully controlled on an individual animal or herd basis but require state-wide coordinated resources. Implementing programs that protect California's livestock industries and consumers, ensures the availability, affordability, and wholesomeness of food.



Inside This Issue:

- State Veterinarian's Message - Pg. 1
- Message from the Branch Chief - Pg. 1
- The Dreaded Lookalike -Vesicular Stomatitis Virus Strikes Again - Pg. 2
- Highly Pathogenic Avian Influenza Outbreak Update
 Pg. 3
- Two Eggs with a Side of Lead: A CAHEN Case Report on Lead Contamination in Backyard Chicken Eggs - Pg. 4
- Chronic Wasting Disease: An Emerging California Concern - Pg. 5
- Future of Brucellosis in California – A Continued Threat? - Pg. 6
- Brucella ovis Free Flock Certification - Pg. 7
- Foreign Animal Disease Investigations - Pg. 8
- Marek's Disease Not Always Textbook or Typical
 Pg. 9
- Fly Identification Resources
 Pg. 10
- Animal Care Program Update: Implementation of Proposition 12 (2018) - Pg. 10
- The Animal Health Branch is Hiring! - Pg. 12
- CDFA Announces Vacancies On The Cattle Health Advisory Task Force - Pg. 12
- Stop By and See Us at The Fair! - Pg. 13
- AHB Staff Biography - Pg. 14
- Animal Health Branch Contact Information - Pg. 15



cdfa california department of food & agriculture

Animal Health Branch Newsletter

Volume 60

July 2023

State Veterinarian's Message: Welcome New Animal Health Branch Chief!

By: Annette Jones, DVM, AHFSS Director and State Veterinarian

I am very pleased to announce that Dr. Mandy Murray has accepted the position of Animal Health Branch (AHB) Chief. I am particularly happy about this decision because I believe she will bring the stability and the vision needed to maintain the AHB reputation for State and national leadership. I know she shares my enthusiasm for ensuring our programs stay a step ahead of issues, embrace change, and remain highly valued by our stakeholders. She has the patience and determination to stay focused on goals despite bureaucratic challenges. Given the current mix of experienced staff with years of wisdom to guide us, and some extremely impressive new additions, the future for the AHB is looking very bright.



Dr. Murray comes to this position with impressive credentials

including a Doctorate of Veterinary Medicine, a Masters of Preventative Medicine, and a PhD in Comparative Pathology from UC Davis. She joined CDFA in 2017 as a Veterinarian Supervisor in the AHB and was promoted to Assistant Branch Chief in 2021. For the majority of 2023, she has also been serving as Acting Branch Chief. A more detailed biography of Dr. Murray can be found at the end of this newsletter.

Please join me in congratulating Dr. Murray as she takes on the new challenge.

Message from the Branch Chief

By: Mandy Murray, DVM, MPVM, PhD, AHB Branch Chief

Hello!

The Animal Health Branch has continued to address many challenges this year. During 2023, staff have been busy responding to and monitoring the ongoing outbreak of Highly Pathogenic Avian Influenza, the introduction and outbreak of Vesicular Stomatitis Virus in California for the first time since 1980, multiple isolated detections of Equine Infectious Anemia and Equine Herpes

Myleoencephalits, the flooding during the early part of the year, as well as routine surveillance activities. While the primary mission of the Animal Health Branch is to prevent, detect, and respond to foreign animal diseases, our staff spends countless hours educating livestock and poultry owners about diseases of concern and conducting education and outreach. This summer you can find us at fairs and events including the Los Angeles, Orange, San Bernadino, and Ventura County Fairs; various poultry shows and auctions; the California Agriculture Teacher's Association annual conference; and during July, staff will have tables set up in the poultry and livestock areas of the California State Fair.

I am excited by the opportunity to lead the talented and skilled staff who comprise the Animal Health Branch. I am confident that we will continue to adapt to meet the needs of our industries and partners and continue to protect California's animal agriculture.

The Dreaded Lookalike - Vesicular Stomatitis Virus Strikes Again

By: Emily Nietrzeba, DVM, MPH, Equine Program Lead



California continues to set records with the first detection of Vesicular Stomatitis Virus (VSV) in the state since the early 1980s, and the first detection in the US since 2020. The unusual weather patterns and heavy precipitation from winter storms in addition to the presence of all three biting fly vectors (*Culicoides* midges, Simuliid black flies, and sand flies) that can transmit the virus created a unique, albeit unfortunate, opportunity for this disease incursion. CDFA and USDA have worked tirelessly in collaboration with hard-working large animal private practitioners since early May to respond to this outbreak and protect the health of California's equine and livestock populations.

VSV is endemic in areas of Mexico, and periodically will occur in the U.S. as the transmitting insect vectors migrate northward. While VSV causes painful ulcerative lesions around the lips, nostrils, coronary bands, teats, and ear pinna in equids, cattle, small ruminants, and porcines among others, the disease is largely self-limiting and usually requires only supportive care during the healing period. Unfortunately, the clinical lesions in cattle, swine, and small ruminants are largely indistinguishable from those caused by the far more devastating Foot and Mouth Disease Virus (FMDV), and as such, the presence of the lesions requires regulatory actions including mandatory quarantines and testing **only** at approved regulatory laboratories.

Enhanced and effective fly control measures are **critical** to disease prevention, as well as ongoing disease mitigation in areas where the virus and insect vectors are actively present. Frequent and on-label applications of appropriate fly sprays as well as frequent removal of fly attractants such as manure and standing water sources are extremely important for fly control. CDFA's Antimicrobial Use and Stewardship Branch has recently created an excellent set of resources for fly control and mitigation, more information about which can also be found in this newsletter edition on page 10.

Only active lesions are contagious as these have live virus present, and viral transmission can be via direct contact with the active lesions, sharing of water troughs, or direct inoculation of the virus by biting flies. Serology in non-lesioned animals is of little diagnostic value, as a positive antibody test simply indicates exposure rather than active infection or viral incubation; exposed animals can have positive titers for years after exposure or infection. Similarly, and highly unfortunately, antibodies to VSV provide no protection against infection or reinfection.

of the primary reasons an effective vaccine has not yet been developed, and also underlies the critical importance of ongoing fly prevention and enhanced biosecurity measures in known affected areas, even on premises that have been previously affected.

Situation reports from the current and past VSV outbreaks can be found on the <u>USDA Vesicular Stomatitis</u> <u>page</u>. Additional information about VSV including current maps, equine event recommendations, and case reporting and sampling guidelines for accredited veterinarians can be found on the <u>CDFA Vesicular Stomatitis page</u>.

Highly Pathogenic Avian Influenza Outbreak Update

By: Felicia Pohl, Research Scientist, Avian Program

Over the past month, domestic bird cases of H5N1 Highly Pathogenic Avian Influenza (HPAI) have started to dissipate in the United States. There are still ongoing HPAI findings in wild birds, but since waterfowl migratory season has phased out, so too has the number of cases. As of July 6, 2023, there have been 836 cases of HPAI documented in domestic flocks in 47 states (with approximately 58.8 million birds affected). The last detected cases were documented in Missouri and North Carolina on May 18, 2023. Approximately 7,105 wild bird cases have been documented with the last cases being in three Caspian terns in Oregon on June 23, 2023, and a red-tailed hawk and Western gull on June 16, 2023, in New York and California, respectively. Other wild birds affected include geese, ducks, pelicans, turkey



Map: <u>H5N1 Bird Flu Detections across the United</u> <u>States (Backyard and Commercial) | Avian Influenza</u> (Flu)

vultures, raptors, swans, owls, etc. Mammals (e.g., foxes, raccoons, skunks, seals, etc.) have also been affected (most likely from scavenging on infected birds) with the last cases being documented in two red foxes in Michigan and Maine on June 12 and 9, 2023 and in three raccoons and a fisher in California on June 2, 2023. For an up-to-date list of confirmed cases in the United States, please visit: <u>USDAAPHIS | 2022-23 Detections of Highly Pathogenic Avian Influenza</u> and <u>CDFW News | Avian Influenza</u>.

In California, the most recent domestic HPAI detection was on April 12, 2023, in a backyard flock in Modoc County. Since the beginning of this HPAI outbreak (January 2022), California has had 36 infected domestic flocks (16 commercial, 20 backyard/non-commercial) in 19 counties.

The first domestic case detected during this outbreak was a backyard flock in Sacramento County in August 2022. In addition to domestic flocks, HPAI has been detected in wild birds in 44 California counties, with the first cases in this outbreak detected in Colusa and Glenn County in July 2022. It is important to note that HPAI has been widespread and may also be present, especially in wild waterfowl, in other counties that are not listed (if no wild birds have been submitted for testing). For information on current HPAI control areas (affected zones that may require permits for the movement of poultry/poultry products), see the infographic here.

Avian influenza is a highly contagious and often fatal disease in birds. The disease is spread through movement of infected or exposed birds, direct or indirect contact with infected wild and/or domestic birds or contact with the virus on fomites (surfaces or objects) such as hands, shoes, clothing, or feet and hair of rodents and other animals. Despite the decrease in HPAI detections in the U.S. and California, it is critical for poultry owners to remain vigilant and take proper biosecurity measures to prevent disease and protect their birds. It is expected that there will be an uptick in detections again when the fall migration season begins and weather starts to cool. Poultry owners with flocks that have experienced any unusual/suspicious illness or deaths should call our CDFA Sick Bird Hotline at 866-922-BIRD (2473).

Please report any unusual or suspicious dead wild birds to the California Department of Fish and Wildlife online <u>here</u>. If you have questions about wildlife rehabilitation, please contact the California Department of Fish and Wildlife directly. Contact information is available <u>here</u>.

For more information, updates, and tips on protecting your flock, please visit our <u>CDFA Avian Influenza webpage</u>.



Two Eggs with a Side of Lead: A CAHEN Case Report on Lead Contamination in Backyard Chicken Eggs

By: Alexi Haack, DVM, CAHEN

The California Avian Health Education Network (CAHEN) recently had an owner call our Sick Bird Hotline to report unexplained and sudden deaths of a few 8-month-old hens after mild diarrhea over the last month. These birds had free run of a large yard, often eating forage as well as store-bought pellet feed. Two new pullets were introduced two weeks ago and were unaffected. Based on the slow course of this mystery illness and the healthy state of the new arrivals, CAHEN veterinarians determined it was unlikely that this flock had either of the poultry viruses of regulatory concern: virulent Newcastle or Highly Pathogenic Avian Influenza. However, CAHEN was able to assist the owner in submitting one of their recently deceased hens to the California Animal Health and Food Safety (CAHFS) laboratory for a necropsy to find out what might be causing the deaths.

The lab report revealed that this hen had numerous small bolts and screws in the ventriculus, smaller metal bits in the intestines, and a high concentration of iron and lead in the liver - 6200 ppm of iron and 3.5 ppm of lead, respectively 20 and four times higher than the limit of the 'normal' reference range in poultry. The liver histology showed perivascular hemosiderosis (excess accumulation of iron deposits) with an abundant intracytoplasmic pigment consistent with iron, and acute multifocal hepatonecrosis (destruction of liver cells). Iron intoxication leading to liver damage is the likely cause of the multiple deaths in this case. The high lead levels may have contributed to the deaths, or been incidental, but was an important finding to discuss with the owner as a public health issue. While chickens can handle some lead in their diet without visible issues, they will deposit the lead into their eggs and body where it becomes an issue for the people who consume the eggs and meat.

People with chronic illnesses, and/or who are pregnant, and young children are most susceptible to severe adverse health outcomes from lead exposure. There is no safe level of lead that children can consume due to its effect on the developing brain, but as of 2018, a maximum intake of 2.2 micrograms of lead per day is the limit FDA uses to make decisions on whether foods are too high in lead. In 2023, FDA released a draft plan to reduce the daily limit to as close to zero as possible in products for infants and toddlers due to growing evidence of health issues even at low

Animal Health Branch Newsletter

levels of exposure. Consequences of lead exposure are not often visible at first but include damage to the brain and nervous system, and slow or impaired behavior, hearing, and speech in children. In studies conducted on California backyard flocks diagnosed with lead contamination, the edible portion of the eggs was found to contain lead at levels exceeding the 2.2 micrograms daily intake limit in many cases. So even one of these contaminated eggs per day could be dangerous for children.

Our owner in this case did have children at home and immediately stopped feeding the flock's eggs to the family and planned to throw out eggs until they tested safe. A private veterinarian continued management of the flock and recommended increased dietary calcium as well as regular blood work to monitor the lead levels in the flock. We also discussed measures to reduce lead exposure in the flock.



The most important first step to reducing lead exposure is to consider keeping poultry in an enclosed coop and run with alternative flooring to a natural dirt floor, such as concrete with a replaceable litter material. Additionally, potential sources of lead and other metals from the environment such as old plumbing, electronics, batteries, scrap metal pieces, lead fishing weights, bullet casings, and ground contaminated with used motor oil should be removed. Old painted structures, wood scraps, and paint chips are all potential sources of lead as well. For cases where lead contamination has been identified, lead deposited in soil stays for hundreds of years and can contaminate plants, so soil testing and remediation may be needed. Egg shells are often the most contaminated portion of the eggs, so they should not be used in composting or fed back to the chickens if you have lead contamination.

If you or your family have consumed lead-contaminated poultry products, you can discuss your concerns with your doctor or with California's Department of Public Health (CDPH). If you are feeding at-risk family members or the public with backyard eggs, it is important to know if you may have lead exposure in your flock. The CAHFS Laboratory in Davis can help identify lead contamination through necropsy services on deceased poultry and through a pooled test of your flock's eggs. To submit birds or samples, contact CAHFS at (530) 752-7578 to request the lead test and get the mailing and drop-off address. Collect at least 2-3 eggs from your flock, or if you have more than a few hens, we recommend you submit up to 12 eggs. Some of the best packaging is a cardboard egg carton with additional cushion around the carton in a mailable box. This test is currently under \$50, and the backyard flock necropsy, which includes toxicology testing for heavy metals, is \$25 for up to two deceased birds.

Chronic Wasting Disease (CWD): An Emerging California Concern

By: Danny Dickason, DVM, Wildlife Interface Program

Chronic Wasting Disease (CWD) is a uniformly fatal disease of cervids (e.g. deer, elk, moose, reindeer) similar to "Mad Cow Disease" and caused by a misfolded protein called a prion. Signs of CWD include weight loss ("wasting"), abnormal stance or gait, and an inability of affected animals to keep their head up. The disease can be elusive in that it can take months or years to become apparent. It can be transmitted through direct contact between affected animals or via environmental contamination with urine, feces, blood, and saliva. The prion that causes CWD is remarkably hardy – it can persist in the environment for years and requires exposure to temperatures of approximately 1,000 degrees for several hours to be rendered non-infectious. The traditional gold standard testing is Immunohistochemistry (IHC) or enzyme-linked immunosorbent assay (ELISA) of retropharyngeal lymph node or obex (part of the brain) on postmortem

samples (animals already deceased), which makes for added surveillance difficulty. Thus far, CWD has been found in over 30 states, although fortunately it has not yet been detected in California.



Recent research has discovered some concerning evidence for possible routes of CWD transmission. One study found that 20-26% of ticks removed from CWD-positive deer tested positive for prions. These ticks exhibited a potentially infectious level of prions, which could represent a significant source of infection during grooming and allogrooming behavior (e.g., cervids removing and ingesting ticks from other herd members). Additionally, plants have been shown experimentally to incorporate prions into their roots and leaves and these plant materials were found to be infectious to hamsters who consumed them.

There is, however, also good news on the research horizon! A cervid's genes have been shown to play a key role in their susceptibility and genetic testing was found to be highly accurate in predicting an individual's susceptibility. These genetic traits were also shown to be highly heritable, providing the future potential for herds to be managed via selective (as opposed to herdwide) culling. Trained sniffing dogs have also demonstrated an ability to identify feces from infected vs. non-infected animals, providing another tool for herd management and the potential for the development of an electronic "sniffer" machine in the future. Finally, a newer antemortem (before death) test called real-time quaking-induced conversion (RT-QuIC) has been developed to enable the testing of live animals. This test was shown to detect CWD cases nearly four months earlier than the current gold standard of postmortem IHC testing and could potentially be developed for use on ticks removed from cervids.

CWD is a burgeoning concern for Californians as many people in our state consume deer meat. CWD testing is recommended for all hunter-harvested deer meat prior to consumption, and although it is thought unlikely to be transmissible to humans, consuming CWD-positive animals is not recommended. Humans are known to be susceptible to prion diseases and some research has shown "humanized" mice to be susceptible to CWD, leading to this cautionary recommendation. Additionally, hunter concern for CWD-affected deer has the potential to lead to fewer hunting licenses purchased and reduced revenue for wildlife management agencies and associated economic ripple effects and ecological concerns. For these reasons, we are working hard to keep California free of CWD to protect our valuable wildlife resources and hunter-harvest food safety.

Future of Brucellosis in California – A Continued Threat?

By: Kavishti Kokaram, DVM, DACVPM, Bovine Specialist

This past year staff from CDFAAHB and USDAAPHIS investigated and closed out three suspected Brucellosis cases in cattle in California. All three suspect investigations were initiated following receipt of positive Brucellosis results during routine slaughter surveillance. All cases were closed out with no further investigation required and all were most likely the result of cross-reactions on surveillance testing.

Brucellosis is a zoonotic disease affecting domestic and wild animals as well as people. In cattle, bison, and buffalo, Brucellosis is mainly caused by *Brucella abortus*, though other *Brucella* species uncommonly associated with disease in cattle may include *Brucella melitensis* and *Brucella suis*. Disease caused by *Brucella* has taken many names including Bang's Disease in animals and Malta Fever or Undulant Fever in people. *B. abortus* is usually transmitted

among animals via contact with the placenta, fetus, fetal fluids, and vaginal discharges from infected animals. Transmission to humans in endemic areas occurs as a result of occupational exposure of those working with infected animals and/or their tissues (commonly farm workers, slaughterhouse workers, and laboratory personnel). The general public is at risk through the consumption of unpasteurized dairy products, especially rawmilk cheeses known as "queso fresco" from Mexico, and this is the most common source of human brucellosis infection in California. Occasionally, people can become accidentally infected by live *B. abortus* vaccine in raw milk and milk product. Also, hunters who field-dress infected animals are at risk of infection. While *B. abortus* has not been diagnosed in



wildlife populations in California, brucellosis caused by *B. suis* continues to be detected in our feral swine populations throughout the state.

In 1954, Congressional funds were first approved for a Cooperative State-Federal Brucellosis Eradication Program to eliminate the disease from the country. Since that time, brucellosis due to *B. abortus* has been largely eradicated from the United States and now remains primarily present in the Greater Yellowstone Area (GYA) where the infection is maintained within wild elk and bison populations. California has been classified as a "Brucellosis Free" state since October 1997 when the last affected dairy herd was released from quarantine in December 1996. The progressive success of the national eradication program has seen significant changes over the years with the program transitioning towards targeted surveillance for brucellosis via slaughter surveillance in high-risk animals: specifically, those originating from the GYA and the Designated Surveillance Area.

Due to the success of the National Brucellosis Eradication program, there has been much recent discussion with respect to ending mandatory vaccination of domestic cattle and declaring eradication of brucellosis from the U.S. cattle herd. Some western states, including California, continue to vaccinate cattle for brucellosis, due mainly to continuing spillover from wildlife into cattle that occurs on a regular basis in the GYA. As a border state with Mexico, there is also the risk of the introduction of brucellosis associated with the illegal entry of Mexican cattle into our state. The risk of introduction from infected cattle needs to be weighed and balanced with the risk of accidental human exposure to live *B. abortus* vaccine in raw milk and milk products.

The USDA is slated to release its updated brucellosis regulations at the end of this year. In the interim, continued vigilance and enforcement of surveillance and regulatory movement requirements within the United States will continue to be essential to protecting California's brucellosis-free status.

Brucella ovis Free Flock Certification

By: Kavishti Kokaram, DVM, DACVPM, Bovine Specialist

Recently, CDFA has received inquiries into the requirements for certification of sheep flocks for disease free status for *Brucella ovis*. Unlike *B. abortus*, brucellosis due to *B. ovis* is mainly a sheep disease (though experimental infection of goats, white-tailed deer, and pregnant cows has been shown) and poses no human health risk. *B. ovis* is an economically important cause of epididymitis and reduced fertility in rams, and may also occasionally be associated with abortions in ewes and perinatal mortalities of lambs. Its primary detrimental effect is on the rams which can

Animal Health Branch Newsletter

become persistently infected, shedding over 2-4 years in semen and being a source of infection to other rams. Ewes are resistant, and if infected, generally only transiently infected. Transmission is thought to be ram-to-ram via ewes as mechanical vectors or direct ram-to-ram transmission. There is currently no national eradication program for *Brucella ovis* in the United States; flock certification is voluntary and is predominantly regulated by individual states. That said,

California is one of the states that has a certification program.

California's certification program, administered by CDFA, requires that all rams six months of age or older within the flock be test negative on two sequential herd tests for *B. ovis* sampled 45-120 days apart. Following completion of flock testing, the flock shall be recognized as having disease free status. Maintaining disease-free status certification for *B. ovis* requires annual recertification via an additional negative test



within 9-15 months of previous certification. Additionally, any ram introduced into the flock must be either from a *B. ovis* certified free flock or be isolated until they test negative on two sequential *B. ovis* tests 45-120 days apart, or the flock will lose their disease-free status with CDFA.

Flock owners interested in gaining certified *B. ovis*-free status should contact their local District AHB office and work with through their veterinarian to complete the required testing for certification. Additional information on the program with respect to program requirements can be found <u>here</u>.

<u>Author note</u>: Raw milk sheep dairies must submit brucellosis testing for *B. melitensis* when conducting annual whole flock testing due to its zoonotic potential. In contrast, *B. ovis* has no public health risk.

Foreign Animal Disease Investigations March 16 – June 15, 2023

By: Alireza Javidmehr, DVM, MPVM, PhD, Emergency Preparedness and Response Section

Awareness of Foreign Animal Diseases (FADs) and their potential impact on the food supply chain and international trade is of utmost importance. Although these dangerous diseases have been eradicated or never occurred in the United States, a widespread outbreak could have severe consequences. Some FADs may even pose a public health risk if they are zoonotic. Therefore, early detection and immediate action are critical to controlling and eradicating FADs. California is investing a significant amount of resources to safeguard our livestock industry against FAD outbreaks. To learn about the critical activities when a FAD is detected in the state, 13 infographics and three short video clips were developed and can be viewed on the <u>CDFA Preparedness and Response page</u>.

Between March 16, and June 15, 2023, FAD diagnosticians investigated a total of 142 FAD suspicious cases (Table 1) to protect California's livestock industry. Out of 142 investigations conducted, almost 87 percent were to rule out Foot and Mouth Disease (FMD) in pigs being shipped to slaughterhouses. The lesions observed in these cases were found to be caused by Senecavirus A (SVA). Although SVA is an endemic disease in the U.S., the presence of lesions triggers a FAD investigation due to the clinical similarity of the lesions to FMD. Similarly, the lesions caused by Vesicular Stomatitis Virus (VSV) are clinically indistinguishable from FMD. It is important to treat any animal diseases with signs similar to FADs as emergencies until the FAD can be ruled out.

All Emergency conditions listed in the <u>California reportable animal disease list</u> must be reported to the local animal health authorities within 24 hours. The AHB district offices' contact information is listed on the last page of this newsletter as well as on the reportable disease list.

AHB Districts	Disease	Species	Sample Type	Number of Investigations	Destination Lab*
Modesto	Foot and Mouth Disease (FMD), Senecavirus A (SVA)	Porcine	Swab	116	CAHFS-Davis
	FMD, Vesicular Stomatitis Virus (VSV)	Bovine	Swab	1	NVSL, CAHFS-Davis
	VSV	Equine	Serum	1	NVSL, CAHFS-Davis
Ontario	FMD, SVA	Porcine	Swab	1	CAHFS-Davis
	FMD, VSV	Bovine	Swab	1	NVSL, CAHFS-Davis
	VSV	Equine	Swab	13	NVSL, CAHFS-Davis
	VSV	Exotic	Swab	1	NVSL, CAHFS-Davis
Redding	FMD, VSV	Bovine	Carcass	1	NVSL, CAHFS-Davis
Tulare	FMD, SVA	Porcine	Swab	6	NVSL, CAHFS-Davis
	VSV	Equine	Carcass	1	NVSL, CAHFS-Davis

Table 1. Summary of FAD investigations from March 16 to June 15, 2023

*NVSL: National Veterinary Services Laboratory

CAHFS: California Animal Health and Food Safety Laboratory

Marek's Disease – Not Always Textbook or Typical

By: Maureen Lee-Dutra, DVM, Tulare District Veterinarian-in-Charge

The Tulare District received a report of a one-year-old chicken that presented for sudden death and was predeceased by a sister hen the week prior. The flock members were in about 30 separate small cages with no other birds exhibiting signs of illness. The chicken in question was trembling in the morning and died early afternoon after showing signs of respiratory distress. The neighboring property had various breeds of chickens, ducks, and quail, but the owner had not heard of any illness or loss in those birds. The weather had been in the high 90's for several days. The birds were home-raised, and



unvaccinated. On gross necropsy, the bird was in good body condition with no signs of dehydration. The bird was in egg production and had internal parasites. On histology, there were focal areas of perivascular cuffing in the brain and peripheral nerves. There were lymphocytic infiltrates in the liver and kidney and granuloma formation in the ceca. Based on the necropsy findings as described above, the diagnosis of Marek's disease was made.

Per the Penn State Extension website, the morbidity of Marek's disease in flocks is highly variable, affecting anywhere from 1-50%. The affected birds are usually under 30 weeks of age and loss of production can be an early warning sign of infection. Nerve affliction is the most common presentation, resulting in paralysis of the wings or legs. Tumors may develop in internal organs, causing emaciation over a period of time. In this case, the chicken died within only a few hours of the initial onset of clinical signs and showed no evidence of paralysis. The bird's body condition had not been affected. The respiratory distress was likely an end-stage sign (there was no lung pathology) and unfortunately misled the owner to conclude it was a respiratory disease.

Marek's disease does not always have a textbook presentation and should be on most rule-out lists for backyard flocks that have not been vaccinated. For more information, please visit the <u>Penn State Extension website</u>.

Fly Identification Resources

By: Antimicrobial Use and Stewardship Branch

CDFA's Antimicrobial Use and Stewardship Branch (AUS) has newly released <u>Fly Identification, Monitoring</u>, and <u>Tracking Resources</u> designed to help livestock/cattle producers identify and manage fly pest populations and develop a pest management program for their operation. These innovative resources include a corresponding set of "Fly Monitoring and Management Tool Sheets" that serve as an additional, dynamic aid in evaluating an operation's chosen pest management program.

The package includes:

- · Fly species-specific information and infographics
- · Fly identification and monitoring guidelines
- · Pest management tools and strategies
- Direct hyperlinks to scientific literature and published materials regarding fly species and management strategies of interest
- Spreadsheets that aid in monitoring and displaying general and specific fly population abundance
- Spreadsheets that aid in tracking fly management tool use and strategies



AUS hopes that producers find these materials useful when developing and evaluating an on-farm pest management plan. Stay tuned for the Spanish translation version to be released later this year.

Animal Care Program Update: Implementation of Proposition 12 (2018)

By: Elizabeth Cox MS, DVM, Animal Care Program

The CDFA Animal Care Program is responsible for the implementation of Proposition 12 (Health and Safety Code Sections 25990-25994) which set minimum confinement standards for egg-laying hens, veal calves, and breeding pigs that are raised in California as well as for the covered products that are sold in California. An egg-laying hen under Prop 12 means any female domesticated chicken, turkey, duck, goose, or guineafowl kept for the purpose of egg production for human food. To comply with Prop 12, an egg-laying hen must be kept in an enclosure that meets all the following requirements:

- The enclosure shall allow the egg-laying hen to lie down, stand up, fully extend limbs, and turn around freely.
- · The enclosure shall be a cage-free housing system that complies with all the following:
 - The enclosure shall be an indoor or outdoor controlled environment within which hens are free to roam unrestricted.
 - The enclosure shall provide enrichments that allow hens to exhibit natural behaviors, including, at a

(Continued on page 11) Page 10 minimum, scratch areas, perches, nest boxes, and dust bathing areas.

- · Employees can provide care while standing within the egg-laying hens' usable floorspace.
- And, the enclosure shall provide the minimum amount of usable floorspace per hen required by the 2017 edition of the United Egg Producers' Animal Husbandry Guidelines for U.S. Egg-laying Flocks: Guidelines for Cage-Free Housing, as follows:
 - Multitiered aviaries in which hens have access to multiple elevated platforms shall provide a minimum of one square foot of usable floorspace per hen.
 - Partially slatted systems in which hens have access to elevated flat platforms shall provide a minimum of one square foot of usable floorspace per hen.
 - Single-level all-litter floor systems bedded with litter in which hens have limited or no access to elevated flat platforms shall provide a minimum of one and one-half square feet of usable floorspace per hen.
 - Any other cage-free housing system not described in this section shall provide a minimum of one square foot of usable floorspace per hen in systems that provide hens with access to vertical space and shall provide a minimum of one and one-half square feet of usable floorspace per hen in systems that do not provide hens access to vertical space.

Egg producers in California are currently required to keep their egg-laying hens in enclosures that meet the minimum requirements listed above. The final deadline for the usable floorspace requirement went into effect on January 1, 2022. The next important deadline for egg producers in California is by January 1, 2024, when they need to be third-party certified. This third-party certification can be issued by an accredited certifying agent, CDFA, or another recognized government entity and includes an on-site inspection to verify compliance. For a current list of certifying agents, please visit the Animal Care Program's website: <u>ACP Certifying Agents</u>. The <u>Animal Care Program's website</u> has more information including guidance documents for producers, distributors, products covered under Prop 12, and links to our recent educational webinar series.



Animal Care Program staff certifying a California egg producer for compliance with Prop 12 and Animal Confinement regulations.

The Animal Health Branch is Hiring!

Do you have a passion for California's animal agriculture? Do you want to make a difference in animal health?

Join the California Department of Food and Agriculture's Animal Health Branch!

We have openings for veterinarians and non-veterinarian scientists in our Sacramento, Modesto, Tulare, and Ontario offices.

As part of the California Department of Food and Agriculture (CDFA) and the Animal Health and Food Safety Services (AHFSS) Division, the Animal Health Branch (AHB) functions as California's organized, professional veterinary medical unit to protect



(AHB) functions as California's organized, professional veterinary medical unit to protect public health, animal agriculture, and the economy from catastrophic animal diseases, disasters that impact animals, and other related health and agricultural problems.

Most positions offer a hybrid remote work schedule; some are office-based and some are field-based. The State offers a benefits package that includes medical, dental, and vision insurance, a CalPERS pension, opportunities to create retirement savings through a 401(k) or 457 plan, and the opportunity to receive health insurance in retirement. For veterinarians, CDFA has a Continuing Education allowance, pays for veterinary licensure, and is a qualified employer for both Public Service Loan Forgiveness and Veterinary Medicine Loan Repayment Programs.

If you have questions, contact our Branch Chief, Dr. Mandy Murray at <u>amanda.murray@cdfa.ca.gov</u> or our Assistant Branch Chief, Dr. Andrea Mikolon, at <u>andrea.mikolon@cdfa.ca.gov</u>.

CDFA Announces Vacancies On The Cattle Health Advisory Task Force

By: Kavishti Kokaram, DVM, DACVPM, Bovine Specialist

The California Department of Food and Agriculture, Animal Health and Food Safety Services is announcing multiple vacancies on the Cattle Health Advisory Task Force. The Task Force shall advise the Secretary of Food and Agriculture (Secretary) on the control and management of cattle health diseases and evaluate the effectiveness of those programs administered by the Department of Food and Agriculture (Department) relative to the topic. Additionally, the Secretary shall consult with the advisory task force prior to the adoption of regulations pertaining to the control and management of cattle health diseases and evaluating the effectiveness of programs administered by the Department relative to the topic.

Applications are currently being solicited to fill the following member vacancy areas:

- · Beef cattle industry (producer or livestock trade association representative);
- Dairy cattle industry (producer or livestock trade association representative);
- · Livestock Market Association;
- · Veterinary community specializing in beef and/or dairy practice;
- Academic, university or extension community specializing in cattle health diseases; and

• California Animal Health and Food Safety Laboratories System.

Interested individuals should send a brief resume and letter of interest by July 31, 2023, via email to <u>Kavishti.Kokaram@cdfa.ca.gov</u> or by mail to:

California Department of Food and Agriculture Animal Health Branch

Attn: Dr. Kavishti Kokaram 1220 N Street

Sacramento, California 95814

For more information, contact Dr. Kavishti Kokaram (916) 764-8684 or <u>Kavishti.Kokaram@cdfa.ca.gov</u>. Deadline for submission of applications will be July 31, 2023.

Stop By and See Us at The Fair!

July 2023 California State Fair

Southern California Fairs

Livestock area: Friday 7/14 – Thursday 7/27 Poultry area: Tuesday 7/18 – Sunday 7/23 July:

August:

- Chino fairgrounds
- Orange County Fair
- Exotic Bird Mart

Ventura County Fair

Antelope Valley Fair 4H/FFA



AHB staff at the 2022 State Fair.



The CAHEN outreach booth at the Del Mar County Fair.

AHB Staff Biography

Dr. Mandy Murray grew up in Northern California on a small family farm raising cattle, sheep, pigs, and chickens. She grew up in a Peace Corps family, where her mom worked overseas as a Peace Corps Program Manager and Country Director in the South Pacific, Eastern Caribbean, and Eastern Europe (opening Peace Corps in Ukraine and Moldova). She was an avid equestrian rider since the age of five engaging in pleasure riding as well as hunter/jumper, 3-day eventing, and dressage disciplines. She spent a year as a barn manager in Vermont for a professional dressage trainer and traveled the Florida show circuit before pursuing her DVM degree. After she



received her DVM degree from UC Davis, she practiced small animal medicine for a short while before returning to Davis for her MPVM and Ph.D. degree programs. Her MPVM research was on risk factors for Equine Protozoal Myeloencephalitis and her Ph.D. was the first comprehensive investigation into Equine Bone Fragility Syndrome, or Silicate Associated Osteoporosis. Throughout her veterinary career, Dr. Murray has strived to make information accessible, applicable, and useful to clients.

Prior to joining CDFA Animal Health Branch in 2017, Dr. Murray was the Program Manager at the Western Institute for Food Safety and Security (WIFSS) at UC Davis where she oversaw and contributed to a number of training and educational projects with USDA, FDA, and Department of Homeland Security (DHS). The projects were broad in scope and included training videos for the Secure Milk Supply Program; inspector and investigator training pertaining to the Food Safety Modernization Act; and DHS courses on animals in disasters and community preparedness for food and agricultural-related disasters. Prior to WIFSS, Dr. Murray was a Science and Technology Policy Fellow with the California Council for Science and Technology. During her fellowship, she spent a year working in the California



Assembly Water, Parks, and Wildlife Committee analyzing legislative bills and participating in Committee hearings, especially those pertaining to wildlife issues in California.

Dr. Murray also has a background in and passion for leadership and public service. Mandy traveled to visit her mom overseas and worked at Peace Corps headquarters in Washington, D.C., as a Country Desk Liaison before attending vet school. While working for JBS International, she managed leadership contracts for AmeriCorps and engaged in multiple strategic planning events.

Dr. Murray is a lifelong learner and enjoys new challenges. Her non-work hours are spent raising her two wonderful and enthusiastic kids, walking her dog, going to the beach, and trying to find time to relax.

Contact Information



CALIFORNIA DEPARTMENT OF FOOD & AGRICULTURE

State Veterinarian and Director, Animal Health and Food Safety Services Dr. Annette Jones (916) 900-5000

Other AHFSS Branches

Bureau of Livestock Identification John Suther, Chief (916) 900-5006

Milk and Dairy Food Safety Dr. Stephen Beam, Chief (916) 900-5008

Meat, Poultry and Egg Safety Paula Batarseh, Chief (916) 900-5004

Antimicrobial Use and Stewardship Dr. Edie Marshall, Chief (916) 576-0300

> Animal Care Dr. Elizabeth Cox, Chief (916) 900-5000

United States Department of Agriculture

Dr. Donald Herriott District Director, District 3

Dr. Larry Rawson Assistant District Director, District 3 (CA/HI)

USDA, APHIS, VS, SPRS (916) 854-3950/Toll Free: (877) 741-3690

Animal Health Branch

 Dr. Amanda Murray, Branch Chief

 Headquarters:
 (916) 900-5002

 Fax:
 (916) 900-5333

 Permit Line:
 (916) 900-5052

California Department of Food and Agriculture Animal Health and Food Safety Services Animal Health Branch 1220 N Street Sacramento, CA 95814

District Offices Veterinarian In Charge (VIC)

Redding Dr. Michael Poulos 2135 Civic Center Drive, Room 8 Redding, California 96001 (530) 225-2140

Modesto Dr. Maryaam Goshgarian 3800 Cornucopia Way, Suite F Modesto, California 95358 (209) 491-9350

Tulare Dr. Maureen Lee-Dutra 18760 Road 112 Tulare, California 93274 (559) 685-3500

Ontario Dr. Alisha Olmstead 1910 South Archibald Avenue, Suite Y Ontario, California 91761 (909) 947-5932

Website: www.cdfa.ca.gov/ahfss/Animal_Health/Index.html Email: ahbfeedback@cdfa.ca.gov