The California Department of Food and Agriculture (CDFA) Animal Health Branch (AHB) has been kept busy with one of its primary missions – to investigate, control and eliminate incursions or outbreaks of emerging and foreign animal diseases that impact animal agriculture. The Branch has been working with its State and Federal partners in ongoing responses to three disease outbreaks.

Poultry Disease Update and Biosecurity Advisory
By Felicia Pohl and Elise Chad, DVM, MS

The risk of diseases entering your flock is always present but can be mitigated. Enhanced biosecurity is critical in the face of ongoing disease outbreaks, the start of winter (bringing cool, moist conditions where viruses thrive), and the onset of wild bird migration season.

Avian Influenza

From September through November 2018, there were five (5) confirmed cases of H7N3 low pathogenic avian influenza (LPAI) in Stanislaus County. The first case was confirmed on September 11, 2018 in a commercial turkey flock. While the affected flock did not show notable signs of avian influenza (AI), the company veterinarian submitted samples to the California Animal Health and Food Safety (CAHFS) Laboratory for routine flock surveillance. CAHFS diagnosed the samples as presumptive positive for LPAI H7. The infection was confirmed by the United States Department of Agriculture’s (USDA) National Veterinary Services Laboratory as North American wild bird lineage LPAI H7N3.

CDFA and USDA took immediate action and worked closely with poultry producers and veterinarians in the area to test other flocks for disease and limit additional introductions and spread. During surveillance, in less than a week, a second case was confirmed also in commercial turkeys. By the end of September, a total of four (4) flocks were confirmed positive for LPAI H7N3.

On October 4, 2018, a commercial turkey flock began experiencing a slight increase in mortality and respiratory signs. Samples were submitted to the CAHFS lab and within a week, they were also confirmed positive for LPAI H7N3. This brought the total number of infected flocks to five (5)(four (4) National
Poultry Improvement Plan [NPIP] commercial turkey flock participants and one (1) small, non-NPIP flock of mixed poultry). Three (3) of the poultry flocks (one (1) of them being the non-NPIP mixed flock) were euthanized and disposed of, while the other two (2) affected turkey flocks (because of flock age and premises characteristics) were control-marketed. Control-marketing consisted of isolating the flocks in place under quarantine, monitoring twice weekly, and holding until they tested negative for AI. Once negative, the flocks were able to be processed under CDFA oversight.

LPAI has the potential to mutate to highly pathogenic avian influenza which is highly lethal to poultry. Some strains of avian influenza (AI) can also be a public health concern. While zoonotic strains currently have not been found in wild birds in California, they have been found in migrating and domestic birds in other parts of the world. Even common strains of AI can mutate to a more dangerous form, so vigilance is critical.

Virulent Newcastle Disease

In Southern California, from May 18, 2018 - December 21, 2018, a total of 231 virulent Newcastle disease (VND) cases were identified in backyard birds: one hundred and four (104) in San Bernardino County, eighty-seven (87) in Riverside County, thirty-nine (39) in Los Angeles County, and one (1) in Ventura County. Multiple cases of infected birds continue to be found on a weekly basis. In addition, VND was detected in a commercial chicken flock in Riverside County on December 15, 2018 via routine surveillance testing and the entire flock was euthanized and disposed of within twenty-four (24) hours of the confirmed diagnosis.

VND, previously known as exotic Newcastle disease, is a fast-spreading virus that affects the respiratory, nervous and digestive system of numerous bird species, but most severely affects poultry. The last outbreak in the U.S. occurred in Southern California in 2002, resulting in the death of 3.2 million birds and a response cost of over $160 million. While wild birds are not thought to play a major role in the spread of VND, they can become infected or mechanically carry virus. In addition, humans can also have a significant role in moving the disease by moving birds. CDFA continues to work with the USDA, CAHFS, the poultry industry, and additional stakeholders in the eradication of this outbreak.

Biosecurity Advisory

At this time, CDFA requests that poultry be kept separate from wild birds by housing poultry inside barns and discouraging any interaction with wild birds, particularly migrating waterfowl, as much as possible. We also recommended limiting introduction of new poultry and if doing so, to obtain the birds from reputable sources.

The risk to each farm may be different, so if you are a poultry owner, it is important to consider your situation when complying with this request. For certified organic farms wanting to make changes to housing, certifiers must be contacted before altering confinement and continue to follow certifier requirements to remain certified. This heightened biosecurity effort will be important through April 2019 (when migration typically ends, and warmer weather begins).

For updates and more information about LPAI and VND, please visit: http://www.cdfa.ca.gov/go/avianinfluenza http://www.cdfa.ca.gov/go/VND
Bovine trichomonosis is a venereal disease of cattle that can have serious economic and production impacts. CDFA's trichomonosis control program, established in partnership with the livestock industry, has been in place since 2003. Regulations were subsequently modified to update, strengthen and improve the program in 2007, 2011, and 2017. A core element of being able to review the program’s efficacy over time is capturing data. Animal Health Branch staff dedicate time and effort to enter negative and positive trichomonosis test records received from practitioners into a database, which can then be reported out for analysis.

Yearly summary numbers (October 1, 2017 – September 30, 2018):

- **1,422** herd tests (increase 4.6% from previous year)
- **12,620** samples tested (increase 9.5% from previous year)
- **106** positive tests (increase 0.95% from previous year; 12 of these positives were uterine fluid samples from dairy cows with history of increased abortion and open cows with pyometra)
- Over **13,000** color-coded trichomonosis ear tags distributed to approved veterinarians
2018 Equine WNV Summary

For 2018, a total of eleven (11) horses have been confirmed positive for West Nile Virus. The positive horses were in Amador, Kern, Merced (2), Placer, Sacramento (3), San Joaquin, Shasta and Stanislaus counties. Five (5) horses were unvaccinated, three (3) horses had an unknown vaccine history, and three (3) horses were vaccinated. Six (6) horses died or were euthanized and five (5) horses are alive.
CDFA continually monitors and investigates equine neurologic cases for WNV and urges horse owners to consult their veterinarian on WNV vaccination programs to ensure maximum protection of their horses.

San Mateo Equine Herpesvirus Myeloencephalopathy Case

On November 7, 2018, a 24-year-old Arabian mare, originating from a San Mateo County facility, displaying neurologic signs was confirmed positive for Equine Herpesvirus Myeloencephalopathy. The mare was removed from the property and placed in isolation and quarantined. Five (5) exposed horses were monitored for clinical signs and their temperatures were taken twice daily. No additional cases were confirmed, and the quarantine was released.

Equine Microchip Look Up Tool

The American Horse Council (AHC) has launched its new equine microchip look-up tool, which will allow horse owners, law enforcement, animal health officials, and others to search for horses that have been microchipped and registered with a participating organization. Microchip lookup services have existed for several animal species for years. Unfortunately, those lookup tools have limitations that prevented the entirety of the horse industry from being represented. The new lookup tool addresses the limitations, provides informational resources for the equine industry regarding microchipping, and promotes microchipping as a form of permanent official identification. Visit www.horselookup.org for more information.

Equine Welfare Data Collective

The Equine Welfare Data Collective (EWDC) was created by the Unwanted Horse Coalition (UHC), a program of the American Horse Council (AHC), with funding partners being The Right Horse Initiative (TRH), The American Society for the Prevention of Cruelty to Animals (ASPCA), and the American Association of Equine Practitioners Foundation (AAEPF). The collaboration is an effort to accumulate, analyze and report data to enhance programing for transitioning an at-risk equine. Most current data on equine welfare from transition centers, adoption centers, rescues, sanctuaries, and shelters is anecdotal. The industry recognizes a need for accurate and credible data to identify risks and opportunities within these facilities. The plan is to distribute online surveys to organizations within the United States and collect anonymous results. For more information visit: https://www.unwantedhorsecoalition.org/equine-welfare-data-collective/
Sporadic Brucellosis Cases Continue in the Greater Yellowstone Area

By Anita Edmondson, BVM&S, MPVM, MRCVS and Alyssa Louie, DVM, MPVM

Three (3) new detections of Brucella abortus in cattle occurred in the Fall of 2018. All of the herds affected were in counties close to Yellowstone National Park in Wyoming, and fell within the Brucellosis Designated Surveillance Area (DSA). The first was a beef cattle herd in Park County, detected in October – three (3) animals that tested as reactors were removed, and the remaining herd remains quarantined for additional herd testing. All contact herds have tested negative. The second was a small hobby herd in Teton County, where initially five (5) animals tested as reactors. The herd was voluntarily sent to slaughter, and given there were no contact herds, the case is considered closed. The third case was detected in a beef cattle herd in Sublette County in November, where two (2) reactors were found and removed; the herd has been quarantined, and contact herds are being tested.

All three (3) herds were detected through required testing for movement or change of ownership in the DSA, showing that this method of surveillance is effective in controlling spread between herds. There does not appear to be epidemiological links between the three (3) herds, and the most likely source of infection for all is exposure to elk.

The last cases of brucellosis in Wyoming were found in 2015, with the last affected herd released from quarantine in 2017.

Phasing Out Visual Only Official Identification Tags for Cattle

By Rebecca Campagna, DVM, MPH

The United States Department of Agriculture (USDA) recently announced goals for advancing animal disease traceability (ADT) in all dairy cattle and sexually intact beef cattle eighteen (18) months of age and over.

One of the goals is to complete the transition to use of electronic forms of official identification (ID), or Radio Frequency Identification Devices (RFID), within the next few years. Visual only ID tags, including silver brite and orange brucellosis vaccination (bangs) metal clip tags, will be phased out. The proposed timeline for this transition is:

- January 1, 2020: USDA will stop providing free visual only ID tags; tags will still be available for purchase.
- January 1, 2021: Tag manufacturers will stop providing visual only ID tags.
- January 1, 2023: All official ID devices in cattle must be electronic.

CDFA is working with the cattle industry in California to ensure this transition occurs as smoothly as possible. State animal health officials are exploring options regarding funding from the USDA, which may help cover the cost of tags and wand readers. The above timeline is tentative, and state veterinarians are working with the USDA to ensure that that industry, veterinarians, and animal health officials are prepared for this transition to mandatory electronic ID tags.
Bovine Tuberculosis Confirmed in a Wisconsin Dairy Herd: Human Source?
By Anita Edmondson, BVM&S, MPVM, MRCVS and Alyssa Louie, DVM, MPVM

In September 2018 in Wisconsin, a cow was found to be infected with bovine-TB at slaughter. The animal was traced back to a 2,000-cow dairy herd in Wisconsin. The herd was quarantined and tested for tuberculosis by state and federal staff in October 2018. Forty-eight (48) cattle that responded to the caudal fold tuberculin skin test were euthanized (or sent to slaughter with enhanced inspection), and tuberculosis was confirmed in the herd. Any contact herds, traces of animals moved off the dairy, and potential sources of infection are being investigated.

Whole genome sequencing confirmed that the TB-strain isolated from the slaughtered cow matched the strain isolated from a worker that was at the dairy in 2015. This worker left the dairy and completed TB-treatment that same year. The whole herd was TB-tested in 2015 and again in 2016 (including the cow later found TB-infected at slaughter in 2018) because of the TB-infected worker – both herd tests were negative.

Wisconsin has been accredited TB-free since 1980, with the last bovine-TB was detection in the state occurring around 1995.

For more information:
https://datcp.wi.gov/Pages/Programs_Services/TBInvestigation.aspx

CDFA List of Reportable Conditions for Animals and Animal Products: Annual Update
By Alyssa Louie, DVM, MPVM

Every year, CDFA Animal Health Branch reviews and updates a reportable disease list for animals and animal products. Determining diseases of importance and accurate, timely reporting and response are important components of surveillance and disease control. The list closely follows USDA's National List of Reportable Animal Diseases, as well as OIE’s international list of notifiable animal diseases, though State and industry specific concerns are also considered. This year, there were minimal changes to the national, international, and state lists.

Did you know: the CDFA Animal Health Branch List of Reportable Conditions has nearly 100 unique conditions, and is consistent with an additional 35 OIE-listed diseases of fish, amphibians, mollusks, bees, and crustaceans?

Your role in disease surveillance is critical in protecting California’s agriculture. While the list includes specific conditions with time frames for reporting depending on level of concern and severity of animal disease, it is important to remember to contact CDFA or USDA animal health officials immediately if you see vesicles, unusual or unexplained illness, CNS signs, unexplained high morbidity or mortality, or any other signs suspicious of a foreign animal disease.

Poster: https://www.cdfa.ca.gov/AHFSS/Animal_Health/pdfs/CA_Reportable_Disease_List_Poster.pdf
Two-pager: https://www.cdfa.ca.gov/AHFSS/Animal_Health/pdfs/CA_Reportable_Disease_List_2pg.pdf
LIST OF REPORTABLE CONDITIONS FOR ANIMALS AND ANIMAL PRODUCTS*

*Pursuant to Section 9101 of the California Food and Agricultural Code, Title 3 California Code of Regulations § 797 and Title 9 Code of Federal Regulations Section 161.4(f)

WHO MUST REPORT: Any licensed veterinarian, any person operating a diagnostic laboratory, or any person who has been informed, recognizes or should recognize by virtue of education, experience, or occupation, that any animal or animal product is or may be affected by, or has been exposed to, or may be transmitting or carrying any of the following conditions, must report that information.

WHAT TO REPORT: Immediately report any animal disease not known to exist in the United States, any event with increased mortality and/or morbidity of unknown cause or source and any toxicology condition likely to contaminate animals or animal products (meat, milk or eggs).

CALL IF YOU SEE: Vesicles, unusual or unexplained illness, CNS signs, mucosal diseases, hemorrhagic septecmias, unusual larvae in wounds, uncommon ticks, high morbidity or mortality.

Report any emergency, regulatory, or monitored condition within the provided time frame. Some diseases are listed under the major species of concern; if you see compatible signs for such conditions in another species, please report!

**EMERGENCY CONDITIONS – Report within 24 Hours of Discovery**
Redding 530-225-2140, Modesto 209-491-9350, Tulare 559-685-3500, Ontario 909-947-4462, Headquarters 916-900-5002, or VS at 1-877-741-3690

**MULTIPLE SPECIES**
General, non-specific conditions: Unexplained high mortality or disease conditions; livestock exposed to toxic substances.
- Anthrax (Bacillus anthracis)
- Crimean Congo hemorrhagic fever
- Foot-and-mouth disease
- Heartwater (Ehrlichia ruminantium)
- Japanese encephalitis
- Melioidosis (Burkholderia pseudomallei)
- Rabies of livestock
- Rift Valley fever
- Screwworm myiasis (Cochliomyia hominivorax or Chrysomya bezziana)
- Surra (Trypanosoma evansi)
- Vesicular stomatitis

**BOVINE**
- African trypanosomiasis (Tsetse fly diseases)
- Bovine babesiosis (Cattle tick fever)
- Bovine spongiform encephalopathy
- Contagious bovine pleuropneumonia (Mycoplasma mycoides mycoides small colony)
- Foot-and-mouth disease
- Hemorrhagic septecmia (Pasteurella multocida B/Asian or E/African)
- Lumpy skin disease
- Malignant catarrhal fever (wildebeest-associated form)
- Rinderpest
- Schmallenberg virus/ Akabane
- Theileriosis (Theileria parva parva or T. annulata)

**CAPRINE/OVINE**
- Contagious agalactia (Mycoplasma agalactiae)
- Contagious caprine pleuropneumonia (Mycoplasma capricolum capri pneumoniae)
- Foot-and-mouth disease
- Nairobi sheep disease
- Peste des petits ruminants (Goat plague)
- Schmallenberg virus/ Akabane
- Sheep pox and goat pox

**PORCINE**
- African swine fever
- Classical swine fever
- Foot-and-mouth disease
- Nipah virus
- Swine vesicular disease
- Vesicular exanthema of swine virus (VESV)

**AVIAN SPECIES**
- Avian influenza (HPAI and H5/H7 LPAI)
- Turkey rhinotracheitis (Avian metapneumovirus)
- Virulent Newcastle disease (Exotic Newcastle disease, velogenic viscerotropic Newcastle disease)

**EQUINE**
- African horse sickness
- Dourine (Trypanosoma equiperdum)
- Glanders (Farcy: Burkholderia mallei)
- Hendra virus (Equine morbillivirus)
- Venezuelan equine encephalomyelitis
- Vesicular stomatitis

**CERVIDS/LAGOMORPHS/CAMELIDS**
- Rabbit hemorrhagic disease (Calicivirus)

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1 Diseases in green, seen in any species, are also reportable to California Department of Public Health (CDPH); CDFA will report these designated zoonotic diseases to CDPH.

For additional information, contact CDFA (email: cavet@cdfa.ca.gov or visit our website at www.cdfa.ca.gov/ah)

(Continued on page 8)
REGULATED CONDITIONS – Report within Two Days of Discovery

**MULTIPLE SPECIES**
- Brucellosis (*B. melitensis, B. abortus, B. suis*)
- Pseudorabies (Aujeszky’s disease)
- Tuberculosis (*Mycobacterium bovis*)
- Tularemia

**BOVINE**
- Bovine brucellosis (*Brucella abortus*)
- Bovine tuberculosis (*Mycobacterium bovis*)
- Trichomonosis (*Tritrichomonas foetus*)

**CAPRINE/OVINE**
- Caprine and ovine brucellosis (excluding *Brucella ovis*)
- Scrapie
- Sheep scabies (Body mange; *Psoroptes ovis*)

**PORCINE**
- Porcine brucellosis (*Brucella suis*)
- Pseudorabies (Aujeszky’s disease)

**AVIAN SPECIES**
- Fowl typhoid (*Salmonella gallinarum*)
- Omithosis (Psittacosis, avian chlamydiosis; *Chlamydia psittaci*)
- Pulmonary disease (*Salmonella pullorum*)

**EQUINE**
- Contagious equine metritis (*Taylorella equigenitalis*)
- Eastern equine encephalomyelitis
- Epizootic lymphangitis
- Equine herpesvirus myeloencephalopathy (EHM)
- Equine infectious anemia
- Equine piroplasmosis (*Babesia caballi* or *Theileria equi*)
- Western equine encephalomyelitis
- West Nile virus

**CERVIDS/LAGOMORPHS/CAMELIDS**
- Chronic wasting disease in cervids

MONITORED CONDITIONS – Report within 30 Days of Discovery

**MULTIPLE SPECIES**
- Bluetongue
- Echinococciosis/hydatoïdosis (*Echinococcus species*)
- Epizootic hemorrhagic disease
- Johne’s disease (*Paratuberculosis; Mycobacterium avium paratuberculosis*)
- Leishmaniosis
- Q Fever (*Coxiella burnetii*)

**BOVINE**
- Anaplasmosis (*Anaplasma marginale* or *A. centrale*)
- Bovine cysticercosis (*Taenia saginata*)
- Bovine genital campylobacteriosis (*Campylobacter fetus venerealis*)
- Bovine viral diarrhea
- Enzootic bovine leukosis (Bovine leukemia virus)
- Infectious bovine rhinotracheitis (Bovine herpesvirus-1)
- Malignant catarrhal fever (sheep-associated form)

**CAPRINE/OVINE**
- Ovine epididymitis (Brucella ovis)
- Caprine arthritis/encephalitis
- Enzootic abortion of ewes (Ovine chlamydiosis; *Chlamydophila abortus*)
- Maedi-visna (Ovine progressive pneumonia)
- *Salmonella abortusovis*

**PORCINE**
- Porcine cysticercosis (*Taenia solium*)
- Porcine reproductive and respiratory syndrome
- Senecavirus A
- Swine enteric coronavirus diseases, including transmissible gastroenteritis
- Swine influenza
- Trichinellosis (*Trichinella spiralis*)

**AVIAN SPECIES**
- Avian infectious bronchitis
- Avian infectious laryngotracheitis
- Duck viral hepatitis
- Goose parovirus
- Infectious bursal disease (*Gumboro disease*)
- Influenza A viruses (see Emergency Conditions for HPAI and H5/H7 LPAI)
- Mycoplasmosis (*Mycoplasma synoviae* and *Mycoplasma gallisepticum*)

**EQUINE**
- Equine herpesvirus-1 and 4 (excluding EHM)
- Equine influenza
- Equine viral arteritis

**CERVIDS/LAGOMORPHS/CAMELIDS**
- Camelpox in camels
- Myxomatosis in rabbits

**FISH, AMPHIBIAN, CRUSTACEAN, BEE, AND MOLLUSK**

WHERE TO REPORT: Department of Food and Agriculture, Animal Health Branch (AHB) District Office: Redding 530-225-2140, Modesto 209-491-9350, Tulare 559-688-3500, Ontario 909-947-4462; AHB Headquarters at 1220 N Street, Sacramento, California 95814, telephone 916-900-5002, facsimile 916-900-5333; or the USDA, APHIS, Veterinary Services (VS) office at 1-877-741-3690.

5 Diseases in green, seen in any species, are also reportable to California Department of Public Health (CDPH); CDFA will report these designated zoonotic diseases to CDPH.
Sr. Livestock Inspector Vickie Conger grew up on a small ranch in eastern Arizona, raising horses, donkeys, rabbits and chickens. Ranch life in Arizona developed her appreciation of the old west and the cowboy way of life. She followed her passion obtaining an A.S. Degree in Agriculture with a Specialization in Equine Studies from Sierra College in Rocklin, CA. Vickie’s career in state service began in 2003 and in 2007 she joined CDFA Plant Health and Pest Prevention Services. In 2011, she joined the Animal Health Branch (AHB) as a livestock inspector working at the Livestock Movement Permit desk. In 2017, she left CDFA and relocated from northern California to the central coast. In 2018, she rejoined CDFA AHB in Tulare as a Sr. Livestock Inspector.

She currently raises Suffolk/Hamp cross sheep, Charolais cattle and owns three (3) horses. For almost ten (10) years she was a BLM Wild Horse and Burro Program volunteer gentling mustangs to prepare them for adoption and completing compliance checks once adopted. She has also competed in Extreme Makeover training challenges and has ridden with the Painted Ladies Drill Team. Vickie currently lives in Templeton with her husband and has two (2) grown sons. She enjoys spending time with her family, raising her livestock, working her horses, volunteering for Veteran's programs, fishing, traveling and cruising the coast in her muscle car.

Cindy Ames grew up in the Central Valley where she was heavily involved in agriculture. In particular, she was active in showing horses: Western Pleasure, Halter Classes and Western Equitation; as well as participating in 4-H and FFA showing sheep. Later, after meeting her husband, she was a header while her husband healed in team roping competitions. She continued her love for agriculture as she and her husband raised their four (4) children on a small farm near Porterville. There, the children learned about animal husbandry and showing their animals along with the family farming of oat hay, oranges and culinary herbs.

She started her career with the State eleven (11) years ago working in Corrections and in the State’s Developmental Centers (mainly in Human Resources, Labor Relations and in the Health & Safety department). She has been very happy to return to the agricultural milieu as the office manager for Tulare District Animal Health Branch. Her local knowledge and familiarity with all things agriculture has made her an asset to the Tulare team.
Contact Information

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

Physical Address:
2800 Gateway Oaks Drive
Sacramento, CA 95833

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

Animal Health Branch
Dr. Kent Fowler, Chief
Headquarters: (916) 900-5002
Fax: (916) 900-5333
Permit Line: (916) 900-5052

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

District Offices
Veterinarian In Charge (VIC)

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

Modesto: Dr. Randy Anderson
3800 Cornucopia Way, Suite F
Modesto, California 95358
(209) 491-9350

Tulare: Dr. Gregory Ledbetter
18760 Road 112
Tulare, California 93274
(559) 685-3500

Ontario: Dr. Alisha Olmstead
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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

United States Department of Agriculture

Dr. Gary Brickler
Director, District 6

Dr. Larry Rawson
Assistant District Director, District 6 (CA/HI)

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