

# Washington State VETERINARIAN



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## SMALL ANIMAL

# Brucella canis

Across the country, *Brucella canis* has been in the news frequently.

Just this past May, Iowa's state veterinarian confirmed multiple cases of *B. canis* in a commercial breeding kennel. Due to the increasing interstate movement of dogs—whether rescue animal movement or private breeding transactions—it is important for veterinarians to vigilantly protect our canine and human populations from this serious zoonotic disease.

### Disease Information

*B. canis* is a gram-negative, intracellular coccobacillus. It is transmitted between dogs by mucosal contact with infected material. Vaginal discharges, seminal fluids, and tissues associated with birth and abortion contain the highest concentrations of the bacterium. However, urine, blood, milk, saliva, and feces can also contain the organism. Pups can be infected in utero, intrapartum, or during nursing. Dogs and wild Canidae are the only animal species serving as reservoirs of *B. canis* under natural conditions.

The primary clinical manifestations in dogs consist of reproductive problems, although prostatitis, uveitis, and discospondylitis have also been noted. Canine brucellosis is considered a lifelong infection in dogs.

### Zoonotic Risk

The epidemiology of *B. canis* infection in humans is poorly understood and the proportion of human brucellosis attributed to *B. canis* is unknown. Current knowledge suggests *B. canis*

CONTINUED ON PAGE 2

## Inside this issue

- |  |         |
|--|---------|
| We're not zombies, but we need your neurologic sheep and goat brains!        | Page 2  |
| Reportable disease statistics  | Page 3  |
| Ten (relatively) easy and inexpensive strategies to improve farm biosecurity | Page 4  |
| UPDATE on Brucellosis in the U.S.  | Page 6  |
| CDC survey of Large Animal Clinical Practitioners in the U.S.                | Page 6  |
| A Case of Ruffled Feathers: Can It Be Virulent Newcastle Disease?            | Page 7  |
| Scuttlebutt on WSDA's Reserve Veterinary Corps                               | Page 8  |
| Swine Flu Risk and Prevention at Fairs and Exhibitions                       | Page 9  |
| Vesicular Stomatitis: It's Back  | Page 10 |

## Brucella canis, continued from page 1

infection in humans is significantly under-diagnosed and under-reported, primarily due to the disease's nonspecific presentation and lack of readily available laboratory testing for humans.

### Testing Options for Canines

Due to the multitude of tests available for *B. canis* in dogs, choosing the right test can be difficult. A comparison chart of diagnostic tests can be found in the following guidance document: [USDA Best Practices for Brucella canis Prevention and Control in Dog Breeding facilities](#). Screening tests are commercially available and very sensitive. Positive screening tests should be confirmed with a secondary test.

### Recommended testing scheme

- Screening tests
  - Rapid Slide Agglutination Test (RSAT)
  - Tube Agglutination Test (TAT)
- Confirmatory tests
  - Agar Gel Immunodiffusion (AGID)
    - » *Only available at [Cornell's Animal Health Diagnostic Center](#)*
  - PCR
  - Blood culture

Due to the complexities of canine testing, one standard protocol is difficult to recommend; contact the [Washington Animal Disease Diagnostic Laboratory at WSU](#) for guidance on testing.

### Reporting Brucella canis

Infection with *B. canis* is reportable. A WSDA veterinarian will contact the primary reporting veterinarian and collect more information. WSDA is particularly interested in determining if the canine was imported and if it was accompanied by a health certificate and proof of rabies vaccination. It is also important to know if the dog resides in a private residence or a breeding operation and how many dogs reside with the positive patient.

### Next Steps

After initial reporting, the WSDA and private veterinarian will discuss possible additional testing and options to address canine and human health risks. Due to the lifetime infection of the dog and public health risks, euthanasia is one option. Another is to castrate or spay the canine (if not already done) and treat with antibiotics. The difficulty with this option is the dog may need to stay on quarantine for the remainder of its life.

WSDA would prefer the private reporting veterinarian maintain primary management of the case; however, WSDA veterinarians will support practitioners in case management if requested. If the client is resistant to treatment, quarantine, and other mitigations, WSDA veterinarians have the legal authority to intervene, protect public health, and limit the spread of animal disease by writing a formal quarantine.

Because of zoonotic risk, it is the Washington State Department of Health (DOH) or local health jurisdiction (LHJ) may contact the reporting veterinarian and dog owner to discuss the public health risks associated with *B. canis*.

*B. canis* infection in a dog is difficult to deal with. Veterinarians and owners have to take into account the patient's quality of life, public health risks, and the human-animal bond. Historically, Washington has had a low reporting rate of positive *B. canis* cases, and we would like it to stay that way. We are counting on you to help us contain and control this disease for our canine and human populations! ☞

## SMALL RUMINANT

# We're not zombies, but we need your neurologic sheep and goat brains!

Accredited veterinarians are encouraged to submit tissues or whole heads for scrapie surveillance from sheep/goats over 18 months of age that die on-farm or are euthanized. For fiscal year 2020, WA is required by USDA APHIS to sample 82 goats and 89 sheep to contribute to the national data pool so we can have statistical confidence in the scrapie status of the U.S. flock.

Scrapie is a fatal, degenerative disease affecting the central nervous system of sheep and goats. It is among a number of diseases classified as transmissible spongiform encephalopathies (TSE). Due to nervous system damage, affected animals often show behavior changes such as nervousness or aggression, intense rubbing, and locomotor incoordination that progresses to recumbency and death. Other clinical signs may include tremors (especially of head

and neck), head pressing, star gazing, significant weight loss with no decrease in appetite, wool pulling, and hyperesthesia.

*In addition to collecting routine surveillance samples, if a sheep or goat is neurologic or showing clinical signs compatible with scrapie prior to death, the animal must be reported to the WA State Veterinarian.*

APHIS provides collection and shipping supplies including waybills for tissue and whole head submissions at no cost. You can order a box with all pertinent paperwork included through USDA APHIS Veterinary Services in Tumwater at 360-753-9430. For information on sample collection, labeling, and shipping samples, click [here](#). Remember when sampling to keep all identification tags on the animal(s). ☞

# Washington Reportable Disease Stats

## JULY 2019

DISEASE REPORTED	ANIMAL	NUMBER
Brucellosis ( <i>Brucella canis</i> )	Canine	1
Contagious ecthyma (Orf)	Caprine (goat)	4
Equine influenza	Equine (horse)	3
Heartworm	Canine (dog)	25
Lyme Disease	Canine (dog)	1
Other	Canine (dog)	3
	Equine (horse)	1
	Feline (cat)	1
Salmonellosis	Canine (dog)	1
Strangles ( <i>Streptococcus equi</i> subsp. <i>equi</i> )	Equine (horse)	4

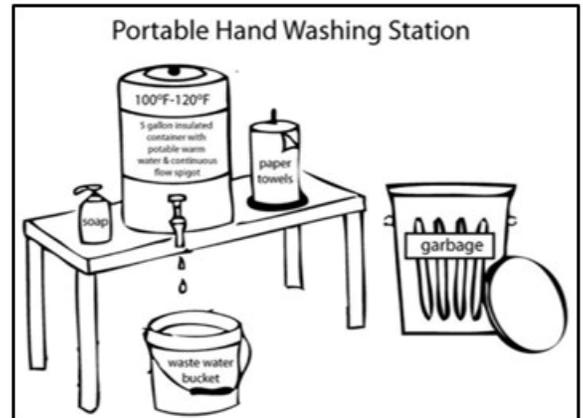
## AUGUST 2019

DISEASE REPORTED	ANIMAL	NUMBER
Brucellosis ( <i>Brucella canis</i> )	Canine	1
Enzootic Bovine Leukosis ( <i>Bovine leukemia virus</i> )	Bovine (cow)	1
Heartworm	Canine (dog)	9
Johne's disease (paratuberculosis)	Bovine (cow)	1
Leptospirosis	Canine (dog)	2
Other	Canine (dog)	1
	Equine (horse)	1
	Feline (cat)	8
Viral hemorrhagic disease of rabbits (calicivirus)	Canine (dog)	3

# Ten (relatively) easy and inexpensive strategies to improve farm biosecurity

## 1. Wash your hands.

Everyone on a livestock farm should wash his/her hands before and after handling animals, equipment, food, or farm surfaces. If plumbing is not available for sinks, install portable handwashing stations in various places around the farm to encourage handwashing. Educate employees about how handwashing will reduce both human and animal diseases. Figure 1 is a diagram of an inexpensive handwashing system that can be set up anywhere.



**Figure 1.** Economical remote handwashing station. Use paper towel to turn handle on and off; wash hands with soap under running water for 20 seconds. Adapted from Kalamazoo MI County Environmental Health by Sarita Role Schaffer and previously published in *WSU Extension publication FS257E*, "Practical Biosecurity Recommendations for Farm Tour Hosts."

## 2. Keep a closed herd.

As shown in Figure 2, having a closed herd is one of the most cost-effective biosecurity practices. Herd additions are the greatest potential risk to farm biosecurity. Using artificial insemination, growing your own replacements, and preventing contact with neighboring animals will greatly reduce health risks posed to your animals.

## 3. Quarantine new or returning animals.

If you do not have a closed herd, have an area about 100 feet away from other animals where newly-purchased animals or those returning from a show can be housed for 30 days and observed for signs of illness. The area should be downwind and downstream from the main herd, with feed and water separate from the main herd. Designate tools and equipment to be used in that area only. Only one person should care for animals in quarantine; this person should use footwear and coveralls designated for the area and care for these animals last. Vermin and vector control should be especially diligent in the quarantine area.

## 4. Purchase animals from disease status-known sources.

Pre-purchase laboratory testing of potential herd additions is wise, but knowing the disease status of that animal's herd of origin is equally important. Johne's disease, bovine leukosis, contagious mastitis, bovine viral diarrhea and many other problems can be brought in with herd additions. Obtain new animals from trustworthy sources with good reputations for selling healthy animals. If you purchase replacements from livestock auctions or sale yards, you are taking a huge and unwise gamble with the health of your herd. Discuss sources of low-risk animals with your veterinarian.

## 5. Isolate and treat sick animals.

Have a hospital area for sick animals situated well away from healthy and quarantined animals. All tools, equipment, water buckets, etc. used in this area should be specific to the area and not used elsewhere; they should be cleaned and disinfected after each sick animal's case has been resolved. Sick animal chores should be done after those of healthy animals

Cost Rankings (\$\$\$, \$\$, \$, €)	Effectiveness (★, ☆)	
€	★ ★ ★ ★	<b>Reduces animal to animal disease spread</b>
\$	★ ★ ★ ★	1. Have a closed herd (grow own replacements; do not take livestock to shows)
\$	★ ★ ★ ★	2. If you do buy animals, purchase healthy, test-negative animals (don't buy animals from auction yards)
\$	★ ★ ★ ★	3. Quarantine herd additions or returns
\$\$	★ ★ ★ ★	4. Isolate and treat sick animals
\$	★ ★ ★ ★	5. Vaccinate against diseases of concern effectively (store vaccines/medicines correctly)
\$	★ ★ ★ ★	6. Control flies, birds, wildlife, and other species (could also be indirect)
\$\$	★ ★ ★ ★	7. Prevent contact with neighboring animals or their discharges through water, air, or direct fence-line contact
€	★ ★ ★ ★	8. Remove and dispose of placentas and aborted fetuses promptly and properly (also animal to human)
€	★ ★ ★ ★	9. Cull animals that do not respond to treatment or that are asymptomatic disease carriers
\$	★ ★ ★ ★	10. Use AI for breeding whenever possible; Do not share breeding males between farms
		<b>Reduces animal to human or v.v.</b>
\$	★ ★ ★ ★	1. Use personal protective equipment (gloves, clean boots, coveralls)
\$\$	★ ★ ★ ★	2. Clean and disinfect (hands, feet, shower in/out). Provide facilities for C&D
€	★ ★ ★ ★	3. Restrict visitors; Keep a log of visitors
€	★ ★ ★ ★	4. Prevent employee ownership of same species of livestock as those cared for
€	★ ★ ★ ★	5. Care for animals in the following order: healthy, quarantined, sick, washing hands and changing PPE between
		<b>Reduces chance of feed or water contamination or disease spread by same</b>
\$\$	★ ★ ★ ★	1. Manage manure effectively
\$\$	★ ★ ★ ★	2. Have an effective on-farm composting system for manure and mortalities
\$\$	★ ★ ★ ★	3. Protect feed and water from contamination
		<b>Reduces disease spread by vehicles, equipment, facility</b>
\$\$	★ ★ ★ ★	1. Clean and disinfect (vehicles, equipment, facilities)
\$	★ ★ ★ ★	2. Establish effective signage (parking, no entry, etc.); Control traffic on farm
\$\$\$	★ ★ ★ ★	3. Establish and maintain a line of separation (gates, perimeter, internal fences, and traffic flow)
\$	★ ★ ★ ★	4. Do not share equipment with others
\$\$	★ ★ ★ ★	5. Have separate equipment for feed and manure
\$\$\$	★ ★ ★ ★	6. Ensure good air quality through effective barn ventilation systems
\$\$\$	★ ★ ★ ★	7. Avoid dirt and wood-based facilities

**Figure 2.** Relative cost-benefit comparison for biosecurity practices. From "A human behavioral approach to reducing the impact of livestock pest or disease incursions of socio-economic importance" youth curriculum, Module 4, Biosecurity Strategies. This material is based upon work that is supported by the National Institute of Food and Agriculture, U.S. Department of Agriculture, under award number 2015-69044-23273.

and those in quarantine. Better yet, just one person should be designated to handle sick animals. Ensure wastes (urine, manure, leftover feed) and airflow from the hospital area are prevented from contacting other animals, including calves housed outside.

## 6. Cull chronically sick animals.

Cull animals that do not respond to treatment because they are a source of risk to other animals. Chronic mastitis and pneumonia are often obvious problems, but others (BVD-PI, Johne's disease, leukosis, etc.) can be more subtle and responsible for chronic poor-doers. Cull them while still in decent body condition to make room for healthier replacements.

## 7. Use personal protective equipment (PPE).

Coveralls, boots, gloves, and sometimes masks and protective eyewear should be used when working on livestock farms. PPE will help prevent transmission of diseases through indirect contact between animals as well as minimize spread of disease from animals to people and vice versa. PPE should be used in hospital areas and cleaned/disinfected or disposed of after use. All farm personnel should have designated footwear for on-farm and off-farm use.

## 8. Vaccinate against diseases of concern.

With your veterinarian, design a vaccination program addressing the specific health threats to your animals. Make initial and booster vaccinations a priority by flagging animal records or recording a group action on a calendar. For most vaccinations, correctly timed boosters are critical for the development of effective immunity. Store vaccines as directed on the label, clean the top of the vial with alcohol before use, and use a new needle for each animal.

## 9. Clean and disinfect effectively.

Disinfectants only work on clean surfaces. Footwear, equipment, calf milk bottles, tools, etc. all need to be cleaned thoroughly with soap and water before they can be disinfected (Photo 1). Consult your veterinarian to determine the best product to use for the pathogens of concern on your farm, then carefully follow the manufacturer's label directions regarding dilution, storage, hazards, disposal, and contact time. The latter is a very important and often neglected aspect of disinfection. Many products require 10 minutes of contact time for maximum effectiveness—this is not achieved by walking through a foot bath in dirty boots. Figure 3 is a good summary of effective disinfection steps. Additional helpful information is available at [www.cfsph.iastate.edu/Disinfection](http://www.cfsph.iastate.edu/Disinfection).

## 10. Control foot and vehicular traffic.

Farm signage, fencing, and gates will help control traffic on your premises. Several disease-causing agents of concern can be introduced to a farm on visitors' feet and/or vehicle tires. People and vehicles going from farm-to-farm on a single day (veterinarians, consultants, sales representatives, haulers, inspectors, etc.) and recent international travelers are the biggest concern; establish lines of separation on your farm to limit where these farm visitors can go. Use gates and signs to keep non-essential personnel out of feed, livestock, and other areas of concern. Printing and posting signs such as those in Figure 4 will help communicate your disease control expectations with farm visitors.

## Conclusion

Biosecurity practices are well worth the costs and efforts to implement them. Preventing disease introduction and spread in a herd saves labor and treatment costs, prevents lost production and deaths, and supports animal welfare by preventing pain and suffering. Biosecurity is a pro-active approach to animal health. ☘



**Photo 1.** After removing visible debris, clean surfaces with soap and water so disinfectant can be effective.

Cleaning and Disinfection Protocol
<p><b>Remove all grossly visible debris.</b> The presence of gross contamination or organic material, especially feces, will inactivate most disinfectants.</p>
<p><b>Wash the area or item with water and detergent.</b></p>
<p><b>Thoroughly rinse the cleaned area to remove any detergent residue.</b> Some disinfectants may be inactivated by detergents; therefore, it is very important to rinse well after washing the area or item.</p>
<p><b>Allow the area to dry completely.</b></p>
<p><b>Select and apply an appropriate, effective disinfectant.</b></p>
<p><b>Allow the proper contact time!</b> This is one of the most overlooked steps!! Contact time may vary depending on the disinfectant selected, but is usually at least 10 minutes. Consult the product label.</p>
<p><b>Thoroughly rinse away any residual disinfectant and allow the area or item to dry.</b></p>

**Figure 3.** Steps for effective disinfection. Source: Iowa State University Center for Food Safety and Public Health.



**Figure 4.** Examples of farm signage from The Center for Food Security and Public Health at Iowa State University.

# UPDATE on Brucellosis in the U.S.

In the 1940s, brucellosis was endemic (widespread) throughout the U.S. Prior to implementation of the Brucellosis Eradication Program, there were 154,000 positive herds in the U.S. and \$400 million in related production losses, including abortion and lost milk production. Prior to pasteurization, brucellosis was a significant public health concern because humans could become infected through consuming milk or contacting birthing fluids.

The Brucellosis Eradication Program has been extremely successful in the U.S. As of 2009, all States were declared Brucellosis FREE in their cattle herds. Currently, only three states have rare reported cases of brucellosis due to wildlife reservoirs occasionally infecting cattle; cattle contacting infected elk and bison herds are at greatest risk. Idaho, Montana, and Wyoming have identified designated surveillance areas (DSAs) and are required to execute Brucellosis Management Plans reviewed by the USDA annually. This gives other states confidence brucellosis is unlikely to leave those states. There have been no herds found positive outside of a DSA for 10 years. Affected herd prevalence across the U.S. is 0.0002%.

Many states have relaxed brucellosis requirements based on the low risk of disease. However, several states including Washington have retained vaccination requirements at change of ownership to facilitate commerce with Idaho and Oregon, which also require the vaccine. USDA is challenging states that still require brucellosis vaccination to reconsider based on the negligible disease risk. Industry has requested states align their rules to facilitate interstate commerce. WSDA is looking for feedback from industry and veterinarians about the brucellosis vaccination requirement. A relevant USDA RB-51 factsheet is available on the [USDA APHIS website](#).

In late October 2018, a New York resident became ill after drinking raw milk originating from a Pennsylvania dairy farm. The Centers for Disease Control and Prevention (CDC) confirmed the illness was due to *Brucella abortus* RB51 vaccine. The New York patient is the third known domestically acquired illness caused by *Brucella abortus* RB51 in raw milk in the United States since 2017. The other two patients occurred in two unrelated outbreaks in 2017 in Texas



and New Jersey. USDA's current recommendation is raw milk herds should NOT vaccinate for brucellosis because of this rare but serious public health risk.

USDA uses slaughter facilities in five states for "catchment of ID" for slaughter surveillance data across the U.S. Each year, 1.7 million samples are taken at slaughter at a cost of \$1.15 million. Over 90% of the samples have low surveillance data because they are from non-DSA areas. USDA has awarded WSDA cooperative agreement money to pay for testing on any abortion screening test through WADDL. If you are interested in such testing, please contact the State Veterinarian's office. ☞

## OTHER

# CDC survey of Large Animal Clinical Practitioners in the U.S.

The Centers for Disease Control and Prevention (CDC) is conducting a survey of large animal clinical practitioners across the United States. The goal of this survey is to understand the circumstances and challenges large animal veterinarians experience when evaluating an abortion event in livestock. Please take 15 minutes to complete this survey. The information gathered will assist the CDC with targeted veterinary education to decrease occupational exposures to zoonotic infectious disease.

To access the survey, please [visit the site](#). The survey is best viewed with Chrome browser and is open now through October 31, 2019. ☞

# A Case of Ruffled Feathers: Can It Be Virulent Newcastle Disease?

Raising chickens and other poultry has gained popularity over the last several years. Responsible bird owners should become familiar with sound husbandry practices, biosecurity principles, and recognizing the signs of disease in a flock. Unfortunately, many poultry diseases can present in the same way, with ruffled feathers, lethargy, huddling, diarrhea, respiratory signs, and decreased egg production among the most common signs.

Concentration of backyard flocks within a geographical area can also contribute to disease outbreaks in other flocks or even commercial operations. Of course, this can be devastating to owners and the poultry industry, and difficult for regulatory officials to eradicate.

For example, California has been battling Virulent Newcastle Disease (vND) since May 2018, but good news may be on the horizon! According to California State Veterinarian Dr. Annette Jones, no new positive cases of vND have been detected since August 14, 2019. However, a regional quarantine remains in effect and surveillance efforts continue. This has been a very intense, costly, and time consuming effort for all involved. **It is critical owners practice strict biosecurity and not move any birds during this crucial time.**

USDA recently published the following updates on their vND website: as of August 23, 2019, USDA has confirmed 449 premises in California as infected with vND, including 142 in San Bernardino County, 260 in Riverside County, 45 in Los Angeles County, 1 in Ventura County, and 1 in Alameda County. USDA also confirmed 1 infected premises in Utah County, Utah and 1 infected premises in Coconino County, Arizona.

vND is spread from bird to bird by aerosols or direct contact with sick birds, saliva, feces, soiled bedding, contaminated feed, farm equipment, clothing, and other fomites. Thus far, vND has not been detected in the State of Washington, but poultry owners should be on alert for the following clinical signs listed below.

vND may cause transient conjunctivitis (“pink eye”) or flu like symptoms in humans. Properly cooked poultry products pose no risk and are safe to consume.

Sick birds should be reported immediately to one (or more) of the following:

- **WSDA Avian Health Program Sick Bird Hotline: 1-800-606-3056**
- Local veterinarian
- Washington Animal Disease Diagnostic Lab (WADDL): 509-335-9696
- Avian Health and Food Safety Lab (AHFSL): 253-445-4537

It is everyone’s hope vND is on the downhill slide, but we are not out of the woods yet. It cannot be stressed enough: reporting sick birds right away is critical for accurate diagnosis, containment, and eradication of disease. Although some common illnesses can be treated and cured, others are potentially devastating to poultry, their owners/producers, and can impact world trade. With your cooperation, we can keep Washington poultry healthy and disease free! For more information on vND visit our [blog](#).

## The real scoop on antibiotic use in poultry: Why less is not always better

Since the implementation of the Veterinary Feed Directive (VFD) in January 2017, medical health professionals, veterinarians, producers, pharmaceutical companies, regulatory agencies, and other stakeholders have been working together to promote judicious antibiotic use in food animals to prevent the development of antibiotic-resistant microbes.

The poultry industry has been very proactive in this regard, and had already eliminated some medically important human antibiotics from their arsenal. However, “no antibiotics ever” or similar label claims can sometimes be misleading and detrimental to animal health and welfare.

What can be done to help prevent antimicrobial resistance, protect animal health, and ensure a safe and wholesome food supply? How can the poultry industry continue to prosper, while increasing consumer confidence?

## Clinical Signs of Virulent Newcastle Disease

- Sudden unexplained death
- Increased number of deaths
- Coughing, sneezing, gasping for air
- Depression
- Decreased appetite
- Green diarrhea
- Changes in egg production
- Paralysis of legs or wings
- Twisting of neck
- Tremors
- Circling
- Swelling around eyes and neck



## A Case of Ruffled Feathers, continued from page 7

- **There is no substitute for using best management practices.** When it comes to raising poultry, healthy diets, adequate ventilation, clean water and housing, targeted vaccination programs, and biosecurity go a long way in keeping birds healthy.
- **Antibiotics should only be used for prevention, control and treatment of disease, not growth promotion.** This requires a valid patient/client relationship and veterinary oversight. Certain diseases, such as coccidiosis and necrotic enteritis (*Clostridium perfringens*) can be extremely devastating and costly to the commercial poultry industry. The use of ionophores can help keep coccidiosis at bay, and they are not used in human medicine or considered antibiotics. Any increases in feed conversion are a secondary benefit due to intestinal function and integrity. If necrotic enteritis does happen to occur, antibiotics such as bacitracin, penicillin, and lincomycin can be prescribed and dispensed in drinking water.
- **Like humans, sick poultry deserve appropriate treatment to heal and prevent suffering.** Failure to do so not only affects the bird's health and welfare, but potentially the health of the entire flock. Restricting the use of antibiotics in these instances may affect performance, increase mortality, decrease food safety, limit feed conversion/growth, and result in more labor intensive management practices. Of note: "organic" poultry that become ill and require antibiotics are transferred to other food production systems.

Keeping these ideas in mind, education goes a long way in helping consumers understand judicious use of antibiotics in animals and how it keeps their food safe. Not only is it important to realize how health officials and industry are collaborating to reduce antimicrobial resistance, people can do their part by washing their hands, handling food in a safe manner, and cooking meat to proper temperatures. ☞

### References:

Avian Insight (by Full Value Poultry). 2016. [Antibiotic Use in Poultry Today](#)-Elanco. E. Heskett, DVM, PhD, ACPV, K. Keffaber, DVM.

National Institute for Animal Agriculture (NIAA). 2017. [Antibiotic Symposium 2017 White Paper](#). Sanderson Farms presentation, A. Batal, DVM.

North American Meat Institute (NAMI). [The Facts About Antibiotics in Livestock and Poultry Production – Sort Fact from Fiction](#).

# Scuttlebutt on WSDA's Reserve Veterinary Corps

Washington State has a large and robust livestock industry with more than a million head of cattle, 400 dairies, and nearly 12,000 ranches. The Reserve Veterinary Corps (RVC) is a body of volunteers willing to help WSDA respond to a crisis affecting animals in our state. Animals handled by RVC members could range from large farm animals to household pets. The mission of the RVC is to assist WSDA Animal Services Division respond to natural disasters, such as a wildfire or flood, an animal disease outbreak such as avian influenza, or any large scale incident that requires caring for animals.

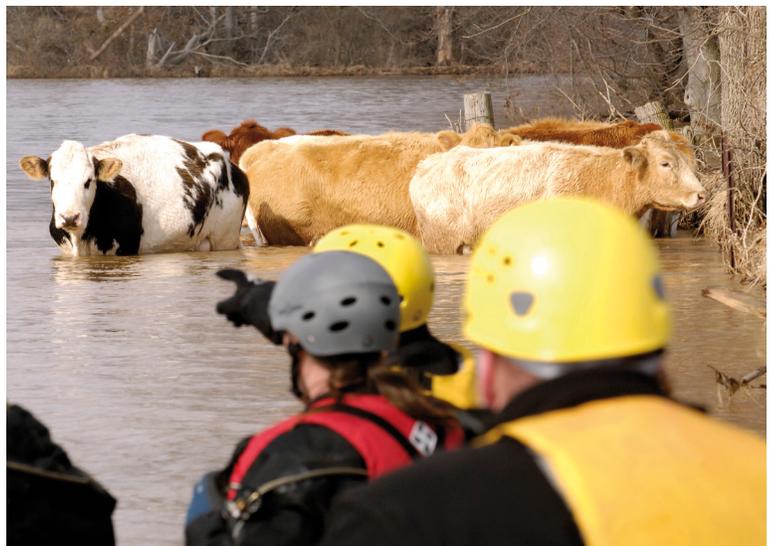
Members of the RVC include veterinarians, veterinary technicians, and animal health professionals. However, those with experience in public health, law enforcement, incident command structures, or the military are also encouraged to become engaged with the RVC.

Participation in the RVC is completely voluntary, but members should be trained on the Incident Command System, a method of organizing and managing large scale emergency responses. The training is free and provided by WSDA. Members are also invited to other training that could assist when responding to an animal health emergency, including training on:

- Foreign animal disease response
- Hazardous materials awareness
- Animal decontamination

On average, there are four training opportunities each year. In some cases, volunteers may be paid to attend depending upon the training or incident. The 2019 WSDA RVC Annual Meeting focused on veterinary clinic emergency preparedness, animal disaster medicine, and humane euthanasia in a disaster response. A total of 30 veterinary professionals participated in this year's one-day training.

**To learn more about the RVC, visit our [website](#) or call 360-902-1889.** ☞



SWINE

# Swine Flu Risk and Prevention at Fairs and Exhibitions

Livestock fairs and shows are learning opportunities for thousands of 4-H and FFA youth across the country. For these youth, exhibiting at their county or state fair represents the culmination of much work dedicated to the care and training of their animals.

In addition, such agricultural exhibitions provide meaningful opportunities for the public to learn about livestock and agriculture, observe animal behavior, and experience what it might be like to live and work on a farm. More than 150 million people visit agricultural fairs each year in North America.

Swine flu viruses do not normally infect humans. However, sporadic human infections with influenza viruses that normally circulate in swine have occurred. When this happens, these viruses are called “variant viruses” and can be denoted by adding the letter “v” to the end of the virus subtype designation. Human infections with H1N1v, H3N2v and H1N2v viruses have been detected in the U.S. Those infected with specific variant viruses have had symptoms similar to those of regular human seasonal influenza. These symptoms include fever, lethargy, lack of appetite, and coughing.

In years past, CDC received reports of approximately one human infection with swine influenza viruses every one to two years, but between 2011 and 2017, 426 human influenza H3N2v cases were reported in 18 states. The largest outbreak occurred in 2012 when a total of 309 human cases of H3N2v flu were identified, including 16 hospitalizations and one death. In 2017, a total of 67 variant virus infections were identified in 10 states.

The majority of these variant cases were exhibitors and others who reported close contact with pigs at agricultural fairs prior to their onset of illness. The data points to an increased risk for humans to contract variant influenza, particularly those in close contact with pigs and those at high risk such as children younger than 5 years of age, people 65 years of age and older, pregnant women, and people with certain long-term health conditions.

In 2016, important new data emerged regarding the dynamics of influenza transmission between swine at exhibitions. In particular, a study by Bowman et al. found at swine shows, the



prevalence of influenza A-positive pigs increases substantially at 72 hours of exhibition. This finding, in addition to implementing strengthened biosecurity for people and pigs, further supported the recommendation that exhibition swine should not be kept on the exhibition grounds longer than 72 hours.

In 2018, the Swine Exhibitions Zoonotic Working Group produced an easily accessible checklist for exhibition organizers and youth organization leaders: “Minimizing Influenza Transmission...” that includes recommended actions to take before, during and after exhibitions. This document is available [online](#). ☞

**References:**

National Assembly of State Animal Health Officials (NASAHO), National Association of State Public Health Veterinarians (NASPHV) and the Swine Exhibitions Zoonotic Influenza Working Group.

**CLEAN UP YOUR ACT** Reduce disease risk for you and your animals!

Wash your hands before and after contacting animals.	Use an effective disinfectant at the right concentration and recommended contact time.	Do not allow smoking, food, drinks, or strollers in animal areas.
Keep vaccinations up-to-date for you and your animals.	Stay home if you or your animal are sick.	Keep communal hoses out of water buckets.
Clean and disinfect footwear before and after visiting animal facilities.	Quarantine new animals or those returning from an event for 30 days.	Protect animal feed and water from contamination.
Do not share tools, tack, or equipment with others.	Control vermin such as rodents and wild birds.	Prevent direct contact between animals at an event.
Clean equipment with soap and water before disinfecting.		

Washington State Department of Agriculture  
ANIMAL HEALTH PROGRAM  
agr.wa.gov

## Biosecurity Signs Now Available

To request a sign, contact the Animal Health Program at:

Phone: (360) 902-1878

Email: [ahhealth@agr.wa.gov](mailto:ahhealth@agr.wa.gov)

EQUINE

# Vesicular Stomatitis: It's back

A periodic if not annual visitor, Vesicular Stomatitis (VS), is with us once again.

So far the affected states are Colorado, Nebraska, Oklahoma, Utah, Wyoming, Texas, and New Mexico (Maps 1 and 2). This outbreak involves the Indiana strain of the virus and is the first time this strain has made it into the U.S. since 1998. Heretofore, the New Jersey strain has been the culprit in U.S. outbreaks. This outbreak is the largest in 40 years: in just two months, more than 800 premises in seven states have been affected. All cases are in horses in this outbreak except for two cattle in Colorado and one each in Utah and Texas.

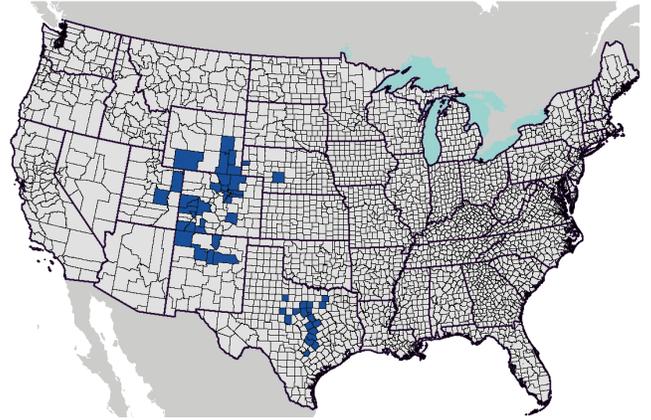
The VS virus affects horses, cattle, pigs, and rarely sheep, goats, and humans. It is spread primarily by biting flies, especially black and sand flies. Watering areas and river valleys with heavy infestations of these flies have a predictably higher incidence of disease. Vectors play a key role in VS outbreaks, determining which species are affected and where and when. The virus is contained in the eggs of biting flies, so the virus can expand its range if the vector's range spreads due to climatic changes.

Once an animal is infected and has lesions, direct contact will spread the disease to other susceptible species. The virus attacks mucosal surfaces and causes ulcers, erosions, and epithelial sloughing. This primarily occurs on the nose, mouth, tongue, sheath, udder, and coronary band. Uncomplicated lesions are self-limiting and are usually healed in 14 days. If VS is diagnosed, a quarantine is placed until 14 days after the last healed lesion. There is no specific treatment and most animals recover in time. Interestingly, exposure to the virus does not protect against reinfection; an animal can be infected more than once, even in the same year.

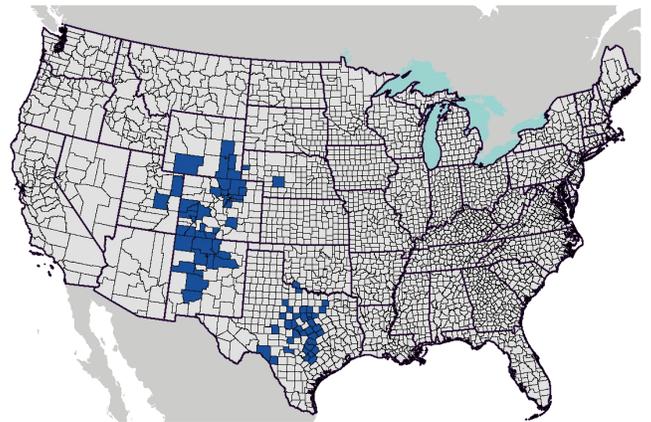
Horses seem to be the most susceptible species, with sheep and goats fairly resistant. The big concern is when VS infects cloven-hooved animals, it looks like foot and mouth disease or other foreign animal diseases. Specially trained State or Federal veterinarians must take samples from these species and send them to a specified laboratory for a rapid diagnosis because of the necessity of identifying FADs as soon as possible.

Traveling from infected to non-infected states can cause some concerns about issuing proper certificates of veterinary inspection, so the inspecting veterinarian should call ahead to get the latest update for an area. These outbreaks and corresponding rule changes can evolve rapidly, so check frequently with the destination's State Veterinarian's office for guidance. ☞

**Map 1. Counties with Current VSV-Quarantined Premises (shaded in blue)**



**Map 2. Counties with Premises Quarantined for VSV Since June 21, 2019 (shaded in blue)**



From USDA APHIS 2019 Vesicular Stomatitis Virus (VSV) Situation Report – August 19, 2019



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