

# Bluetongue Virus

Robert B. Moeller, Jr, DVM, DACVP, CAHFS - Tulare

**CAHFS - Davis Laboratory**  
University of California  
West Health Sciences Drive  
Davis, CA 95616  
Phone: 530-752-8700  
Fax: 530-752-6253  
[daviscahfs@ucdavis.edu](mailto:daviscahfs@ucdavis.edu)

**CAHFS - San Bernardino Laboratory**  
105 W. Central Avenue  
San Bernardino, CA 92408  
Phone: (909) 383-4287  
Fax: (909) 884-5980  
[sanbernardinocahfs@ucdavis.edu](mailto:sanbernardinocahfs@ucdavis.edu)

**CAHFS - Tulare Laboratory**  
18830 Road 112  
Tulare, CA 93274  
Phone: (559) 688-7543  
Fax: (559) 686-4231  
[tularecahfs@ucdavis.edu](mailto:tularecahfs@ucdavis.edu)

**CAHFS - Turlock Laboratory**  
1550 Soderquist Rd.  
Turlock, CA 95381  
Phone: (209) 634-5837  
Fax: (209) 667-4261  
[turlockcahfs@ucdavis.edu](mailto:turlockcahfs@ucdavis.edu)

## Web Site:

[www.cahfs.ucdavis.edu](http://www.cahfs.ucdavis.edu)

Bluetongue is a common viral disease seen primarily in sheep and occasionally in cattle. Bluetongue outbreaks in California usually occur from late July to the end of October. The disease is common throughout the state and most prevalent in the San Joaquin and Sacramento River valleys and California's coastal regions. Bluetongue is a viral (*Orbivirus*), insect born disease that infects animals through the bite of midges or gnats (*Culicoides* sp.).

Affected animals often present with one or more of the following clinical signs: high temperatures (104°F or greater), excessive salivation, swollen muzzles, lips, neck and/or ears, reddening and ulcers in the mouth (particularly on the dental pad, gingiva and lips), conjunctivitis, and nasal discharge with crusting around the nostrils. Some animals will have hyperemia and swelling around the coronary band of the hoof with the affected hooves becoming painful; lameness is common and some animals may slough affected hooves. Occasionally, animals die acutely with no clinical presentation seen. Pregnant animals may abort, give birth to weak nonviable lambs or have lambs that show nervous signs. Some sheep can also lose their hair coat several weeks after recovery from the disease. Depending on the susceptibility of the flock to this agent, up to 100% of the animals can be affected with mortality approaching 30%.

If one suspects bluetongue, testing is available at the CAHFS laboratory for confirming this agent. Fresh whole blood samples (purple top tubes) from live animals demonstrating clinical signs or splenic tissues collected from dead animals at the time of necropsy can be tested for the virus.

A vaccine is available for use against this agent, but caution must be used during administration. Pregnant ewes in their first trimester (first 60 days) of gestation are most susceptible and vaccination for bluetongue can cause fetal injuries and abortions. It is best to vaccinate ewes prior to breeding and lambs in the spring prior to bluetongue season. Always follow the manufactures recommendations for the use of the vaccine.

Since this is an insect born disease, the best control measure is to remove the sheep from the midges. These insects breed and lay eggs along stream banks, irrigation ditches, and settling ponds. They can also breed in wet moist soil around water troughs. Keeping the animals away from these breeding areas, particularly during evening hours, and spraying the breeding sites with an approved insecticides can reduce the incidence of the disease.

