

Maddening

Beware of rabies and other zoonotic diseases.

by Troy Smith

Who didn't cry when Old Yeller died? Come on. Surely you shared the sorrow when the classic Disney film's canine hero met his fate. You remember how Old Yeller defended the family against a wolf gone mad with rabies. Then he was locked in a corncrib until they could be sure he hadn't contracted the disease.

And, just as the quarantine was about to end, just when we thought he was in the clear, the symptoms appeared. Snarling and frothing at the mouth, the dog turned on his young master. Dangerous, suffering and doomed to die a painful death, Old Yeller had to be destroyed.

The movie was set on the Western frontier in the 19th century, when rabies was a fearsome disease. It was sometimes called "hydrophobia," because victims often seemed to display a fear or aversion to water along with other symptoms of strange, often aggressive behavior.

Folks didn't fully understand the mechanisms of microbial infections in those days, but they knew that rabies could be spread through the bite of an infected animal. They knew it could be transmitted from wild critters to domestic livestock.

Old Yeller's fans will remember how the

family's cantankerous milk cow also succumbed to rabies. Folks also knew that humans were susceptible, and contracting rabies meant you were going to die.

Still problematic

Even today, the same reasons make rabies a threat to livestock and their caretakers. Rabies is a zoonotic disease — one caused by an infectious agent that is transmissible between animals and humans.

In the case of rabies, the infectious agent is a virus to which virtually all mammals are susceptible. Though exposure to humans is reduced through widespread vaccination of pet dogs and cats, rabies remains

common among wild animals. According to Angela Dement,

Extension assistant for veterinary medicine, Texas Cooperative Extension (TCE), skunks, raccoons, coyotes, foxes and bats rank among the most common carrier species.

Dement says the threat of infection to domestic animals and humans is sufficient to warrant an effort by TCE personnel to heighten awareness among

livestock producers. In addition to foreign and emerging animal diseases, rabies has been added to the agendas for county

meetings across the state.

"Awareness is the best defense," Dement states, "so our goal [is] to educate producers about the disease and how to recognize the different behaviors associated with rabies."

Symptoms

Not all animals afflicted with rabies exhibit the "slobbering fits" described in the *Old Yeller* movie. Dement says the virus

always attacks the central nervous system, but symptomatic behavior may be either of two different types.

That which most people consider typical is "furious rabies" where the animal displays restless but aimless behavior and becomes aggressive, sometimes to the point that it will bite anything that happens to be in its way. Even gentle family pets, if infected, can become vicious.

However, an animal with rabies may never show aggression or become violent. With the other type of behavior, sometimes called "dumb rabies," the affected animal becomes withdrawn and shy. In any case, rabid animals suffer progressive paralysis. Early signs may include difficulty swallowing. Eventually, even though they are hungry and

"Producers and veterinarians put themselves at risk of infection when conducting oral examinations of salivating cattle."

— Dee Whittier

Safeguarding

Animal Health



► Raccoons, coyotes, skunks, bats and foxes rank among the most common carrier species.



thirsty, animals are unable to eat or drink — hence the perceived fear of water. After the onset of symptoms, the disease is always fatal.

Infection and treatment

According to Dement, the virus is present in the saliva of an infected animal. If it bites another animal or a human, the virus may spread through the wound. However, the virus may also spread when virus-laden saliva comes in contact with scratches or breaks in the skin due to another type of injury. The incubation period for rabies varies by species. It ranges from three to eight weeks in humans but usually is shorter in animals.

“Treatment is available for humans that may be exposed through contact with animals suspected of having rabies. But the only way to be sure if the animal really was infected is to test tissue from its brain. So, while a suspect animal should be destroyed, don’t shoot it in the head,” Dement warns. “If you think you may have been exposed, quickly seek advice from your primary care physician.”

Rabid cattle

Dement says cases where humans were exposed to rabies through contact with infected cattle or other domestic livestock have been rare in Texas, but it can and does happen. In June, officials with the South Carolina Department of Health and Environmental Control reported that two men were undergoing post-exposure treatment after handling a calf that later tested positive for rabies. The men apparently came in contact with its saliva while assisting the calf found staggering around in a field. Reportedly, the calf was one of a handful of domestic livestock in South Carolina that tested positive during the last 20 years.

However, according to veterinarian Dee Whittier of Virginia-Maryland Regional

Other zoonotic diseases on farms and ranches

Cattle producers are wise to familiarize themselves with the numerous zoonotic diseases that pose threats to domestic livestock and also may spread to humans. The list of potentially dangerous maladies ranges from anthrax to West Nile Virus.

Veterinarians can advise producers regarding vaccination and other prevention or control measures. However, proper husbandry practices considerably reduce the chances that humans will contract the more common infections spread through contact with animals.

Asked what kind of infectious agents most commonly spread from livestock to humans, Cooperative Extension Veterinarian Dee Whittier says organisms associated with calf scours are the most frequent culprits.

“I’d say incidences of disease transmission to humans working with cattle are most often due to salmonella and cryptosporidia,” Whittier states. “Both are scour-related, and exposure comes from handling sick calves. The organisms cause enteritis with diarrhea in humans, too. It can be quite serious.”

Generally less serious and unlikely to make newspaper headlines, ringworm is another infection that commonly affects livestock producers and their families. Dermatophytosis, or ringworm, is an infection of the skin and hair caused by fungi collectively called dermatophytes.

Typical symptoms include patchy hair loss accompanied by formation of scaly lesions. All domestic animals are susceptible. The greatest human health consequences result from direct contact with infected cattle and domestic cats, or contaminated housing, bedding and grooming brushes.

Many topical treatments have been reported to be successful in cattle. However, spontaneous recovery is common, so substantiation of treatment results is difficult.

According to Whittier, opportunities for infection with a zoonotic disease are reduced through attention to sanitation, personal hygiene and animal health care. Animal waste management and maintenance of safe water supplies are of particular importance.

Opportunities for infection with a zoonotic disease are reduced through attention to sanitation, personal hygiene and animal health care.

College of Veterinary Medicine, the incidence of rabies among cattle varies by region. The opportunity for exposure increases with prevalence of rabies among wild animal carriers. In Virginia, says the bovine specialist, cattle often are the most frequently diagnosed domestic animal.

“Due to their curious nature, cattle will approach an infected wild animal, like a skunk or raccoon, and be bitten on the nose, or feet and legs,” Whittier explains.

In cattle, rabies symptoms can include restlessness, aggression, repeated bellowing and slobbering, or cattle may act depressed

or sleepy. They may show weakness, particularly in their hind legs, and appear to be choking.

“Any animal with symptoms of a neurological disease ought to be investigated until an answer is found,” Whittier warns. “And producers ought not to be poking their hands in the mouths of animals to see if something is stuck in their throats. Producers and veterinarians put themselves at risk of infection when conducting oral examinations of salivating cattle.”

AJ

