

Changes Threaten To Cause Resurgence Of Cattle TB

MINNEAPOLIS, Minn. — Recent changes in the U.S. livestock industry threaten to reverse tremendous gains made in the nearly 80-year struggle to eradicate tuberculosis (TB) from the nation's livestock, reported Lonnie J. King, D.V.M., M.S., at the 130th annual meeting of the American Veterinary Medical Association (AVMA).

"The National Bovine TB Eradication Program seemed to be on the verge of total success only a few years ago," said Dr. King, acting administrator for the U.S. Department of Agriculture's (USDA) Animal and Plant Health Inspection Service (APHIS). "But in the 1990s, the tuberculosis-free status of two states has been revoked after outbreaks of TB were reported, and a Canadian outbreak of bovine tuberculosis was traced back to U.S. sources."

In 1991, TB was discovered in three captive deer and elk herds in New York, one of which contained infected dairy cattle as well, prompting revocation of that state's tuberculosis-free status. A similar incident in Pennsylvania resulted in revocation of that state's tuberculosis-free status. In 1990, an outbreak of TB in elk on a game ranch in Alberta, Canada, was traced to animals exported from the U.S.

According to Dr. King, the problem stems from an overall decline in concern about the disease combined with several other factors, including the growing popularity of deer and elk farming, ineffective testing methods that may misdiagnose the disease, large importations of Mexican steer herds with higher levels of TB, and the advent of large dairies with dense herd populations, promoting spread of the diseases.

In a separate presentation, Michael Miller, D.V.M., Ph.D., of the Colorado Division of Wildlife, Ft. Collins, warned that rising levels of TB in captive deer and elk will negatively impact the U.S. livestock industry in several ways. Over the last decade, TB has been diagnosed in captive deer and elk in at least 14 different states, and the recent outbreak among U.S. game ranches has affected the tuberculosis-free status of some states.

Since the discovery that U.S. imports caused the Alberta TB outbreak, Canada will no longer accept U.S. exports of deer or elk raised on game ranches. Cattle exports could also be affected if current trends continue. "Moreover, if TB becomes established in wild deer and elk populations through game ranches or other sources, the goal of national eradication will

become virtually unachievable," Miller said.

"The greatest long-term threat to U.S. TB eradication comes from captive elk and deer on game ranches and game farms," he said. "The Canadians have just spent over \$15 million to eradicate the recent outbreak and it has nearly broken them. If we don't start regulating the game ranch industry now, TB will come back to haunt us in a few years."

In recent years, the farming of deer and elk has burgeoned into an industry represented in every U.S. state. Cases of TB have been reported on several game farms, which often exist in conjunction with livestock operations or nearby. The USDA's TB eradication program regulates cattle and bison but not farm-raised elk and deer.

TB was the most important infectious disease of U.S. livestock

in the early 1900s. It was responsible for dramatic drops in production, animal deaths, and the economic ruin of many producers. It infected from five to ten percent of dairy cattle and could be transmitted to people in milk, creating a serious human health threat.

Today, all milk is pasteurized to kill TB bacteria and prevent transmission of the disease to human beings. It cannot be transmitted to human beings through eating meat.

TB may be caused by similar human and bovine strains of bacteria. Cases of human TB today result from infection with the human bacterium, rather than through animal transmission. The reported rise in human TB is due to a variety of factors, unrelated to the livestock industry.

"There hasn't been a case of

cattle TB in humans in this country in over a decade," King said.

Two related presentations addressed the need for improved testing methods to prevent misdiagnosis of TB in deer, elk, and cattle.

Jeffrey J. Huse, D.V.M., New York State Department of Agriculture and Markets, explained that the TB test required for interstate shipments of deer and elk prior to 1991 was ineffective and allowed many infected animals to evade detection and potentially spread disease throughout other herds.

In 1991, USDA advised states to replace the caudal fold test with a more effective test of the skin on the animal's neck. "After testing 8,000 deer in 85 herds, two additional infected herds were discovered in New York," Huse said.

"Since then, New York has taken the lead in implementing a control program including mandatory testing, quarantine of infected herds, and inspection of meat. Other states have been reluctant to implement TB control programs for farmed deer and elk."

Joseph S. Van Tiem, D.V.M., M.S., Huntville, Md., called for improved diagnostic testing for tuberculosis in cattle.

"Traditional TB tests used in cattle will point to herds with the disease, but they are not sensitive enough to identify every animal infected," said Dr. Van Tiem, cattle diseases and surveillance staff, APHIS veterinary services.

"Existing tests aren't adequate in light of today's low prevalence. We need to develop the technology that allows us to identify all individual sources of infection," he said.

NIOSH Warns Of Deadly Hazard

COLLEGE PARK, Md. — According to the National Institute for Occupational Safety and Health (NIOSH), Americans who use gasoline-powered pressure washers indoors are risking their lives.

A 35-year-old farmer recently died from carbon monoxide poisoning while using one of these washers in an enclosed barn. NIOSH warns all workers not to use these machines indoors — it can be a deadly mistake.

"We must act before this 'silent killer' strikes again. Workers must be aware of the hazard and prevent exposure to this potentially fatal gas: Carbon monoxide strikes quickly, and it strikes without warning," said NIOSH Director Dr. J. Donald Millar. The gas is colorless, odorless, tasteless, and gives no signs of its presence.

"It is critical that workers know when carbon monoxide can be a danger and how they can be protected," said Millar.

All gasoline-powered engines produce carbon monoxide. This gas can rapidly build up in any indoor area, and individuals can be overcome without even realizing they are being exposed. Confusion, headache, dizziness, fatigue,

and weakness may set in too quickly for victims to save themselves.

Each of the victims interviewed by NIOSH expressed shock at how quickly they were overcome. A farm woman recently poisoned in Iowa said, "I was amazed at how it affected my ability to think clearly and to get out." Carbon monoxide poisoning can cause permanent brain damage, including changes in personality and memory. Once inhaled, carbon monoxide decreases the ability of the blood to carry oxygen to the brain and other vital organs. Even low levels of carbon monoxide can set off chest pains and heart attacks in people with coronary artery disease.

According to Vernon Meyer, swine housing specialist, Iowa State University, "Two-thirds of swine producers now use pressure washers for cleaning, and that number is expected to go up." As the market for these devices in agriculture and other industries continues to increase, it is essential that users be informed of the carbon monoxide hazard.

While electrically powered pressure washers are available, NIOSH has not evaluated the safe-

ty of these devices. If you are using gasoline powered equipment, take the following precautions:

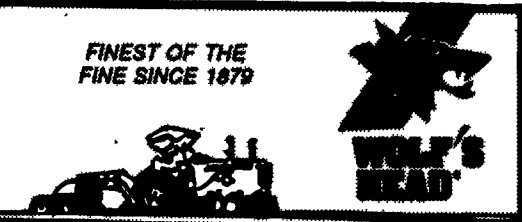
• Do not operate machinery with gasoline engines inside any building.

Though warning notices in operating manuals advise that the equipment is not to be used without adequate ventilation, it can be difficult to determine how much ventilation is adequate. One epi-

sode occurred with three doors open and exhaust fans on.

• Remember that even small engines can produce deadly levels of carbon monoxide.

NIOSH will continue to investigate the problem of using gasoline-powered pressure washers in farm buildings and will address ventilation, warning labels, and freezing problems in an upcoming report.



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