House
Legislative
Analysis
Section

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STATUTORILY BAN FEEDING OF WILD ELK, DEER

House Bill 4499 (Substitute H-2)
First Analysis (5-6-99)

Sponsor: Rep. Rick Johnson
Committee: Agriculture and Resource Management

THE APPARENT PROBLEM:

Although bovine tuberculosis once was relatively common in cattle in this county, particularly prior to the 1960s and 1970s, historically it has been a very rare disease in wild deer. In 1994, however, a four-year-old buck killed by a hunter in southwestern Alpena County was discovered to have been infected with bovine tuberculosis. (See BACKGROUND INFORMATION.) This deer (the "index" case) marks the beginning of what has turned out to be the first self-sustained outbreak of bovine tuberculosis in a wild deer population on record in North America. In fact, the outbreak has not only sustained itself but spread in both area and numbers since the 1994 index case, and as of May 1, 1999, 228 wild deer have been identified as infected with bovine tuberculosis.

But bovine tuberculosis hasn't just spread among wild white-tailed deer in northwestern Michigan. It also has spread to captive elk and white-tailed deer ("captive cervids"), across species to wild carnivores (including coyotes, raccoons, and black bear), and to domestic cattle. In 1994, six captive elk in a 700-head captive elk herd in Montmorency County (which borders Alpena County on the west) were found to be infected with bovine tuberculosis. Three years later, in 1997, two captive white-tailed deer in a 400-head captive white-tailed deer herd in Presque Isle County (which borders Alpena County on the north) were found to have the disease. Then in 1998, bovine tuberculosis showed up in a domestic beef cow in an Alpena County herd, only the second such case in the state since 1974. Two more herds, in Alcona County, were found to have cattle infected with bovine tuberculosis, for a total, to date, of six positive cows on three farms.

Although it was initially thought in February of this year that the USDA had decided not to change Michigan's "Bovine TB Accredited Free" status, this apparently has not turned out to be the case. The state has requested a unique "split-state" status from the USDA, under which the affected area of the state would receive a changed status while the rest of the state would remain accredited as being bovine tuberculosis free. If the USDA does not grant Michigan this split-state status, there could be significant economic losses to the livestock industry in the state. And even pending the USDA's decision, at least one other state -- Wisconsin -- already has imposed testing requirements on all Michigan cattle entering the state regardless of their point of origin in Michigan.

Because bovine tuberculosis is a disease spread primarily by close contact with infected animals or with areas contaminated by infected animals, scientific evidence indicates that the maintenance of bovine tuberculosis in wild white-tailed deer is directly related to the supplemental feeding of deer by humans using a variety of foods including carrots, sugar beets, corn, and hay. Supplemental feeding -- which includes both year-round feeding and the practice of "baiting" deer only during the hunting season -- brings together large numbers of deer for prolonged periods of time, in contrast to the normal grazing practices of deer where they normally remain spread out over greater distances and where "nose-to-nose" breathing, sneezing, or coughing (and the exchange of any airborne diseases) is much less likely to occur. Consequently, a crucial part of the state's strategy to eradicate bovine tuberculosis is to restrict the supplemental feeding of deer. To this end, on March 12, 1998 the Michigan Agriculture Commission approved a wild deer feeding ban, while the Natural Resources Commission approved baiting restrictions that shortened the time period baiting would be allowed, limited the amount of baiting feed that could be used to no more than 5 gallons of feed, and restricted the kind of bait that could be used in the northeastern Lower Peninsula.

The Commission of Agriculture has adopted resolutions asking the legislature "to ban statewide supplemental feeding of wild free-ranging white-tailed deer and elk," and legislation has been introduced to do just this.

THE CONTENT OF THE BILL:

The bill would amend the Natural Resources and Environmental Protection Act (NREPA) to prohibit the feeding of deer or elk except for recreational viewing (and then only under certain specified requirements).

Feeding for recreational viewing. The bill would prohibit deer or elk feeding except feeding for "recreational viewing" when the following requirements were met: (1) the feed was deposited or distributed not more than 100 yards from the person's residence on land owned or occupied by that person; (2) the total amount of unconsumed feed that was deposited, distributed, or tended by the person (or others who lived at the same residence) was no more than five gallons (though in areas where a disease was known to be present, the Natural Resources Commission could reduce the limit to three gallons); and (3) the feed was spread over an area of at least 100 square feet per gallon or part of a gallon of feed.

Definitions. The bill also would add the following definitions to the act:

** "Feed" would be defined to mean "a substance composed of grain, mineral, salt, fruit, vegetable, hay, or any other food material or combination of these materials, whether natural or manufactured, that may attract white-tailed deer or elk." "Feed" would not include plantings for wildlife, standing farm crops under normal agricultural practices, or agricultural commodities scattered solely as the result of normal agricultural planting or harvesting practices.

** "Deer or elk feeding" would be defined to mean "the depositing, distributing, or tending of feed in an area frequented by wild, free-ranging white-tailed deer or elk.""Deer or elk feeding" would not include any of the following:

(a) Feeding wild birds or other wildlife if done in such a way as to exclude wild, free-ranging white-tailed deer and elk from gaining access to the feed.

(b) Feed that was scattered solely as the result of normal logging practices or "normal agricultural practices" (which the bill would define to mean "generally accepted agricultural and management practices as defined by the Commission of Agriculture").

(c) The storage or use of feed for agricultural purposes if one or more of the following conditions applied: (i) The area was occupied by livestock actively consuming the feed on a daily basis; (ii) The feed was covered to deter wild, free-ranging deer or elk from gaining access to the feed; or (iii) The feed was in a storage facility that was consistent with normal agricultural practices.

(d) Baiting to take game as provided by an order of the Natural Resources Commission under a new section that would be added by the bill

Effective date. The bill would take effect on October 1, 1999.

MCL 324.40102, 324.40103, and 324.40111a

BACKGROUND INFORMATION:

Bovine tuberculosis in the northeastern Lower Peninsula. Eleven counties in the northeastern Lower Peninsula are involved in the current bovine tuberculosis outbreak (the "Bovine TB Management Area"): a five-county tuberculosis "core" area consisting of Alcona, Alpena, Oscoda, Montmorency, and Presque Isle counties -- and a six-county "buffer" area consisting of Cheboygan, Crawford, Iosco, Ogemaw, Otsego, and Roscommon counties. This eleven-county area is bounded on the west by I-75, on the south by M-55, on the east by Lake Huron, and on the north by the Straits of Mackinac.

Bovine tuberculosis. According to a brochure, "Bovine Tuberculosis in Michigan," jointly issued by the Michigan Departments of Natural Resources, Agriculture, and Community Health and Michigan State University and the U.S. Department of Agriculture, *"Tuberculosis is a serious disease caused when bacteria attack the respiratory system. There are three types of TB -- human, avian and bovine. Human TB is rarely transmitted to non-humans, Avian TB is typically restricted to birds (pigs and occasionally other animals have been found to be susceptible, however), and bovine TB -- or cattle TB -- is the most infectious, infecting most warm-blooded animals. Tuberculosis in People. Human TB is generally transmitted from person to person through the air by sneezing or coughing. While it is possible to transmit*

bovine TB from animals to people, the likelihood is extremely rare. It is very unlikely that a person field-dressing or eating the cooked meat of a deer infected with bovine TB would become infected. Tuberculosis in Livestock. Bovine TB may be spread among livestock through the air or by consumption of contaminated water, feed or milk. Treatment for bovine TB is generally not feasible in livestock. The most effective means of controlling the disease is by destroying infected and, when appropriate, exposed animals. Tuberculosis in deer. Bovine TB is spread primarily through the air when an infected animal is in close contact with other animals. Bacteria released into the air through coughing and sneezing can spread the disease. In Northeast Michigan, close contact between deer at feeding stations has been determined to be the likely point of transmission, which is the reason a mandatory feeding ban has been imposed in the Bovine TB Management Area. Bovine TB is a chronic disease in deer that can take years for lesions to develop in the lungs. Less than 40% of the TB-positive deer in the 1995-1998 surveys had lesions in the chest cavity or lungs that would be recognized as unusual by most deer hunters. These deer had tan or yellow lumps on the inside surface of the rib cage and in the lung tissue."

Bovine tuberculosis in wild deer populations. Until the 1994 outbreak in the northwestern part of the Lower Peninsula, there were no known instances in all of North America of self-sustaining bovine tuberculosis among a wild, free-ranging deer population. That is, before 1994, even when wild deer were discovered to have been infected with bovine tuberculosis, the disease died out. In fact, before 1994, only eight white-tailed or mule deer had been reported with bovine TB in North America, with one of those eight cases being that of a nine-year-old doe killed in 1975 by a hunter in Alcona County (which borders Alpena County on the south). In each of the eight pre-1994 cases of North American bovine tuberculosis-infected deer, the disease did not spread to other animals, and all eight infected deer were considered to be isolated cases.

Bovine tuberculosis in northeast Michigan wildlife populations. The Department of Natural Resources, which is responsible for managing wildlife populations, has examined white-tailed deer, elk, and nine species of carnivores (4 badgers, 42 black bears, 7 bobcats, 104 coyotes, 57 opossums, 59 raccoons, 6 red fox, 1 gray fox, and 1 feral cat) from the core and buffer counties in the northeastern Lower Peninsula for bovine tuberculosis. As of May 1, 1999, out of 17,654 white-tailed deer tested since 1996, 228 have tested positive for bovine tuberculosis. None of the 408 wild elk tested since May 1996 have been positive, while 8 of the 281 carnivores (5 coyotes, 2 raccoons, and 1 black bear) from the five-county core area tested since February 1996 have tested positive for bovine tuberculosis. The DNR also has done a state-wide white-tailed deer survey, and no deer outside of the Bovine TB Management Area have been identified as positive for bovine tuberculosis.

The annual break-down for deer checked in the bovine TB management area that tested positive for bovine tuberculosis is as follows: 27 (out of 814 samples) in 1995; 47 (out of 3,718 samples) in 1996; 73 (out of 3,681 samples) in 1997; 78 (out of 8,357 samples). Thus, although the total number of wild deer identified as infected has continued to increase, as the number of dead deer sampled has increased, the percentage of infected deer began to decline in the core five-county area after increasing to a high of 4.4 percent in 1997 (in 1996, the percentage was 2.3, while in 1998, the percentage had declined from the previous year's high of 4.4 percent down to 2.5 percent). Similarly, in the six-county buffer zone, the percentage of dead deer identified as infected with bovine tuberculosis was 0.2 percent in 1996, rose to 0.5 percent in 1997, and declined to 0.3 percent in 1998. The Department of Natural Resource's goal is to bring the infection rate in the eleven-county area down to less than one percent by the fall of 2003 and to eliminate it entirely by the fall of 2010.

The greatest number of bovine tuberculosis-infected deer for the 1998 survey came from Alcona (32) and Alpena (24) counties. Montmorency County had 15 infected deer, Oscoda County had 5 infected deer, and Otsego and Presque Isle counties each had 1 deer test positive.

Bovine tuberculosis in captive cervids (elk and white-tailed deer). In 1994 -- the year that the first infected hunter-killed wild deer was found-- bovine tuberculosis also was found in a captive elk herd in Montcalm County. Six of a 700-head captive elk herd were infected, and the entire herd was subsequently killed. Over 70 herds were tested with no additional infected captive elk found. Three years later, in 1997, two captive white-tailed deer in a Presque Isle County captive deer and elk operation were diagnosed with bovine tuberculosis. All 400 captive deer in the herd also were killed, though it reportedly took one and one-half years to track down and kill all of the deer on the 1,400 acre fenced-in property.

The Department of Agriculture shares with the Department of Natural Resources oversight of "captive cervids" (such as elk and white-tailed deer), with the Department of Agriculture being responsible for monitoring the health of captive cervid herds in the state. As of May 1, 1999, the state "farmed-raised" deer and elk industry had approximately 16,000 deer and 2,000 elk. Currently, all captive cervid farms in the five-county core bovine tuberculosis area are under individual surveillance programs, with 13 farms having completed surveillance programs under which 390 animals have been tested. Out of the approximately 30 captive cervid herds in the six-county buffer zone, 8 have completed surveillance programs, with 339 animals having been tested. The only positive captive white-tailed deer and elk farm (in Presque Isle County) that tested positive for bovine tuberculosis has been destroyed.

Bovine tuberculosis in domestic livestock. Michigan has been a federally designated bovine tuberculosis-free state since 1979, five years after the last known bovine tuberculosis-positive cattle herd (a dairy cattle herd in Ingham County) in the state was identified in 1974. In June or July of 1998, a few months after the two captive deer in the Presque Isle County captive deer herd were diagnosed with bovine tuberculosis, one cow in a small cattle operation in Alpena County tested positive for bovine tuberculosis. The United State Department of Agriculture (USDA) acted immediately, suspending Michigan's "Bovine TB Accredited Free" status in August 1998, the first time Michigan has had a suspended status in thirty years. Reportedly, unless the USDA agrees to grant Michigan a unique "split state" status, Michigan will become one of only four states without a bovine tuberculosis-free status (joining, reportedly, three states bordering Mexico -- Texas, New Mexico, and California -- and one other state).

(Although apparently one dairy cow in Isabella County was found at slaughter to be infected with bovine tuberculosis in 1993, the case did not affect the state's bovine tuberculosis free status after over 8,000 cattle in the area were tested and no more infected cows were found.)

In January 1999, two more cattle herds with a combined total of 175 heads of cattle -- this time in Alcona County -- were discovered to harbor bovine tuberculosis, with two cows in one herd, and three in the other, testing positive for the disease. The first identified infected cattle herd in Alpena County and the third identified infected herd in Alcona County have been destroyed ("depopulated"), while the second identified cattle herd (also in Alcona County) is being scheduled for destruction. Under Public Act 552 of 1998 (which took effect on January 1, 1999), the state will reimburse farmers for up to 90 percent of the value of animals destroyed. Reportedly typical beef cows are worth $500 to $800, while dairy cows or cows with registered blood lines are often worth much more. (See COSTS TO THE STATE, below.)

While the Department of Natural Resources has been responsible for testing wildlife for the presence of bovine tuberculosis, the Department of Agriculture has been responsible for testing domestic livestock and captive cervidae (deer and elk) for the disease. The department began testing domestic cattle and goats in the five core counties of Alcona, Alpena, Montmorency, Oscoda, and Presque Isle in 1995, with most of the testing being conducted by state and federal veterinarians. As of May 1, 1999, 881 farms and over 37,725 head of livestock have been tested. A total of six cows found on three premises have tested positive, one in Alpena County and five in Alcona County. A small number of herds remain to be tested in the five-county core bovine tuberculosis area, and testing is underway in the six-county buffer zone. The goal is to have tested all cattle and goats in this area by fall 1999.

Costs to the state. According to the Senate Fiscal Agency analysis of enrolled Senate Bill 1282 (Public Act 552 of 1998), dated 2-2-99, $250,000 had been appropriated to the Department of Agriculture for indemnification purposes (of which $27,000 had been spent). In addition, $890,000 was appropriated for bovine tuberculosis testing (and $571,000 spent), and the department also internally transferred $480,000 and was anticipating requesting additional funding for fiscal year 1998-99. Finally, $500,000 was appropriated from the Game and Fish Protection Fund to the Department of Natural Resources for monitoring the wild deer herd.

FISCAL IMPLICATIONS:

According to the House Fiscal Agency, the bill would have no state or local fiscal implications. (5-4-99)

ARGUMENTS:

For:

The bill is needed for economic, public health, environmental, and good hunting reasons. For the first

time in recorded history, bovine tuberculosis has appeared as a self-sustaining disease in wild, free-ranging white-tailed deer in North America, specifically, in northeastern Michigan counties. The disease has spread to both captive cervid herds and to domestic livestock herds, and, in response, the federal government has suspended the state's bovine tuberculosis-free status. If Michigan loses its bovine tuberculosis-free status, according to one estimate, the economic cost to the state's livestock industry -- both dairy and breeding operations -- could amount to $16 million annually. Although the state is negotiating with the federal government for a "split state" bovine tuberculosis status, where the northeast part of the state would have a modified bovine tuberculosis free status and the rest of the state would have an unmodified bovine tuberculosis-free status, the outcome of these negotiations is still uncertain, and the whole state still could lose its bovine tuberculosis-free status, with potentially severe economic losses to the state's livestock industry.

In terms of public health, although the risk of transmitting bovine tuberculosis from deer to humans by means of human consumption of properly cooked venison is very low, bovine tuberculosis is the most infectious of the three types of tuberculosis types. And once cows are infected, transmission through raw milk is very easy. While commercially available milk must be pasteurized, apparently it still is a fairly common practice on dairy farms for humans and even their dogs and cats to drink unpasteurized milk, so the risk of disease transmission in such situations could be greater than is usually recognized.

From an environmental perspective, both practical experience and scientific studies have shown that the cost of large-scale deer feeding programs far exceeds the value or advantages that might be gained. For even when supplemental foods are plentiful, deer never totally discontinue foraging on native foods, and as deer populations increase so does damage to native forage plants. Supplemental feeding lessens winter deaths, increases spring reproduction, and improves the survival rates of fawns born in the spring, which can result in a spiraling increase in malnourishment of artificially fed deer as deer populations grow beyond even the capacity of supplemental feeding programs.

Finally, supplemental feeding results in increased risk of disease transmission and a degraded quality of deer stock for hunting. According to one international hunting organization with member chapters in Michigan, Michigan has the largest -- and sickliest -- deer population of any state in the country, primarily because deer numbers are kept so artificially high. In fact, some hunters will pay thousands of dollars to be able to hunt in areas of the nation and even the world in order to have the opportunity to hunt healthy, robust deer. And other areas of the country -- especially the southeastern states and, increasingly, some western states -- reportedly are having a hard time meeting their residents' desire for management of deer populations for quality rather than quantity. For all these reasons, the bill is needed, and needed now.

Against:

A ban or restrictions on deer feeding would have a negative economic effect on farmers who grow feed for deer, as well as on transporters and merchants who engage in moving and selling deer feed. On one estimate, in 1995 feeding (including baiting) generated a minimum value to farmers of about $15 million and two to three times that amount to retailers. Reportedly, some farmers started new businesses -- primarily in the northern part of the state in areas that previously did not support such businesses -- to take advantage of the markets generated by deer feeding, with an estimated value of $2-3 million a year.

Response:

In 1998, the Michigan Farm Bureau passed a resolution supporting a statewide bait limit of five gallons, and approved of legislation to prohibit deer feeding statewide. Additionally, the economic costs of bovine tuberculosis infection in both wild and domestic cervids are significant, and according to one estimate, the economic costs to the agriculture industry to contain the spread of bovine tuberculosis transmitted between free-ranging deer and domestic livestock have been estimated at $16 annually. And, finally, these costs do not include the significant costs that have been (and will be) incurred to by the state -- which is to say, the taxpayers of the state -- for the state to eradicate bovine tuberculosis in free-ranging deer, captive cervids, and domestic cattle in the northeastern Lower Peninsula.

Against:

The bill's recreational feeding provisions have so many loopholes that they would virtually gut the bill's effectiveness in ensuring either that the bovine tuberculosis problem in northeastern Michigan would be eradicated or that similar problems in other areas of the state would be prevented. For example, the bill allows up to five gallons of feed to be put out. At up to 35 pounds a gallon, the bill effectively would allow up to 175 pounds of feed to be put out for

"recreational viewing"! And even in the bovine tuberculosis-affected area of the state, the bill still would allow up to 3 gallons of feed to be put out, which could amount to over a hundred pounds of feed, more than enough to keep deer in close contact with other deer, their shared food (which can be contaminated by infected deer and which can transmit the infection to healthy deer), feces and urine. Given that a deer needs only about 3 pounds of food a day when its metabolism is high and only about 1 pound a day during the winter season when its metabolism normally slows down (unless kept artificially high through supplemental feeding), if recreational feeding is to be allowed -- and it should be banned outright in the northeastern quadrant of the Lower Peninsula -- it should be limited to no more than 2 to 3 pounds a day. In addition, the bill would require only that the feed be deposited not more than 100 yards from a person's residence on land owned or occupied by that person, which allows for the possibility that people not occupying the residence could put out feed for deer. In, say, resort areas with a high number of vacation homes in a relatively small area, the bill would allow feeding of deer that could and probably would simply perpetuate the problems already caused by the present system of deer feeding. In fact, rather than specifying in the bill the conditions under which recreational feeding would be permitted, the Department of Natural Resources should be given the authority to set these conditions. This not only would allow for flexibility in addressing the current and any future problems brought on by supplemental feeding, it also would be in line with the authority given by Proposal G in 1996 to the Natural Resources Commission to manage the state's wildlife population using principles of sound scientific management. The bill, with its current recreational feeding provisions, should not be passed.

Against:

Some people argue that the bill will result in unacceptably high numbers of deer deaths due to starvation if supplemental feeding is not allowed in the northeastern part of the Lower Peninsula. In addition, they ask who will pay for the removal and disposal of the carcasses of the deer who starve to death as a result of the bill. Others opposed to the bill argue that it would violate their property rights, presumably by infringing on what property owners can do on their own property.

Response:

While it may be that many deer who now are kept alive only through artificial feeding practices will die of starvation, it also is true that this is a problem that has been created by the practice of supplemental feeding itself. To reestablish some kind of ecological balance in wild deer populations, the existing numbers of deer do need to be reduced, and a variety of ways -- including both hunting and starvation -- no doubt will need to be used, however "cruel" these methods may seem to some people. It can also be argued that it is cruel to artificially inflate deer herd numbers beyond what their habitat can support in the first place.

With regard to the property rights issue, it should be pointed out that except for captive cervid herds, the state, not private property owners, "owns" and manages the state's wildlife on behalf of all of its citizens. The state's authority to manage wildlife in the state, through the Natural Resources Commission, was most recently reaffirmed by a vote of the people of the state when they approved Proposal G in the November 1996 general election. Proposal G submitted Public Act 377 of 1996 to a referendum in the fall 1996 referendum. Public Act 377 gave the Natural Resources Commission "the exclusive authority to regulate the taking of game" and requires the commission ("to the greatest extent practicable") to "utilize principles of sound scientific management in making decisions regarding the taking of game." Thus it is the commission's responsibility to manage the state's wild deer herds according to principles of sound scientific management, and the scientific evidence clearly indicates that supplemental feeding of deer affects their daily and seasonal movement patterns and can cause serious habitat damage in the areas where the deer are fed, causing a drastic decline in the "natural" ability of the habitat to support an ecologically sound deer population. The deer successfully fed one winter will be present to reproduce and compound any food shortages the following year, and if feeding is carried out year after year (as it has been in more than one area in the state), without an adequate deer kill during the hunting season, the cost and effort to maintain a feeding program large enough to handle the extra deer will just continue to grow.

POSITIONS:

The Department of Natural Resources supports the bill but does not support the committee amendments that allow continued feeding of deer in the TB-area for recreational purposes. The department believes there should be no recreational feeding of deer anywhere in the state. (5-6-99)

The Michigan Farm Bureau supports the concept of the bill but wants the Natural Resources Commission to be able to set the conditions for recreational feeding. (5-6-99)

The Michigan Vegetable Council supports the bill. (5-5-99)

The Michigan Cattlemens' Association supports the bill. (5-5-99)

A representative from the Michigan Milk Producers Association indicated support for the bill. (5-4-99)

The Michigan United Conservation Clubs supports the concept of the bill but wants the Department of Natural Resources to be able to set the conditions for recreational feeding. (5-5-99)

Safari Club International (an international hunting club with 2,000 Michigan members in eight Michigan chapters) opposes the bill because of the recreational feeding amendment. (5-5-99)

Pheasants Forever opposes the bill because of the recreational feeding amendment. (5-5-99)

In addition, representatives from the Michigan Sportsmens Congress and Citizens Against Political Eradication of Deer (C.A.P.E.D., the group that brought the lawsuit against the Department of Agriculture in Alcona County Circuit Court) indicated opposition to the bill. (5-3-99)

Analyst: S. Ekstrom

■This analysis was prepared by nonpartisan House staff for use by House members in their deliberations, and does not constitute an official statement of legislative intent.