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December 13, 2007

The Honorable Tom Harkin  
Chairman

Committee on Agriculture, Nutrition, and Forestry  
Chairman

Subcommittee on Labor, Health and Human Services and Education Appropriations  
731 Hart Senate Office Building  
Washington, D.C. 20510

## RE: Landrieu Amendment to Farm Bill on Salmonella Study in pet turtles

Dear Senator Harkin:

The Council of State and Territorial Epidemiologists (CSTE) and the National Association of State Public Health Veterinarians (NASPHV) understand that Senator Landrieu will offer an amendment to the Farm Bill that permits a comparative study by the Food and Drug Administration of the prevalence of Salmonella bacteria in baby turtles and other reptile and amphibian species sold as pets in the United States. If the study determines that the level of Salmonella is similar, a trigger mechanism in the amendment allows the current ban on the sale of baby turtles to be lifted.

**Our organizations strongly oppose this study language and urge that it be rejected. If it is adopted into the Farm Bill, our organizations urge you to eliminate the study during conference negotiations. Further, we urge you to reject any attempt to add this study language as an amendment to the omnibus appropriations bill, should that action occur.**

Our organizations have consistently opposed introduced legislation lifting the ban on the sale of baby turtles (S. 540, H.R. 924) and a Landrieu amendment to S. 1082, legislation reauthorizing prescription drug user fees, to accomplish the same end. In the evaluation of both organizations, strong evidence exists that the ban on the sale of turtles with a carapace length of less than 4 inches is a necessary public health measure that should be continued.

Small turtles were extremely popular as children's pets prior to the institution of the federal ban on sales. During that time period, the Centers for Disease Control and Prevention (CDC) detected high rates of salmonellosis (an intestinal infection caused by ingestion of *Salmonella* bacteria) in children, with subsequent investigation revealing a close association with turtle ownership. The risk is highest in infants and young children as well as people who have lowered natural resistance to disease due to pregnancy, cancer, chemotherapy, organ transplants, diabetes, liver problems, or other diseases. Symptoms may include diarrhea, stomach pain, nausea, vomiting, fever and headache.

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Voluntary educational efforts were unsuccessful at resolving the problem, and thus the Food and Drug Administration (FDA) regulation banning small turtle ownership was enacted in 1975. This regulation is enforced in cooperation with State and local health jurisdictions. It is estimated that the FDA small turtle ban has prevented over 100,000 cases of salmonellosis per year (Am J Epid; 1972; vol. 95: pp. 511-17). With many of the turtle-associated cases involving young children, this ban has also prevented occurrence in that age group of the potential serious complications of salmonellosis, including meningitis and sepsis.

A 1980 analysis concluded that state and federal legislative actions were associated with a 77% reduction in turtle-associated *Salmonella* serotypes especially in states importing turtles in contrast to states producing them, and an 18% reduction in the frequency of salmonellosis in children (JAMA, 1980; vol. 243: pp. 1247-9). It should be noted that turtles exported from the U.S. are also an important potential route for global dissemination of human salmonellosis (JAMA, 1985; vol. 254: pp. 237-9).

Turtles carry *Salmonella* as part of their normal intestinal flora and usually do not appear sick in any way while carrying the organism. *Salmonella* may be shed intermittently by turtles, so relying on negative fecal test results would be an unreliable method of determining whether a turtle was *Salmonella*-free. In addition, attempts to treat turtles with antibiotics to eliminate the bacteria have not proven to be effective. The guidelines of the Association of Reptilian and Amphibian Veterinarians do not recommend treating healthy reptiles with antimicrobials with the intention of eliminating *Salmonella* from the intestinal tract. They further state that it is not possible to determine whether any individual living reptile is free of *Salmonella* (JAVMA, 1998; vol. 213: July 1).

Both the introduced bills and the Landrieu Farm Bill amendment state that “university research has shown that these turtles can be treated in such a way that they can be raised, shipped, and distributed without having a recolonization of *Salmonella*”. It is our evaluation that there is insufficient peer-reviewed scientific research to prove this claim. Cases have been documented where ‘*Salmonella*-free turtles’ turned out *not* to be *Salmonella*-free upon further testing (Morbidity and Mortality Weekly Report, 2005; vol. 54: pp. 223-226). In addition, the current studies on this issue stated that a small percentage of treated eggs and hatchlings were not free of *Salmonella*.

Even more alarming is the scientific literature indicating that attempts to keep turtles *Salmonella*-free may lead to antimicrobial resistance. Amendment 1004 refers to the ‘Seibling method’, which relies on the use of gentamicin or other antibiotics and very specific conditions to produce *Salmonella*-free turtles. One of these conditions, a lack of heavy rainfall, cannot reliably be counted upon by producers. When antibiotics are used, most bacteria will be eradicated, but bacteria that are resistant to the antibiotics survive and multiply, resulting in antibiotic-resistant bacteria. Turtles hatched using the Seibling method were found to harbor *Salmonella* and other strains of bacteria that were resistant to gentamicin and other antibiotics (Applied and Env Micro, 2006; vol. 72: pp. 306-312). The high levels of antibiotic-resistant salmonellae in turtle eggs pose a serious human health risk (Am J Epid, 1990; vol. 132, No. 2: 233-238), and also “pose a special health risk for farm employees, other livestock, and wildlife in the area” (Am J Vet Res, 2007; vol. 68: pp.158-164).

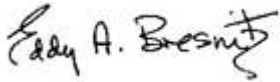
It is important that the public be educated about the fact that all reptiles and amphibians can be a source of *Salmonella* exposure for humans, and that these animals are not suitable pets in households with young children or immunocompromised persons (see <http://www.cdc.gov/healthypets/animals/reptiles.htm>). CDC has conducted outreach efforts to provide risk information to the public via pet retailers. In addition, numerous state and local health departments, the Pet Industry Joint Advisory Council and the Humane Society of the U.S. have all conducted educational efforts concerning the risks of *Salmonella* infection from pet reptiles and amphibians. Unfortunately, despite these efforts, the level of public health awareness about the hazards of reptile and amphibian ownership remains low. It has been shown, moreover, that small turtles pose a greater risk to public health than other reptiles and amphibians currently being sold in pet shops. This is due to their high appeal to smaller children resulting in large sales volume, and extensive exposure of children who might frequently dip their hands in the turtle tank water, carry turtles in their hands, kiss the turtles, and engage in other risky behaviors, often with little or no supervision or handwashing. Providing information to turtle buyers (whether they are wholesalers, retailers or the ultimate consumer) is unlikely to change these behaviors and protect the public from pet turtle-associated *Salmonella*. Additionally, advertising turtles as *Salmonella*-free might discourage owners from taking even the most basic hygiene precautions, such as handwashing after animal handling, as the implication would be that they have been rendered safe.

Regarding animal welfare concerns, it is common knowledge that prior to the FDA ban, many small turtles kept as pets met untimely deaths by being sat on and crushed, flushed down toilets, or otherwise abused and neglected by well-meaning pet owners who were unfamiliar with proper turtle care and who failed to closely supervise turtle/child interactions. Therefore, the FDA ban has had the added bonus of saving hundreds of thousands of hatchling turtles from death due to neglect and mishandling.

In summary, the Landrieu Farm Bill amendment, and the introduced bills, rely heavily on turtle producers being able to produce *Salmonella*-free turtles using methods which appear unreliable, have had insufficient public health review, and which actually may increase the risk of introducing antibiotic-resistant organisms into the environment and of exposure of the public to the same organisms. There is no doubt in the minds of hundreds of public health experts in our associations that allowing small turtle sales will cause a repeat of the high levels of salmonellosis seen in children prior to the ban. Because of this, both CSTE and NASPHV recommend voting to oppose the Landrieu Farm Bill amendment and any similar bills or amendments in the Senate and House.

If you have any questions, or need more information, please feel free to contact us.

Sincerely,



Eddy A. Bresnitz, MD, MS  
President, CSTE



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President, NASPHV