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Livestock pose no or very limited infectious disease risk to people who are not in direct contact. It is inappropriate to extrapolate infectious disease risk of animal care givers to the general public. In addition, the type of production system does not change the risk for diseases that can pass from animals to humans; and livestock are not over-represented in disease risk when compared to companion animals and wildlife. While it is certainly true that there are infectious diseases that pass to humans from animals such as pets, wildlife, and livestock, these risks are confined to humans in direct contact with animals, or in the case of watershed contamination, the risk is reduced from animals housed in managed environments compared to wildlife or pastured livestock.

### Affect of Livestock on Public Health

Some zoonotic diseases can affect people in direct contact with livestock (producers, veterinarians, abattoir workers, etc.)

- Leptospirosis (*Leptospira interrogans*)
- Non-typhoidal salmonellosis
- Cryptosporidiosis (*Cryptosporidia parvum*)

Two historically important zoonotic diseases are not found in Missouri due to eradication efforts by the USDA and the livestock industries.

- Missouri is a tuberculosis-free state
- Missouri is a brucellosis-free state

Some food-borne illnesses are due to pathogens of animal origin

- Non-typhoidal salmonellosis (primarily *S. typhimurium* and *S. enteritidis*)
- *Escherichia coli* O157:H7
- Campylobacteriosis (*Campylobacter jejuni* and *C. coli*)
- Yersiniosis (*Yersinia enterocolitica* and *Y. paratuberculosis*) – rare in U.S., found in Europe and Japan
- Listeriosis (*Listeria monocytogenese*)

Non-food-borne, non-contact diseases due to pathogens of animal (wildlife and domestic) origin are rare

- 1 drinking water-associated outbreak of Cryptosporidiosis in Canada has been reported (0 in the U.S.)
  - All cryptosporidiosis water-associated outbreaks in the U.S. and all but one in Canada that have had genotype analysis performed on parasite isolates have been associated with the H (or 1) genotype (human isolates)

- Giardiasis (*Giardia lamblia*) water-borne outbreaks have been almost uniformly traced to human-to-human transmission. Attempts to link human giardiasis outbreaks with dogs or beavers have not been successful.
- Leptosporidiosis contaminated water can cause disease in humans. The source can be other humans or almost any domestic or wild animal. Recent human disease in the U.S. has been reported due to contact with rodent urine-contaminated water in urban areas.