	Foot and Mouth Disease	**BSE (Mad Cow Disease)**
Infectious agent	Virus (single stranded, non-enveloped, RNA virus)	Prion (small protein)
Animals affected	Cloven hoofed animals such as pigs, sheep, goats and cattle	Beef and dairy cattle can be affected. In sheep the disease is called Scrapie.
Affects humans?	Extremely rare and symptoms are minor compared to those seen in animals.	Yes, in rare instances humans can acquire the disease. It is called Variant Creutzfeldt-Jakob Disease. The majority of vCJD have been reported in the U.K. No cases of vCJD have been detected in the U.S.
How is the disease transmitted?	Virus is released into the environment via the characteristic skin lesions of an affected animal. The blood, milk, urine, stool and meat will also contain infectious particles. The virus can persist in meat and environmental surfaces for more than 30 days.	Consumption of brain and nervous tissue of affected animals
How is the disease spread between animals, farms, and countries?	• People wearing contaminated clothes or footwear or using contaminated equipment pass the virus to susceptible herds. • Animals carrying the virus are introduced into susceptible herds. • Contaminated facilities are used to hold susceptible animals. • Contaminated vehicles are used to move susceptible animals or move between facilities. • Susceptible animals are exposed to materials such as hay, feedstuffs, hides, or biologics contaminated with the virus. • Susceptible animals drink common source contaminated water. • A susceptible cow is inseminated by semen from an infected bull.	Originally caused by feeding of Scrapie-infected sheep meat and bone meal to cattle. Amplification occurred when prion containing rendered bovine meat and bone meal was fed to calves.

Description of the Diseases

	Foot and Mouth Disease	BSE (Mad Cow Disease)
Symptoms of disease	Blisters in the mouth, feet and teats; sticky, foamy stringy saliva; lameness due to interdigital and coronary band lesions.	Changes in temperament. Nervousness, aggression, less coordination, and difficulty rising.
Time from exposure to onset of symptoms	Days	Years
Can the infectious agent be destroyed by disinfectants?	Although more tolerant of disinfectants than other types of infectious agents, many types of disinfectants have been tested and proven effective.	Commercial disinfectants have no practical value in inactivation of the prion.
Can the infectious agent be destroyed by heat?	Normal cooking temperatures will inactivate the virus.	Only by very aggressive heat treatment such as extended time autoclaving and incineration. Normal cooking temperatures do not inactivate the prion.
What types of food should be avoided?	Humans are not affected, however, animals can be infected: • From contaminated water • From milk • From contaminated feed	**In BSE-infected geographies,** the following meat products present a BSE concern because of the possibility of contamination with nervous tissue: Rib roasts, T-bones (dorsal root ganglia) Bone-in-meat ((bone marrow) Mechanically-recovered meat (spinal cord, dorsal root ganglia) Head meat (brain leak, trigeminal ganglia) Sausage casing (distal ileum) Ground meats (brain, spinal cord)