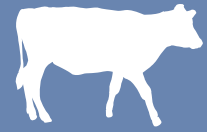


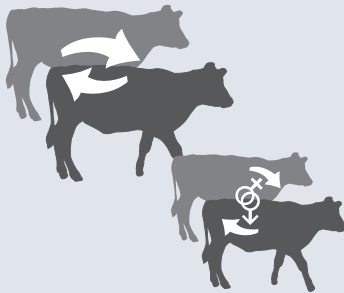
Cattle Routes of Exposure and Disease Examples



Disease causing agents can expose animals and people through different routes. Some diseases are spread only one way; others are spread by several. Preventing exposure helps prevent disease.

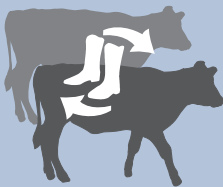


Aerosol (breath or inhalation): Droplets containing disease agents pass through the air and are inhaled. Examples include bovine viral diarrhea (BVD), foot and mouth disease (FMD), *Mycobacterium bovis* (tuberculosis).



Direct Contact: Disease agents in blood or saliva touches open wounds, mucus membranes (e.g., eyes, gums), or skin through nose-to-nose contact, rubbing, or biting. Examples include external parasites, FMD, leptospirosis, rabies.

Reproductive: A subtype of direct contact that includes diseases spread through mating or to the fetus during pregnancy. Examples include BVD, neosporosis, tuberculosis.



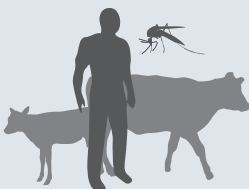
Fomite: An inanimate object (needle, footwear, livestock trailer, milking unit) contaminated with a disease agent can spread it to other animals it touches. Examples include bovine leukemia virus (BLV), FMD, mastitis, ringworm.



Oral (ingestion): Eating feed, drinking water, or licking/chewing objects contaminated by disease agents in manure, saliva, urine, or parasites. Examples include botulism, bovine spongiform encephalopathy (BSE), FMD, Johne's, *Salmonella*.



Vector: Insects, wildlife, rodents, wild birds, and other animals like dogs and cats can spread germs mechanically (on the footpads or feathers) or biologically (insect bite or shed in feces). Examples include anaplasmosis (ticks), contagious mastitis (flies), vesicular stomatitis (mosquitoes).



Zoonotic: Diseases spread between animals and people through the same ways described above: aerosol, direct contact, fomite, oral, and vectors. Examples include anthrax, tuberculosis, leptosporosis, rabies, salmonellosis.

This information based on content created by the CFSPH.
For more information on these diseases, visit: www.cfsph.iastate.edu.

