## Select Zoonoses of Livestock and Poultry

### Animal Impact

<table>
<thead>
<tr>
<th>Disease</th>
<th>Transmission</th>
<th>Cattle</th>
<th>Sheep</th>
<th>Goats</th>
<th>Pigs</th>
<th>Equines</th>
<th>Poultry</th>
<th>Incubation Period</th>
<th>Disease Description and Clinical Signs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BACTERIAL</strong></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Anthrax</td>
<td>Ingestion: spores when grazing; contaminated forage, bone meal</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>1-10 days</td>
<td>Sudden death, lack of rigor mortis; highly infectious blood from mouth, nose, anus fails to clot; respiratory difficulty, edema in neck, throat, shoulders (cattle, sheep, goats, equines); swine usually asymptomatic</td>
</tr>
<tr>
<td>Brucellosis</td>
<td>Direct contact: reproductive tissues/fluids</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>Varies</td>
<td>Reproductive: abortion, stillbirth; retained placenta; placentitis; orchitis; epididymitis</td>
</tr>
<tr>
<td>Campylobacteriosis</td>
<td>Ingestion: feces; reproductive tissues; contaminated soil, water</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>3-25 days</td>
<td>Asymptomatic in most species</td>
</tr>
<tr>
<td>Caseous/ulcerative lymphangitis</td>
<td>Direct contact: abscesses; Inhalation: aerosols</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>1-3 mos.</td>
<td>Cutaneous: (cattle) ulcers, granulomas</td>
</tr>
<tr>
<td>Chlamydia</td>
<td>Inhalation: aerosols</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>Varies</td>
<td>Reproductive: (sheep, goats) late term abortion, stillbirth, low birth weight or premature offspring; (cattle) abortion, retained placenta, mastitis</td>
</tr>
<tr>
<td>Colibacillosis</td>
<td>Ingestion: contaminated soil, feed, or water</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>Varies</td>
<td>Gastrointestinal: (lambs, calves, piglets) diarrhea Reproductive: (cattle) mastitis Septicemia: (poultry) air sacculitis; salpingitis; granulomas</td>
</tr>
<tr>
<td>Dermatophilosis</td>
<td>Direct contact: skin lesions; Inhalation: contaminated soil, thorns Mechanical vectors: biting insects</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>1-30 days</td>
<td>Cutaneous: (cattle, sheep, goats, horses) serous exudates at base of hair shaft (&quot;paintbrush lesions&quot;), crusts, alopecia; found in young animals/wet environments</td>
</tr>
<tr>
<td>Erysipelas</td>
<td>Direct contact: animals, fluids</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>1-7 days</td>
<td>Acute: (pigs) fever; prostration; red-purple spots on ears, skin; dyspnea; death Subacute: red-purple diamond-shaped skin lesions Chronic: joint swelling, lameness, dyspnea; death Septicemia: (turkeys) cyanosis &quot;blue comb&quot;; death Musculoskeletal: (lamb) polyarthritus</td>
</tr>
<tr>
<td>Leptospirosis</td>
<td>Direct contact: infected urine; contaminated water; aborted tissues</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>7-12 days</td>
<td>Reproductive: (cattle, sheep, goats, pigs) abortion; decreased fertility; stillbirth; weak offspring Systemic: (calves, piglets, lambs, kids, foals) fever; icterus; anemia; death; (calves, piglets) meningitis; (foals) pulmonary bleeding, respiratory distress Ocular: (horses) recurrent inflammatory uveitis; (cattle, horses) conjunctivitis; (horses) cataractis</td>
</tr>
<tr>
<td>Listeriosis</td>
<td>Ingestion: improperly fermented silage; spoiled/decaying feed, plant matter; soil</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>● ● ● ●</td>
<td>1 d.-7 wks.</td>
<td>Reproductive: (cattle, sheep) abortion; stillbirth Systemic: (calves) dyspnea, meningitis, death in 12 hrs Neurologic: (cattle, sheep, goats) ataxia; circling; nystagmus; torticollis; cranial nerve deficits Ocular: (cattle, sheep, goats) &quot;silage eye,&quot; keratoconjunctivitis</td>
</tr>
</tbody>
</table>

**Note:** This chart provides an overview of some zoonoses of livestock and poultry. It does not cover foreign animal diseases (FADs). Information presented here is not comprehensive, and should not be used to rule out a diagnosis or take the place of veterinary advice.

Additional disease information available at [http://www.cfsph.iastate.edu/DiseaseInfo/](http://www.cfsph.iastate.edu/DiseaseInfo/) Table last reviewed January 2021
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<tr>
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<th>Transmission Animal-to-Animal</th>
<th>Cattle</th>
<th>Sheep</th>
<th>Goats</th>
<th>Pigs</th>
<th>Equines</th>
<th>Poutry</th>
<th>Incubation Period</th>
<th>Disease Description and Clinical Signs</th>
</tr>
</thead>
</table>
| **Ornithosis/ Avian chlamydiosis**  
*Chlamydia psittaci* | Inhalation: aerosolized feces, respiratory secretions  
Ingestion: feces; carcasses; contaminated feed, water  
Fomites: contaminated equipment, objects or surfaces | ❌ | 🔴 | ❌ | 🔴 | ❌ | 🔴 | 5-14 days; up to 30 | Asymptomatic in chickens; turkeys, ducks affected  
Ocular: conjunctivitis  
Respiratory: ocularonasal discharge; sneezing; dyspnea  
Gastrointestinal: green to yellow diarrhea  
Reproductive: decreased egg production  
Neurologic: (ducks) trembling, abnormal gait |
| **Q fever**  
*Coxiella burnetii* | Inhalation: aerosols  
Direct contact: reproductive tissues  
Ingestion: contaminated feed, water  
Fomites: ticks | ▲ | § | ▲ | ▲ | ▲ | ▲ | 1-3 wks.; varies | Reproductive: (cattle, sheep, goats, horses) abortion; stillbirth; weak offspring; purulent cotyledons (goats) |
| **Rhodococcosis**  
*Rhodococcus equi* | Inhalation: contaminated dust (foals infected soon after birth)  
Ingestion: soil (ubiquitous), feces | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | 9 days to 4 wks. | Asymptomatic in adult horses; sometimes found in cervical lymph nodes (swine, cattle)  
Respiratory: (foals) suppurative bronchopneumonia, esp. 1-4 mos. old; suppurative lymphadenitis fever; tachypnea; cough; purulent nasal discharge; death  
Reproductive: abortion; decreased milk (cattle)  
Systemic: septicemia; CNS signs; pneumonia (calves, lambs, kids, foals, pigs; piglets 2-4 mos.; poultry hatchlings)  
Musculoskeletal: (foals) arthritis |
| **Salmonellosis**  
*Salmonella* spp. | Ingestion: contaminated feed, water  
Direct contact: infected animal, feces  
Fomites: vectors | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | Varies; <1-2 days if severe | Gastrointestinal: (cattle, sheep, goats, equines, swine) severe enteritis +/- blood; young most affected  
Reproductive: abortion; decreased milk (cattle)  
Systemic: suppurative lymphadenitis fever; tachypnea; cough; purulent nasal discharge; death  
Musculoskeletal: (swine) polyarthritis  
Neurologic: (piglets) meningitis, ataxia, high mortality  
Systemic: (foals, swine) septicemia |
| **Staphylococcosis** including methicillin-resistant  
*Staphylococcus aureus* (MRSA) | Direct contact: skin wounds; feces  
Fomites: aerosols (dust) | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | Variable | Cutaneous: wound infections, abscesses; (swine) exudative epidermitis; (poultry) bumblefoot, comb necrosis  
Reproductive: (cattle, sheep, swine) mastitis; metritis  
Systemic: (poultry) septicaemia; salpingitis; synovitis |
| **Streptococcosis**  
*Streptococcus* spp. | Direct contact: infected animals  
Inhalation: aerosols  
Fomites: contaminated feed, water  
Mechanical vectors: flies (S. suis) | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | Varies; toxic shock within hours | Reproductive: mastitis, metritis, placentalis, abortion  
Respiratory: purulent lung lesions; (swine) pneumonia  
Musculoskeletal: (swine) polyarthritis  
Neurologic: (piglets) meningitis, ataxia, high mortality  
Systemic: (foals, swine) septicemia |
| **Tuberculosis, avian**  
*Mycobacterium avium* | Ingestion: infected carcasses; contaminated water  
Inhalation: aerosols  
Reservoir: rodents, wild birds | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | Not known | Systemic: (poultry) emaciation; granulomas (GI, tract, spleen, liver, bone marrow); death  
*M. avium* subsp. *hominissuis* (swine) asymptomatic; head, neck, and mesenteric lymph nodes affected |
| **Tuberculosis, bovine**  
*Mycobacterium bovis* | Direct contact: body tissues/liquids  
Inhalation: aerosols  
Ingestion: unpasteurized dairy; contaminated water  
Reservoir: cervids, rodents, feral swine | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | Varies; months to years | Asymptomatic  
Systemic: (cattle, sheep, goats) weight loss; weakness; emaciation; fever; dissemination  
Respiratory: (cattle, sheep, goats) chronic cough, bronchopneumonia; tachypnea; dyspnea  
Gastrointestinal: intermittent diarrhea; constipation  
Reproductive: abortion; infertility; mastitis; metritis |
| **Tularemia**  
*Francisella tularensis* | Ingestion: contaminated food, water  
Direct contact: animal tissues, bites  
Inhalation: aerosols  
Vectors: ticks, biting insects | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | 1-10 days | Asymptomatic  
Systemic: (sheep, goats) fever; depression; regional lymphadenopathy; death in young lambs and kids  
Reproductive: (sheep) abortion |
| **VIRAL** | | | | | | | |
| **Bovine papular stomatitis**  
*Parapoxvirus* | Direct contact: infected animals | ▲ | | | | | 2-4 days | Cutaneous: lesions in/around mouth (nostrils, palate, lips), young animals; teat lesions; may look like vesicles  
Gastrointestinal: fever, diarrhea, salivation, anorexia |
| **Contagious ecthyma (Orf)**  
*Parapoxvirus* | Direct contact: scabs; lesions  
Fomites: vectors | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | 2-3 days | Asymptomatic in adults  
Cutaneous: (young sheep/lambs) pustules, vesicles, scabs on mouth, muzzle, eyelids, nostrils, teats, udder |

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</thead>
<tbody>
<tr>
<td>Echinococcosis</td>
<td>Vectors: mosquitoes (biological); blackflies, mites (mechanical)</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>1-5 days</td>
<td>Neurological: (equines) fever; depression; encephalitis; ataxia; head-popping; blindness; bruxism; circling; paddling; stupor; seizures; death; (sheep, goats) death</td>
</tr>
<tr>
<td>Taenia</td>
<td>Infection: carcasses (birds)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Variable; 1-3 days in swine; 1-21 days in poultry</td>
<td>Respiratory: (swine) fever; anorexia; dry cough; labored breathing; nasal discharge; conjunctivitis</td>
</tr>
<tr>
<td>Cryptosporidiosis</td>
<td>Infection: infected tissues; contaminated feed, water</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2-15 days</td>
<td>Respiratory: coughing; sneezing; dyspnea; crackles</td>
</tr>
<tr>
<td>Newcastle disease</td>
<td>Direct contact: feces, respiratory secretions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3-7 days</td>
<td>Reproductive: decreased egg production; misshapen and abnormal eggs (velogenic strains)</td>
</tr>
<tr>
<td>Acarasis</td>
<td>Direct contact: infested animals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10 days-6 mos.</td>
<td>Neurological: paralytic form: progressive paralysis; dysphagia; hypertension; ataxia; ascending paralysis; death in 2-6 days; furious form: tremors; restlessness; aggression; ascending paralysis; death in 4-8 days; wool pulling (sheep); bleating (goats)</td>
</tr>
<tr>
<td>Ascaris suum (Roundworms)</td>
<td>Infection: contaminated feed, water</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Variable; 1-3 days in swine; 1-21 days in poultry</td>
<td>Respiratory: coughing; sneezing; dyspnea; crackles</td>
</tr>
<tr>
<td>Cryptosporidiosis</td>
<td>Infection: cyst-contaminated food, water, soil</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3-5 days</td>
<td>Reproductive: decreased egg production; misshapen and abnormal eggs (velogenic strains)</td>
</tr>
<tr>
<td>Cysticercosis</td>
<td>Infection: gravid proglottids on fur; from plants, contaminated water, soil</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Variable; 1-3 days in swine; 1-21 days in poultry</td>
<td>Respiratory: coughing; sneezing; dyspnea; crackles</td>
</tr>
</tbody>
</table>

#### PARASITIC

<table>
<thead>
<tr>
<th>Disease</th>
<th>Transmission Animal-to-Animal</th>
<th>Cattle</th>
<th>Sheep</th>
<th>Goats</th>
<th>Pigs</th>
<th>Equines</th>
<th>Poultry</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Acarasis</td>
<td>Direct contact: infested animals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10-60 days</td>
<td>Cutaneous: pruritus; dermatitis; alopecia; crustated skin</td>
</tr>
<tr>
<td>Sarcoptes, Demodex, Ornithonyssus</td>
<td>Infection: contaminated feed, water</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>50-60 days</td>
<td>Gastrointestinal: (young pigs) pendulous abdomen</td>
</tr>
<tr>
<td>Ascaris suum</td>
<td>Infection: eggs in environment, on pigs, in manure, on fomites; contaminated plants, feed, water</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3-5 days</td>
<td>Asymptomatic</td>
</tr>
<tr>
<td>Cryptosporidiosis</td>
<td>Infection: oocyst-contaminated food, water, soil</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Variable; 1-3 days in swine; 1-21 days in poultry</td>
<td>Gastrointestinal: (neonatal calves, lambs, kids, piglets) watery diarrhea; tenesmus; anorexia; weight loss</td>
</tr>
<tr>
<td>Cysticercosis</td>
<td>Infection: gravid proglottids in pastures; contaminated food, water, soil</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Variable; 1-3 days in swine; 1-21 days in poultry</td>
<td>Respiratory: bronchopneumonia; respiratory difficulty</td>
</tr>
</tbody>
</table>

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<tr>
<th>Disease</th>
<th>Transmission Animal-to-Animal</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Trichuris suis</td>
<td>Ingestion: egg-contaminated soil, feed, water</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>2-3 weeks</td>
<td>Gastrointestinal: diarrhea; weight loss; anemia; death may occur in piglets &lt; 3 mos.</td>
</tr>
<tr>
<td>Cryptococcosis</td>
<td>Inhalation: soil, decaying wood; bird feces, especially pigeon</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>Not known</td>
<td>Respiratory: (cattle, sheep, goats, horses) pulmonary infection; (sheep) rhinitis; (horses) nasal/sinus growths Neurologic: (cattle) abnormal gait, head pressing, circling, (goats, horses) meningoencephalitis Reproductive: (cattle, sheep, goats) mastitis, (horses) endometritis, abortion</td>
</tr>
<tr>
<td>Dermatophytosis/Ringworm</td>
<td>Direct contact: infected animals; skin lesions</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>2-4 weeks</td>
<td>Cutaneous: alopecia, scaling, crusts, erythema; (cattle) legs, chest, intermaxillary skin, dewlap; (sheep) face, head, chest, non-wooled parts of legs; (horses) tack areas; (pigs) inflammatory ring; (poultry) head, neck, comb</td>
</tr>
<tr>
<td>Sporotrichosis</td>
<td>Direct contact: vegetation, wood; cat bites or scratches</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>Several days to 3 mos.</td>
<td>Cutaneous: (equines) moist skin over dermal nodule, progressing to alopecia, ulceration, scabs; ulcers heal slowly; edema in affected limb; lymph node drainage</td>
</tr>
<tr>
<td>Bovine spongiform encephalopathy (BSE)</td>
<td>Ingestion: prion-containing tissues from infected animals</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>2-8 yrs.</td>
<td>Asymptomatic (signs take years to develop) Neurologic: (cattle) hind limb ataxia; tremors; changes in behavior; hyper-responsive to stimuli; recumbency; coma; death; (goats) lethargy; weight loss; recumbency</td>
</tr>
</tbody>
</table>

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<th>Human Impact</th>
<th>Prominent Clinical Signs and Symptoms</th>
</tr>
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<tbody>
<tr>
<td><strong>BACTERIAL</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Anthrax

**Bacillus anthracis**
- **Person-to-Person**: Vector-Transmitted
- **Transmission from Animals or Animal Products**: Spores in soil or blood
- **Ingestion**: Undercooked meat
- **Inhalation**: Spores from hides, wool
- **Septicemia**: Yes
- **Respiratory**: Yes
- **Gastrointestinal**: Yes
- **Cutaneous**: Yes
- **Ocular**: No
- **Neurologic**: No
- **Reproductive**: No
- **Death**: Yes
- **Incubation Period**: 1-10 days
- **Prominent Clinical Signs**: Cutaneous: pustules; dark black scab (eschar)
  - Gastrointestinal: severe vomiting; bloody stools
  - Respiratory: flu-like signs; respiratory distress
  - All forms: sepsis, shock, death

### Brucellosis

**Brucella abortus**
- **Person-to-Person**: Vector-Transmitted
- **Transmission from Animals or Animal Products**: Reproductive tissues/fluids; RB-51 vaccine
- **Ingestion**: Raw milk/dairy
- **Inhalation**: Aerosols
- **Septicemia**: Yes
- **Respiratory**: Yes
- **Gastrointestinal**: Yes
- **Cutaneous**: Yes
- **Ocular**: No
- **Neurologic**: No
- **Reproductive**: Yes
- **Death**: Yes
- **Incubation Period**: 2-4 wks., up to 6 mos.
- **Prominent Clinical Signs**: Flu-like: headache; fever; fatigue; chills; aches
  - Chronic: waxing, waning fever; bone, joint infections
  - Reproductive: epididymo-orchitis; seminal vesiculitis and prostateitis; abortion or premature birth

### Campylobacteriosis

**Campylobacter jejuni**
- **Person-to-Person**: Vector-Transmitted
- **Transmission from Animals or Animal Products**: Ingestion: raw milk; dairy; raw/undercooked meat or poultry; cross-contaminated food; contaminated soil, water
- **Direct contact**: Animal; feces
- **Septicemia**: Yes
- **Respiratory**: No
- **Gastrointestinal**: Yes
- **Cutaneous**: No
- **Ocular**: No
- **Neurologic**: No
- **Reproductive**: No
- **Death**: Yes
- **Incubation Period**: 1-10 days
- **Prominent Clinical Signs**: Gastrointestinal: mild to severe Gi distress; fulminant or relapsing colitis; fever; headache; muscle pain; children/vulnerable people most at risk for diarrhea
  - Reproductive: (C. fetus) miscarriage; premature birth; infant meningitis followed by death

### Caseous/ulcerative lymphangitis

**Corynebacterium spp.**
- **Person-to-Person**: Vector-Transmitted
- **Transmission from Animals or Animal Products**: Direct contact: abscesses
- **Inhalation**: Aerosols
- **Fomites**: Contaminated bedding, equipment
- **Ingestion**: Raw milk
- **Septicemia**: No
- **Respiratory**: No
- **Gastrointestinal**: Yes
- **Cutaneous**: Yes
- **Ocular**: No
- **Neurologic**: No
- **Reproductive**: No
- **Death**: No
- **Incubation Period**: 1-2 wks.
- **Prominent Clinical Signs**: Abscesses: suppurative granulomatous lymphadenitis; rectal and chest abscesses

### Chlamydiosis

**Chlamydia abortus**
- **Person-to-Person**: Vector-Transmitted
- **Transmission from Animals or Animal Products**: Inhalation: Aerosols
- **Direct contact**: Reproductive tissues/Fluids
- **Septicemia**: Yes
- **Respiratory**: No
- **Gastrointestinal**: No
- **Cutaneous**: No
- **Ocular**: No
- **Neurologic**: No
- **Reproductive**: Yes
- **Death**: Yes
- **Incubation Period**: Not known
- **Prominent Clinical Signs**: Reproductive: stillbirth; abortion; pre-term labor
  - Flu-like: fever; headache; dry cough; vomiting
  - Systemic: Septicemia: renal dysfunction; pneumonia

### Colibacillosis

**Escherichia coli**
- **Person-to-Person**: Vector-Transmitted
- **Transmission from Animals or Animal Products**: Ingestion: Undercooked meat; raw milk; other contaminated foods
- **Direct contact**: Animal; feces
- **Septicemia**: Yes
- **Respiratory**: No
- **Gastrointestinal**: Yes
- **Cutaneous**: No
- **Ocular**: No
- **Neurologic**: No
- **Reproductive**: Yes
- **Death**: Yes
- **Incubation Period**: 1-16 days
- **Prominent Clinical Signs**: Gastrointestinal: Watery diarrhea; hemorrhagic colitis; nausea; vomiting; abdominal pain; cramping
  - Systemic: Hemolytic uremic syndrome (HUS); fever

### Dermatophilosis

**Dermatophilus congolensis**
- **Person-to-Person**: Vector-Transmitted
- **Transmission from Animals or Animal Products**: Direct contact: Skin lesions
- **Septicemia**: No
- **Respiratory**: No
- **Gastrointestinal**: No
- **Cutaneous**: Yes
- **Ocular**: No
- **Neurologic**: No
- **Reproductive**: No
- **Death**: Yes
- **Incubation Period**: 1-10 days
- **Prominent Clinical Signs**: Cutaneous: Multiple pustules on hands, forearms; rupture, leaving reddish crater-like cavity

### Erysipeloïd

**Erysipelothrix rhusiopathiae**
- **Person-to-Person**: Vector-Transmitted
- **Transmission from Animals or Animal Products**: Direct contact: Animal; contaminated soil
- **Septicemia**: No
- **Respiratory**: No
- **Gastrointestinal**: No
- **Cutaneous**: Yes
- **Ocular**: No
- **Neurologic**: No
- **Reproductive**: No
- **Death**: Yes
- **Incubation Period**: 1-7 days
- **Prominent Clinical Signs**: Cutaneous: Acute localized cellulitis; painful red/purple firm swelling, usually on hands and fingers; generalized disease possible

### Leptospirosis

**Leptospira spp.**
- **Person-to-Person**: Vector-Transmitted
- **Transmission from Animals or Animal Products**: Direct contact: Infected urine; contaminated water, food, soil
- **Ingestion**: Contaminated water
- **Inhalation**: Aerosolized urine, water
- **Septicemia**: Yes
- **Respiratory**: No
- **Gastrointestinal**: Yes
- **Cutaneous**: Yes
- **Ocular**: No
- **Neurologic**: No
- **Reproductive**: No
- **Death**: Yes
- **Incubation Period**: Varies
- **Prominent Clinical Signs**: Acute/septicemic phase: fever, chills, conjunctival suffusion, headache; myalgia; nausea; vomiting
  - Immune phase: Anicteric (common) or icteric forms; aseptic meningitis; stiff neck; headache; kidney failure; pulmonary hemorrhage; edema; dyspnea; death

### Listeriosis

**Listeria monocytogenes**
- **Person-to-Person**: Vector-Transmitted
- **Transmission from Animals or Animal Products**: Ingestion: Contaminated foods
- **Direct contact**: Reproductive tissues
- **Septicemia**: Yes
- **Respiratory**: No
- **Gastrointestinal**: Yes
- **Cutaneous**: Yes
- **Ocular**: No
- **Neurologic**: No
- **Reproductive**: Yes
- **Death**: Yes
- **Incubation Period**: < 2 wks.; 2 mos. if pregnant
- **Prominent Clinical Signs**: Reproductive: abortion; stillbirth; premature birth
  - Neurologic: Meningitis; Meningoencephalitis
  - Systemic: Septicemia; fever; chills; headache; dizziness

### Note:
This chart provides an overview of selected zoonoses of livestock and poultry. Information presented is not comprehensive, and should not be used to rule out a diagnosis or take the place of veterinary advice.

Additional disease information available at [http://www.cfsph.iastate.edu/DiseaseInfo/](http://www.cfsph.iastate.edu/DiseaseInfo/) Table last reviewed January 2021
## Select Zoonoses of Livestock and Poultry

<table>
<thead>
<tr>
<th>Human Impact</th>
<th>Person-to-Person</th>
<th>Vector-Transmitted</th>
<th>= Body System Affected</th>
<th>Prominent Clinical Signs and Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disease</td>
<td>Transmission from Animals or Animal Products</td>
<td>Septicemia</td>
<td>Respiratory</td>
<td>Gastrointestinal</td>
</tr>
<tr>
<td>Psittacosis Chlamydia psittaci</td>
<td>Inhalation: aerosolized feces, respiratory secretions Direct contact: bites, beak contact</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Q fever/Coxiellois Coxiella burnetii</td>
<td>Direct contact: reproductive tissues, fluids; hides, wool Inhalation: aerosols</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Rhodococcosis Rhodococcus equi</td>
<td>Inhalation: contaminated dust Ingestion: contaminated soil Direct contact: animals, feces</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Salmonellosis Salmonella spp.</td>
<td>Ingestion: raw milk; raw or undercooked meat, poultry, or eggs; contaminated produce, water Direct contact: feces; animals</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Staphylococcosis, including MRSA (methicillin-resistant Staphylococcus aureus) Staphylococcus spp.</td>
<td>Direct contact: skin; wounds; feces Ingestion: contaminated foods Fomites: equipment inhalation: aerosols; dust</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Streptococcosis Streptococcus spp.</td>
<td>Direct contact: infected animals, tissues, fluids; skin wounds Ingestion: raw dairy</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Tuberculosis, avian Mycobacterium avium complex (MAC)</td>
<td>Direct contact: feces, birds Ingestion: contaminated water Inhalation: aerosols from soil or feces</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Tuberculosis, bovine Mycobacterium bovis</td>
<td>Direct contact: animals, fluids Ingestion: raw milk/dairy; raw or undercooked meat Inhalation: aerosols from soil, dust, or wool</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Tularemia Francisella tularensis</td>
<td>Direct contact: animals; meat; tissues; body fluids Inhalation: aerosols from soil, dust, or wool contaminated with rodent urine or feces Ingestion: undercooked wild game; water contaminated with dead animals, urine, or feces</td>
<td>•</td>
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</tr>
</tbody>
</table>

Note: This chart provides an overview of some zoonoses of companion animals. Information presented here is not comprehensive, and should not be used to rule out a diagnosis or take the place of veterinary advice.

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**Select Zoonoses of Livestock and Poultry**

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<tr>
<td><strong>VIRAL</strong></td>
<td></td>
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<tr>
<td>Bovine papular stomatitis</td>
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</tr>
<tr>
<td>Parapoxvirus</td>
<td>Direct contact: wounds, skin abrasions; bites</td>
<td></td>
<td></td>
<td>Cutaneous: papule or wart-like nodule on finger or hand, resolves within a month; may become vesiculated; similar to contagious ecthyma or pseudocowpox</td>
</tr>
<tr>
<td>Contagious echthyma (Orf)</td>
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</tr>
<tr>
<td>Parapoxvirus</td>
<td>Direct contact: skin lesions; scabs; animal vaccine</td>
<td></td>
<td></td>
<td>Cutaneous: small, firm red-blue papule (usually on hands/fingers), progresses to hemorrhagic bulla or pustule, +/- central crust; becomes weeping nodule covered by thin crust, usually self-limiting</td>
</tr>
<tr>
<td>Equine encephalitis viruses</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Eastern (EEE), Western (WEE), Venezuelan (VEE) Alphavirus</td>
<td>Vector: mosquitoes</td>
<td></td>
<td>Respiratory: fever; chills; myalgia; upper respiratory symptoms; sore throat; lethargy; headache</td>
<td></td>
</tr>
<tr>
<td>Influenza A viruses</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>Influenzavirus A (Swine, avian, human)</strong></td>
<td>Direct contact: nasal discharge; Infections: droplets and aerosols from coughing/sneezing</td>
<td></td>
<td>Respiratory: fever; chills; myalgia; upper respiratory symptoms; sore throat; conjunctivitis</td>
<td></td>
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<tr>
<td>Newcastle disease</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Avulavirus</td>
<td>Direct contact: birds; secretions; feces; feathers; litter</td>
<td></td>
<td>Gastrointestinal: nausea; vomiting; diarrhea</td>
<td></td>
</tr>
<tr>
<td>Pseudocowpox</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parapoxvirus</td>
<td>Direct contact: teat, udder lesions</td>
<td></td>
<td>Neurologic: headache; fever; pain at inoculation site</td>
<td></td>
</tr>
<tr>
<td>Rabies</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lyssavirus</td>
<td>Direct contact: infected animal saliva (bites, droplets, aerosol, broken skin)</td>
<td></td>
<td>Neurologic: headache; fever; death</td>
<td></td>
</tr>
<tr>
<td>Vesicular stomatitis</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Vesiculovirus</td>
<td>Direct contact: skin lesions and exudate from vesicles; saliva, nasal secretions</td>
<td></td>
<td>Gastrointestinal: nausea; vomiting; diarrhea</td>
<td></td>
</tr>
<tr>
<td>West Nile virus</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flavivirus</td>
<td>Vector: mosquitoes</td>
<td></td>
<td>Respiratory: fever; headache; myalgia; malaise; lymphadenopathy</td>
<td></td>
</tr>
<tr>
<td><strong>Fungal</strong></td>
<td></td>
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<td></td>
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<tr>
<td>Cryptococcosis</td>
<td></td>
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</tr>
<tr>
<td>Cryptococcus neoformans, C. gattii</td>
<td>Inhalation: soil, decaying wood; bird feces, especially pigeon</td>
<td></td>
<td>Respiratory: cough; chest pain; dyspnea; hemoptysis; fever</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Direct contact: soil, feces; blood</td>
<td></td>
<td>Neurologic: meningitis, meningoencephalitis</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unknown; wks. to mos.</td>
<td></td>
<td>Systemic: disseminated disease involving any organ</td>
<td></td>
</tr>
<tr>
<td>Dermatophytosis/ Ringworm</td>
<td></td>
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</tr>
<tr>
<td>Microsporum spp., Trichophyton spp.</td>
<td>Direct contact: infected animals</td>
<td></td>
<td>Respiratory: cough; chest pain; dyspnea; hemoptysis; fever</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fomites: objects, environment</td>
<td></td>
<td>Neurologic: meningitis, meningoencephalitis</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7-14 days</td>
<td></td>
<td>Systemic: disseminated disease involving any organ</td>
<td></td>
</tr>
<tr>
<td>Sporotrichosis</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sporothrix schenckii</td>
<td>Direct contact: vegetation, wood; bites or scratches from cats</td>
<td></td>
<td>Cutaneous: nodule or pustule at site of entry; subcutaneous nodules at enlarged regional lymph nodes</td>
<td></td>
</tr>
</tbody>
</table>

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<tbody>
<tr>
<td><strong>PARASITIC</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acariasis</td>
<td>Direct contact: infested animals, people</td>
<td></td>
<td></td>
<td>•</td>
<td>Cutaneous: S. scabiei – (from mammals) severe pruritus on arms, chest, abdomen, thighs. D. gallinace and O. sylviarum – (from poultry) pruritus most intense at night; allergic dermatitis; rash; vesicles.</td>
</tr>
<tr>
<td>(Mange/fowl mites)</td>
<td>fomites</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Ascaris suum</td>
<td>Ingestion: contaminated food, water, soil</td>
<td>•</td>
<td></td>
<td></td>
<td>Respiratory: cough, due to larva migration. Gastrointestinal: diarrhea; vomiting; abdominal pain; intestinal obstruction in children.</td>
</tr>
<tr>
<td>(Roundworms)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cryptosporidiosis</td>
<td>Ingestion: contaminated food, water, soil</td>
<td>•</td>
<td></td>
<td></td>
<td>Gastrointestinal: mild to severe profuse, watery diarrhea; abdominal cramps; anorexia; nausea; gas; malaise.</td>
</tr>
<tr>
<td>Cryptosporidium spp.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taeniasis/</td>
<td>Ingestion: raw or undercooked beef, pork</td>
<td>•</td>
<td></td>
<td></td>
<td>Gastrointestinal: proglottids in stools; nausea; gas; diarrhea; constipation; abdominal pain; poor appetite. Neurologic: (neurocysticercosis) seizures; increased intracranial pressure; headaches; blindness.</td>
</tr>
<tr>
<td>Cysticercosis</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Taenia spp.</td>
<td></td>
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</tr>
<tr>
<td>Echinococcosis (Hydatid disease)</td>
<td>Ingestion: larval cysts in raw or undercooked meat; contaminated fruits, vegetables, water, or soil</td>
<td>•</td>
<td></td>
<td></td>
<td>Various organs: cysts in liver and lungs (most common), may grow faster in immunocompromised individuals.</td>
</tr>
<tr>
<td>Echinococcus spp.</td>
<td></td>
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</tr>
<tr>
<td>Giardiasis</td>
<td>Ingestion: contaminated food, water, soil</td>
<td>•</td>
<td></td>
<td></td>
<td>Gastrointestinal: mild-severe, acute-chronic diarrhea. Systemic: anemia; anorexia; weight loss.</td>
</tr>
<tr>
<td>Giardia intestinalis</td>
<td></td>
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</tr>
<tr>
<td>Trichuris suis (Whipworms)</td>
<td>Ingestion: contaminated food, water, soil</td>
<td>•</td>
<td></td>
<td></td>
<td>Gastrointestinal: diarrhea; vomiting; abdominal pain; intestinal obstruction, anemia, slow growth in children with high worm burdens.</td>
</tr>
<tr>
<td>Trichinella spiralis</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Toxoplasmosis</td>
<td>Ingestion: raw or undercooked meat containing tissue cysts; sporulated oocysts in food, water, soil</td>
<td>•</td>
<td></td>
<td></td>
<td>Flu-like: fever; malaise; myalgia; lymphadenopathy. Ocular: chorioretinitis; vitreous inflammation. Reproductive: abortion; stillbirth (1st trimester). Congenital: chorioretinitis; hydrocephaly; encephalitis; visual and learning disabilities later in life.</td>
</tr>
<tr>
<td>Toxoplasma gondii</td>
<td>Direct contact: feces (cat) Reproductive: vertical</td>
<td>•</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Trichinellosis/</td>
<td>Ingestion: raw or undercooked meat (pork,</td>
<td>•</td>
<td></td>
<td></td>
<td>Gastrointestinal: nausea; vomiting; diarrhea; pain. Flu-like: fever; myalgia; fatigue; weakness; headache; chills; cough; joint pain.</td>
</tr>
<tr>
<td>Trichinosis</td>
<td>wild boar, wild game meat) containing encysted larvae</td>
<td>•</td>
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</tr>
<tr>
<td><strong>PRION</strong></td>
<td></td>
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</tr>
<tr>
<td>Variant Creutzfeldt-Jakob disease (vCJD)</td>
<td>Ingestion: prion-containing tissues from infected animals</td>
<td>•</td>
<td></td>
<td></td>
<td>Neurologic: depression, anxiety, insomnia; months later ataxia, memory loss, slurred speech, deterioration of motor, cognitive function, sight; death within two years.</td>
</tr>
</tbody>
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