



# MICHIGAN BEEF PRODUCTION

COOPERATIVE EXTENSION SERVICE • MICHIGAN STATE UNIVERSITY

## Cattle Diseases Prevalent in Michigan

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This guide to cattle diseases is a compilation from many sources of the potential maladies

which have been observed in Michigan and throughout the United States. The purpose of this guide is to provide general information and is not meant as a replacement for veterinary services.

Disease	Organism	Transmission	Clinical Signs	Diagnosis	Treatment	Prevention
Anaplasmosis	Anaplasma marginale	Insect vectors, unsanitary blood collection or transfer.	Anemia, abortion, weakness, dehydration, jaundice, anorexia, respiratory distress.	Clinical signs and laboratory identification of organism in blood.	Chlortetracyclines, oxytetracyclines, blood transfusions.	Vaccination, insect control, sanitary procedures, and removal of carrier animals from herd.
Actinomycosis (Lumpy jaw)	Actinomyces bovis	Entry through puncture wound to head region.	Lumps in bony tissues of head.	Clinical signs and microscopic identification of organism.	Ethylendiamine dihydriodide 500 mg/hd/d for 2-3 wks. Antibiotics. Isolate infected animals.	Removal of objects that can cause injury to head.
Bacillary hemoglobinuria (Redwater disease)	Clostridium novyi Type D	Ingestion of contaminated feed and water.	Segregation from herd, arched back, extended head, grunt when animal is forced to walk, depression, sudden death, red tint to urine.	Clinical signs and postmortem lesions. Laboratory identification of organism.	Antibiotics, fluids and blood transfusions.	Vaccination.
Blackleg	Clostridia chauvoei	Ingestion of causative organism.	Gas accumulation beneath skin in shoulder or hips; death.	Postmortem examination and laboratory identification of organism.	Antibiotics if detected early. Remove and destroy dead animals immediately.	Vaccination. Organism can live in soil for years.
Bluetongue	Bluetongue virus	Primary mode of transmission is biting insects. Can be passed in semen or across placental membrane.	Weight loss, abortion, infertility, excess salivation, fever.	Laboratory identification of virus.	None. Use antibiotics to control secondary infections. Isolate infected animals.	Adequate drainage to eliminate insect breeding areas, remove and dispose of carriers.
Bovine Respiratory Disease Complex (Shipping fever)	Three vectors are involved: 1. stress; 2. viral invasion (IBR, PI <sub>3</sub> , BVD); 3. bacterial invasion.	Contact with other animals, contaminated facilities and feed.	Off feed, nasal discharge, elevated temperature, cough, unthrifty, cloudiness of eyes, distress.	Clinical signs and identification of organisms.	Antibiotics and sulfonamides.	Minimize stress, pre-conditioning, sanitary conditions, and vaccination.

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Bovine Infectious Xeratoconjunctivitis (Pinkeye)	Moraxella bovis, Mycoplasma	Insects, dust, irritation to eye.	Watery eyes, swelling, corneal ulceration, light sensitivity.	Clinical signs.	Sulfonamides, antibiotics, powders in eye.	Control flies, isolate infected animals, vaccination, use pesticide impregnated ear tags.
Bovine Respiratory Syncytial Virus (BRSV)	Syncytial virus	Exposure to infected cattle or facilities.	Fever, rapid breathing nasal and eye discharge, coughing, slight swelling in areas of neck and jaw.	Laboratory identification of organism in blood.	None, treat with antibiotics to prevent secondary infection.	Vaccination for BSRV.
Bovine Virus Diarrhea	Togavirus	Contact with infected animals or contaminated feed, surfaces, feces, etc.	Nasal discharge, depression, poor appetite, excessive salivation, abortion, diarrhea, erosions and sores inside mouth, ulceration of digestive tract.	Lesions in the mouth area and clinical signs. Laboratory identification of organism in blood.	None. Treat with antibiotics to prevent secondary infection.	Vaccination. Isolate infected cattle.
Brucellosis	Brucellosis abortus	Ingestion of organism.	Genital and uterine infection, abortion, retained placenta, infertility.	Laboratory identification of organism.	None.	Vaccination. Remove infected animals.
Clostridial hepatitis, Infectious necrotic hepatitis (Black disease)	Clostridium novyi Type B	Ingestion of contaminated feed and water.	Reluctance to move, segregation from herd, depression. Sudden death.	Clinical signs and postmortem lesions. Laboratory identification of organism.	Antibiotics and fluids.	Vaccination.
Coccidiosis	Eimeria zurni Emimeria bovis (protozoan)	Ingestion of infective organism.	Fluid feces, bloody feces, straining, dehydration, weight loss, poor appetite.	Clinical signs and fecal examination for presence of oocysts.	Amprolium in feeds or water. Sulfonamides in water.	Feed a coccidiostat, reduce stress, crowding and muddy or damp conditions.
Enterotoxemia (overeating)	Clostridium perfringens	Ingestion of contaminated feed.	Sudden death, downers, symptoms rarely seen before death.	Laboratory identification of toxins.	None.	Vaccination. Increase forage in grain diets.
Infectious Pododermatitis (Foot Rot)	Fusobacterium necrophorum	Injury to foot.	Lameness, swelling, necrosis, foul odor, weight loss.	Clinical signs.	Antibiotics and sulfas. Drain pockets, treat with copper sulfate.	Remove sources of injury; drain wet areas; clean lots frequently; use organic iodide (EDDI), antibiotic or sulfa in feed.
Haemophilus somnus (Diphtheria)	Haemophilus somnus	Contact with infected animals.	Chronic cough, respiratory symptoms, difficult breathing, "honkers."	Laboratory identification of organism in blood.	None. Treat with antibiotics and sulfa to prevent secondary infection.	Vaccination.
Infectious Bovine Rhinotracheitis (Red Nose)	Herpesvirus	Contact with infected animals.	Fever, nasal discharge, eye discharge, abortion, poor appetite, vaginal infection.	Clinical signs and laboratory identification of organism.	None. Treat with antibiotics and sulfa to prevent secondary infection.	Vaccination.
Leptospirosis	Leptospira spp.	Ingestion of contaminated feed, water, or urine.	Fever, off feed, abortions, discolored urine, difficulty breathing.	Laboratory identification of organism in blood.	Antibiotics.	Vaccination, drain water holding areas.
Listeriosis	Listeria monocytogenes	Ingestion of contaminated soil, feces or feed. Often found in inadequately fermented silages.	Encephalitis, circling, depression, lateral inclination of head, disorientation, facial paralysis, segregation from herd, butt foreign objects, limb paralysis, and death.	Microbial cultures from brain tissue.	None. Antibiotics and sulfonamides may be beneficial in early detection. Dispose of dead animals.	Eliminate inadequately fermented or contaminated silages. Good hygiene.

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Malignant Edema	<i>Clostridium septicum</i>	Nonaerated wounds and parturition in contaminated areas.	Swelling around a wound, fever, rapid pulse, off feed, weakness, depression, death.	Clinical signs and history. Laboratory identification of organism.	Antibiotics if detected early. Remove and destroy dead animals.	Vaccination.
Neonatal diarrhea (Scours)	<i>Escherichia coli</i> , <i>Salmonella</i> spp., <i>Clostridium</i> spp., rotoviruses, corona-like viruses, <i>Cryptosporidie</i> spp.	Ingestion of causative organism.	Diarrhea, dehydration, weakness, rough hair coat, recessed eyes, foul odor, death.	Laboratory identification of organism in feces.	Chlortetracyclines, oxytetracyclines, electrolytes and neomycin sulfas.	Vaccinate cows 30 to 40 days prior to calving. Vaccinate calf at birth. Chlortetracycline or oxytetracycline in feed, proper sanitation and clean calving areas.
Parainfluenza (PI <sub>3</sub> )	Parainfluenza virus	Contact with infected animals.	Nasal discharge, fever, mild depression, reduced appetite.	Clinical signs and laboratory identification of organism in blood.	None. Treat with antibiotics to prevent secondary infection.	Vaccination.
Pasteurellosis (pneumonia)	<i>Pasteurella multocida</i> , <i>Pasteurella hemolytica</i> .	Contaminated feed and water, inhalation of infective organisms.	Depression, fever, salivation, nasal discharge.	Clinical signs and laboratory identification of organism.	Antibiotics and sulfas.	Vaccination.
Rabies	Rabies virus	Bite from infected carnivorous animal.	Depression, off feed, tetany, paralysis, excessive salivation, easily excited, hostile.	Laboratory identification of organism.	Hyperimmune rabies serum. Very expensive.	Vaccination, control skunk population.
Salmonellosis	<i>Salmonella</i> spp.	Ingestion of the infective organism.	Elevated temperature, diarrhea, bloody feces, putrid smell, abdominal pain.	Clinical signs and laboratory identification of organism in feces.	Neomycin and other antibiotics.	Minimize stress, eliminate contaminated facilities, vaccination.
Thromboembolic meningoencephalitis (TEME)	<i>Haemophilus somnus</i>	Contact with infected animals.	Death, knuckling of fetlocks, reluctance to move, lameness, depression, arched back, extended neck.	Clinical signs and laboratory identification of organism in brain tissues.	None. Antibiotics may help.	Vaccination.
Trichomoniasis	<i>Tritrichomonas fetus</i>	Act of breeding, especially bulls.	Vaginal discharge, uterine infection, abortion, infertility.	Clinical signs, herd history and laboratory identification of organism.	Infected cows will recover spontaneously after 90 days of sexual inactivity. Repeated washings and medications of penis and sheath are required for treatment of infected bulls.	Artificial insemination, use young virgin bulls, culture new bulls.
Tuberculosis	<i>Mycobacterium</i> spp.	Ingestion of contaminated feed and water, inhalation of contaminated air.	Chronic pneumonia, lesions on lymph nodes, diarrhea, emaciation, infertility.	Laboratory identification of organism.	None.	Removal of infected animals.
Viral papillomatosis (Warts)	Virus	Contact with infected animals.	Warts on all parts of the body.	Clinical signs.	Vaccination with repeated doses.	Sanitation.
Vibriosis	<i>Vibrio fetus</i> variety <i>venerealis</i>	Act of breeding.	Infertility, prolonged calving season.	Clinical signs and herd history. Bacteriologic examination of aborted fetus, cervio-vaginal mucus or semen.	Antibiotics.	Artificial insemination, remove infected bulls, vaccinate cow herd.
Weak Calf Syndrome	Virus	Unknown.	Abortions, stillbirths, weak calves.	Clinical signs, herd history and laboratory identification of organism.	Fluid therapy, colostrum, hyperimmune serum, blood transfusions.	Adequate nutrition and sanitary conditions.
Winter Dysentery	Unknown virus	Contact with infected animals.	Watery brown diarrhea, dehydration, weakness, anemia, depression, off feed, blood in stool.	Clinical signs, season, explosive onset, local distribution, high morbidity and short duration.	Mild cases require no treatment. Severe cases use astringents and antiseptics.	Good hygiene and control contamination from outside sources.

## Metabolic and Nutritional Disorders of Cattle

Disorder	Cause	Clinical Signs	Treatment	Prevention
Bloat	Gas accumulation in rumen.	Distension of left side.	Release gas pressure with hose or trocar. Provide exercise. Use of mineral oil or other materials to reduce surface tension in rumen.	Poloxylene, ionophores, alter diet.
Gastric ulcers	Sudden change in diet; concentrate level too high.	Reduced appetite and weight gain.	None.	Change roughage to grain ratio, reduce stress.
Liver abscess	Fusobacterium necrophorum.	Reduced weight gains.	Antibiotics, increase roughage in diet.	Feed tylosin, oxytetracycline, chlortetracycline or bacitracin in feed. Increase roughage in diet. Prevent acidosis.
Polioencephalomalacia	Thiamine insufficiency. Reasons are unknown.	Sudden death, blindness, incoordination, "downers."	Thiamine injection if given early.	Unknown, however, prevention of overconsumption of sulfur will help.
Rumenitis acidosis	Grain overload. Spherophorus necrophorus.	Reduced appetite, lesions on rumen wall.	Antibiotics, antacids.	Change roughage to grain level, reduce sporadic intakes, low level antibiotics in the feed.
Urinary calculi (Water-Belly)	Mineral imbalance, change in diet.	Dripping urine, difficulty during urination, fluid accumulation in abdominal area.	Surgery.	Correct mineral imbalance. Feed ammonium salts in the diet.
White Muscle Disease	Deficiency of selenium and/or vitamin E.	Sudden death, gradual weakness, difficulty breathing, sawhorse stance.	Selenium and vitamin E injections.	Provide sufficient selenium and vitamins to dam at least 30 days before calving.



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