

Disease Impacts of Wild Pigs



In the United States, wild pigs are nonnative, invasive pests that are known carriers of at least 45 different parasites (external and internal) and diseases (bacterial and viral). Diseases of wild pigs affect humans and other animals in several ways. First, there are diseases that are transmissible to humans, called zoonotic diseases. Then there are diseases that might impact livestock and pets (for example, swine, cattle, and dogs). A third group of diseases is foreign animal diseases (FADs), those that have never been present in North America or those that were present at one time but have been eradicated during the last 100 years. While not a direct threat to human health, FADs would have an overwhelming economic impact if introduced or reintroduced. In addition, it would be very difficult to eradicate FADs from our continent because of the continued expansion of wild pig ranges.

Zoonotic Diseases

Bacteria

- **Leptospirosis:** The most common zoonotic disease worldwide, Leptospirosis can infect virtually all warm-blooded animals, including cattle, dogs, and deer. The disease commonly affects the liver, kidneys, and reproductive tract and is thus spread through urine, birthing fluids, and blood. The bacterium can survive in warm water for extended periods. Leptospirosis is usually mild, producing flulike fever, chills, aches, pains, and jaundice. In humans, Leptospirosis usually responds to antibiotics, but it can result in death if undiagnosed and untreated. Vaccines are available and recommended.
- **Brucellosis:** There are multiple species of this bacterium that are somewhat restricted to particular animal species, but in most species it involves the male and female reproductive systems (typically causing testicular inflammation, embryonic death, or abortion and infertility). *Brucella* is capable of crossing mucous membranes and intact skin. Brucellosis infections in humans most often occur from handling infected tissues without protective gloves. In humans, the disease produces a fever that comes and goes (undulant fever), which can make it difficult to diagnose. Like Leptospirosis, it usually responds to long-term antibiotic therapy in humans and animals.

- **Salmonellosis (Gram-negative enteric bacteria):** Many swine can harbor *Salmonella* without showing clinical signs. This bacterium is usually found in the lower gastrointestinal (GI) tract. Meat can become contaminated during processing or when improperly handled or poorly stored. In humans, Salmonellosis begins with diarrhea and vomiting and, if untreated, may progress to blood poisoning, dehydration, and death. Like other bacteria, this disease can respond to proper antibiotic therapy.

Viruses

- **Pseudorabies virus (PRV):** PRV is a disease with implications for nonswine animals such as cattle, sheep, and dogs. This disease is a herpes virus and is not related to rabies. Some symptoms of the disease may resemble rabies, which is where it gets its name. It sometimes kills pigs but is routinely fatal in nonswine species that become infected either through direct contact or ingestion of tissues from PRV-positive wild pigs. Pseudorabies is a reportable disease and may restrict transporting animals (even uninfected ones) across state lines. Thus, the economic impact can extend well beyond affected animals or affected premises.
- **Rabies:** This disease is usually transmitted only through the bite of a rabid animal and affects primarily the nervous system. Rabid animals usually exhibit abnormal behavior, and the disease is ultimately fatal in most hosts. Rabies is a reportable disease and can only be confirmed by an approved public health laboratory.
- **Influenza viruses:** Swine can serve as a reservoir and amplifying host for influenza viruses. Signs of influenza in humans and animals can range from extremely mild, with some systemic or respiratory signs (such as cough, aches, and chills) to an overwhelming multi-systemic and occasionally fatal disease. However, prevalence of these diseases is thought to be low, and direct transmission to humans has not been demonstrated.

Parasites

- ***Trichinella:*** This round worm localizes within the muscles of humans and swine and also cycles through wild rodents. When ingested in undercooked meat, *Trichinella* can localize in muscle tissue and produce intense pain in humans.

- *Giardia* and *Cryptosporidium*: These protozoan parasites affect many animals. They localize in the lower GI tract and produce cramps and diarrhea that may lead to dehydration and death if untreated. These agents are shed in the feces of the primary host and gain entrance to the secondary host through water contaminated with fecal matter or improperly handled food products. Each of these parasites is treatable upon proper diagnosis.

Foreign Animal Diseases

Foreign animal diseases include a number of conditions that have never been identified in North America or have been eradicated during the past century. Some of these diseases affect only swine (for example, hog cholera, or classical swine fever, and African swine fever), but others affect multiple species. Foot-and-mouth disease (FMD) is highly contagious and can affect cloven-hooved animals like cattle, deer, and elk. Both hog cholera and foot-and-mouth disease were eradicated from the United States during the previous century (hog cholera during the 1970s; foot-and-mouth disease in the early 1900s). However, eradication occurred before wild pigs were found in most of the lower 48 states, and even then, the cost was in the billions of dollars. If reintroduced today, those diseases would have a greater host population in which to spread and would be much more costly, if not impossible, to eradicate again.

Disease Prevention

Follow these simple measures to help avoid infection when handling or field dressing wild pigs:

- Wear latex or nitrile gloves; pathogens can enter the body through cuts on hands or torn cuticles.
- Wash your hands thoroughly after field dressing and processing meat, even if you wear gloves.
- Avoid splashing body fluids into your eyes or mouth.
- Follow correct refrigeration, freezing, and cooking methods. Freezing to 0°F will render bacteria inactive but will not destroy them; once thawed, bacteria can again become active. Also, you should not rely on home freezing to destroy *Trichina* and other parasites. Thorough cooking will destroy all parasites. Cook meat until it has reached an internal temperature of 170°F.
- Thoroughly clean and disinfect work areas and tools used to dress and butcher wild pigs.
- Properly dispose of animal remains, used gloves, and other materials. Animal remains should not be left for scavengers, nor should they be fed to dogs. Depending upon your jurisdiction, several methods of appropriate disposal may be considered. Check with your local health department or state wildlife agency.

For more information about disease impacts of wild pigs and other wild pig issues, please visit www.wildpig-info.com.

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