



Effects of an Invasive Species: Feral Swine

Domestic swine are **not native** to North America, but have been used on the continent for agriculture and other purposes since early European settlers.¹ The intentional release and/or escape of these domesticated swine have led to established populations of **feral swine**—also known as wild pigs, wild boar, or wild hogs (*Sus scrofa*).¹ Feral swine should not be confused with North America's only native pig-like animal, the collared peccary (*Pecari tajacu*).²



Feral swine: One of the IUCN's 100 worst non-native invasive species in the world⁵ (Credit: USDA-APHIS).

What is a Feral Animal?

An animal living in the wild but **descended from domesticated** individuals.³

In the past decade, the range and abundance of feral swine has increased markedly. Feral swine now exist in parts of Canada, Mexico, and at least **35 U.S. states**—where current population estimates exceed **5 million** individuals.⁴ Due to their detrimental effects on ecosystems, property, and agriculture; controlling feral swine populations is critical to natural resource management.



Feral swine use their tusks and snouts to root in search of food, damaging plants and crops (Credit: USDA).

Economic Impacts of Feral Swine

Feral swine cause at least **\$1.5 billion in economic damages per year**.⁶ This includes control costs, agricultural production losses, and non-production losses like damage to infrastructure.²

Moreover, this dollar estimate is likely conservative given the difficulty of documenting and assigning a monetary value to environmental degradation, disease outbreaks, and other effects to ecosystem services like clean water.⁷

Effects on Native Wildlife and Habitats

Feral swine are **extreme habitat generalists**, capable of surviving and thriving in both natural and suburban areas.⁴ As **omnivores**, feral swine feed on both plants and animals; changing food preferences based on availability.¹ In some areas, the diet of feral swine can include sea turtles, ground nesting birds, endemic reptiles, and macro-invertebrates, resulting in the direct loss of wildlife through predation.⁸

Feral swine also modify plant communities, and can quickly decimate an area of native vegetation—or agricultural fields and lawns—through their **wallowing, tree-rubbing, and rooting** behaviors.⁴ In Hawaii, more than 80% of soil is bare in areas inhabited by feral swine.⁶ This intensifies soil erosion, negatively effects water quality/availability, increases invasive plant colonization, alters vegetative ground cover, and disrupts natural ecosystem processes.⁶

Disease

Feral swine can carry and transmit over **30 diseases and 37 parasites⁴** to wildlife, pets, livestock, and humans, including:

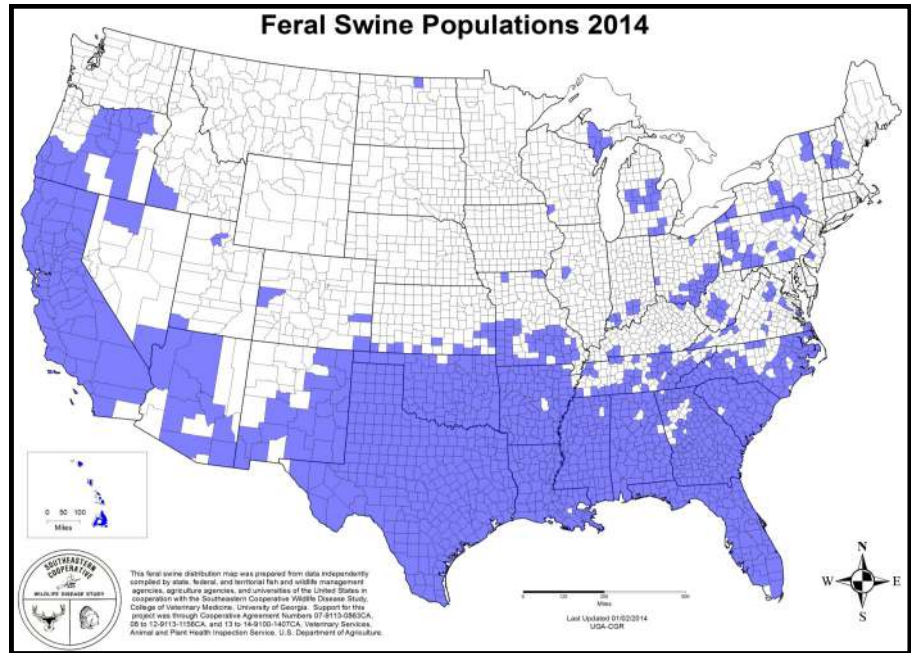
- **Zoonotic diseases**, like brucellosis, salmonellosis, and swine influenza, which can be transmitted to humans and wildlife;⁹ and
- **Other infectious animal diseases**, like bovine tuberculosis and Aujeszky's disease (**pseudorabies**), which can affect some pets and have devastating effects to the livestock industry.⁹

Feral swine can also potentially facilitate the reemergence of **foot-and-mouth disease (FMD)**; one of the most economically damaging animal diseases in the world. Feral swine act as amplifiers of FMD because they can excrete large quantities of the disease as an aerosol virus, thus exacerbating its spread.⁹

FMD was last detected in the U.S. in 1929, Canada in 1952, and Mexico in 1953.¹⁰



Feral swine trap in Florida (Credit: Wikimedia User Rusty Clark).



Feral swine populations are expanding northward at a rate of 12.6 km per year. At this rate, the entire continental U.S. could be inhabited within the next 3–5 decades¹¹ (Credit: Southern Cooperative Wildlife Diseases Study 2014).

Management of Feral Swine

Management of feral swine is a challenging task. Swine are difficult to trap, highly mobile, and exhibit high reproductive capacity.¹¹ Where populations are well established, multiple methods of control are required to reduce or eradicate populations, including trapping, snaring, shooting, use of trained dogs, and aerial gunning.² **Hunting alone will not keep populations from growing.¹²**

Both federal and state agencies, with the assistance of non-governmental organizations, work to control feral swine, but **variability in regulations** across political boundaries further complicates management. Some states manage feral swine as a **game species**, while other states have little or no regulations concerning their control.¹ In recent years, this has led to the intentional, and illegal, release of swine to establish new populations for hunting. **Delayed implementation of control efforts for these newly established populations will result in the need for increased effort at higher cost and/or more years needed to achieve elimination.²**

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