



# THE WILDLIFE SOCIETY

## FACT SHEET

## Feral Swine: Impacts of Invasive Species



Trapping, shooting, installing barriers, and modifying habitats are methods used by agencies to reduce damage by feral swine. (Credit: USDA-APHIS)

### What are the economic impacts of feral swine?

Economic losses resulting from feral swine damage is estimated at greater than **\$1.5 billion per year in the U.S.**<sup>2</sup> Feral swine damage property, agriculture, and natural resources by their aggressive rooting of soil in addition to their trampling and consumption of crops as part of their daily search of food.<sup>1,5</sup>

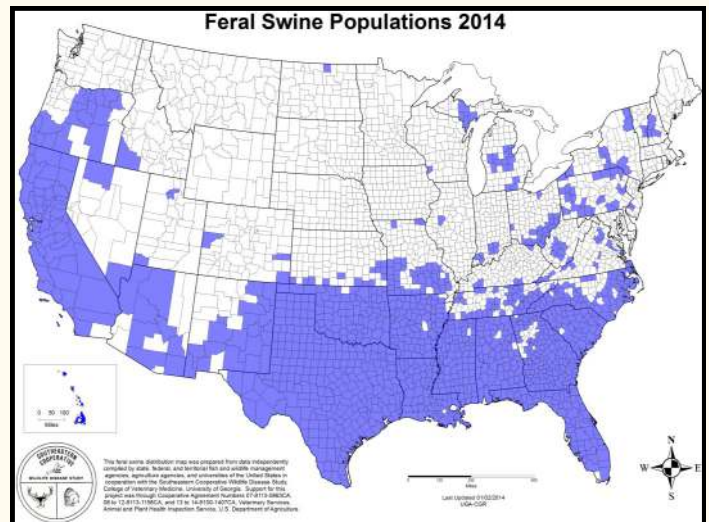
**Feral swine have huge impacts on many natural communities.** Feral swine are extreme habitat generalists and one the greatest vertebrate modifiers of natural plant communities,<sup>4</sup> feeding on plants and animals and changing food prefer-

ence based on availability.<sup>1</sup> Wallowing activities may reduce water quality and disrupt sensitive wetland ecosystems.<sup>6</sup> Other documented damage includes predation on young livestock, ground nesting birds, amphibians, reptiles, and other wildlife.<sup>5</sup>

Truly wild swine are native only to Europe and Asia.<sup>1</sup> Domestic swine have been bred for agriculture and other purposes throughout North America. The intentional release and/or escape of these domesticated swine have led to established populations of feral swine (*Sus scrofa*). The release of swine has been common in recent years to establish populations for hunting, most frequently in the southeastern United States.<sup>1</sup>

The feral swine population currently exceeds an estimated 5 million in the United States.<sup>2</sup> Control of feral swine populations is critical to natural resource management.

**Feral swine are prolific breeders.** In productive habitats, female pigs can begin breeding as juveniles.<sup>3</sup> Most sows produce a single litter annually, but are physiologically capable of reproducing twice a year. Typical litter sizes range from 5 to 6 piglets, but can potentially be greater than 10. In the absence of control efforts, local populations can triple in a single year.<sup>1</sup>



Feral swine distribution map in the U.S. (Credit: Southern Cooperative Wildlife Diseases Study 2014)

## Which agencies manage feral swine populations?

Agencies responsible for feral swine management include federal agencies such as Wildlife Services within the U.S. Department of Agriculture's Animal and Plant Health Inspection Service (USDA-APHIS), and state and provincial Departments of Agriculture, Fish and Game, and Natural Resources. Non-governmental agencies, like the Southeastern Cooperative Wildlife Diseases Study program may also complement state and federal efforts in feral swine management.

**Feral Swine carry diseases that can impact wildlife and livestock.** Feral swine can carry at least 30 important viral and bacterial diseases, such as leptospirosis, salmonellosis, and brucellosis and at least 37 parasites that affect people, pets, livestock, or wildlife.<sup>7</sup>

Feral swine can be particularly devastating to the livestock industry within the United States. Large, widely distributed populations of feral swine jeopardize ongoing efforts to control a number of livestock diseases such as pseudo-rabies and the considerable financial investments that support those efforts.

**The most serious potential disease threat from feral swine is the reemergence of foot-and-mouth disease (FMD),** which was last detected in the U.S. in 1929<sup>8</sup> and in Canada in 1952.<sup>9</sup>

Feral swine can cause airborne transmission of FMD at rates much higher than cattle and sheep.<sup>8</sup> A FMD outbreak could cripple the U.S. and Canadian pork industry and would likely have negative impacts on wild ungulate species.

Widespread disease outbreak has the potential to impact landowners, outdoor recreationists, and natural resources agencies. Strict quarantine necessary for disease control could prevent access to lands for hunting, wildlife viewing, and other activities.<sup>8</sup>

**Feral swine can be difficult to control.** Feral swine are managed as game species in some states, while other states have little or no regulations concerning their control and eradication. Variability in regulations across political boundaries can complicate management efforts.

Where feral swine are well established, multiple methods of control are needed to reduce or eradicate feral swine populations. The most widely accepted methods for control and elimination include trapping, snaring, shooting, use of trained dogs, and aerial gunning.<sup>1</sup>

**Feral swine impose their greatest threat in areas where their presence is a relatively new phenomenon.** New populations are often the result of illegal releases of swine for the purpose of increasing hunting opportunities.<sup>1</sup>

Delayed implementation of control efforts for newly established populations of feral swine will result in the need for increased effort at higher cost and/or more years needed to achieve elimination.



Feral swine cause direct and indirect economic losses to agriculture. Direct damage to crops by feral swine is estimated at over \$800 million in the U.S. annually (Credit: USDA-APHIS)

<sup>1</sup>Barrett, R. H., and G. H. Birmingham. 1994. Wild Pigs. S. E. Hygnstrom, R. M. Timm, and G. E. Larson, editors. Prevention and Control of Wildlife Damage. University of Nebraska-Lincoln.

<sup>2</sup>Pimental, D. 2007. Environmental and economic costs of vertebrate species invasions into the United States. Pages 2-8 in G. W. Witmer, W. C. Pitt, and K. A. Fagerstone, editors. Managing Vertebrate Invasive Species: proceedings of an international symposium. Volume Paper 38. Fort Collins, Colorado, USA.

<sup>3</sup>Dzieciolowski, R. M., C. M. H. Clarke, and C. M. Frampton. 1992. Reproductive characteristics of feral pigs in New Zealand. Acta Theriologica 37:259-270.

<sup>4</sup>Singer, F. J., W. T. Swank, and E. E. C. Clebsch. 1984. Effects of Wild Pig Rooting in a Deciduous Forest. The Journal of Wildlife Management 48:464-473.

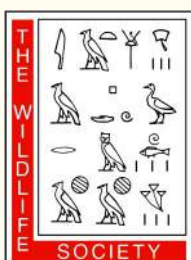
<sup>5</sup>Mapston, M. E. 2004. Feral hogs in Texas, Publication B-6149. Texas Cooperative Extension.

<sup>6</sup>Engeman, R. M., B. U. Constantin, S. A. Shwiff, H. T. Smith, J. Woolard, J. Allen, and J. Dunlap. 2007. Adaptive and economic management methods for feral hog control in Florida. Human-Wildlife Conflicts 1:178-185.

<sup>7</sup>Feral Hog Biology, Impacts and Eradication Techniques. 2010. USDA APHIS Wildlife Services New Mexico.

<sup>8</sup>Hutton, T., T. DeLiberto, S. Owen, and B. Morrison. 2006. Disease risks associated with increasing feral swine numbers and distribution in the United States. Midwest Association of Fish and Wildlife Agencies.

<sup>9</sup>Government of Canada, C. F. I. A. 2012. Fact Sheet - Foot-and-Mouth Disease. <<http://www.inspection.gc.ca/animals/terrestrial-animals/diseases/reportable/foot-and-mouth-disease/fact-sheet/eng/1330481689083/1330481803452>>. Accessed 16 Jun 2015.



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