

### Introduction to North America

Pigs (*Sus scrofa*) are not native to North America. The species was first introduced to the West Indies by Christopher Columbus in 1493 and then to the continental United States by Spanish explorer Hernando de Soto in 1539 when he landed on the Florida coast. Domestic pigs were often carried on these excursions as a sustainable, low-maintenance food source. As explorers moved across the continent, domestic pigs would often be left behind, establishing the first populations of feral pigs in North America. The term “feral” refers to a domestic animal that has gone wild.

Following these introductions, European settlers and Native Americans implemented free-range farming practices for domestic pigs (*Sus domesticus*) that promoted the spread of feral pig populations. Free-range farming methods were still practiced in some states through the 1950s. In addition to these feral pigs, Eurasian wild boars have been imported and released as an exotic game species for recreational hunting across the United States since the early 1900s.

**Today’s free-range pig population in the United States is made up of feral pigs, Eurasian wild boar, and hybrid populations resulting from cross-breeding of Eurasian wild boar and feral pigs. The grouping of these different types is generally referred to as “wild pigs,” and they are widely considered the most destructive invasive species in the United States.**



### Appearance

Wild pigs show significant variability in color, body shape, and size. Most wild pigs are black or brown, but any color or combination of colors can occur. Piglets can be striped, spotted, or solid. In Kentucky, adult hogs weigh between 75 to 250 pounds. On average, they stand 3 feet in shoulder height and are between 5 and 6 feet in length (from the tip of the nose to the end of the tail) as adults. Males are typically larger than females. Exceptionally large males can be over 7 ft in length and over 3 ft in shoulder height, weighing over 500 pounds.

### Reproduction

The age at which reproductive maturity is reached is highly variable among populations of wild pigs but could occur as early as six months in both males and females.

Pigs have the highest reproductive rate of any hooved animal. The average litter size is 4 to 6 piglets, and a sow can easily have two litters per year. Farrowing can occur every month of the year, though most wild pig populations exhibit prominent peaks in new litters that correlate with forage availability.

### Diet

Wild pigs are omnivores, generally categorized as opportunistic feeders, and typically consume between 3% and 5% of their total body mass daily. They exhibit a generalist diet consuming various food sources, allowing them to thrive across a wide range of environments.

Their diet is primarily herbivorous throughout their range, shifting seasonally and regionally among grasses, mast, shoots, roots, tubers, forbs, and cacti as resource availability changes. When available, wild pigs will select agricultural crops, often making up over 50% of the vegetative portion of their diets and causing significant damage to agricultural fields. The United States Department of Agriculture estimates that wild pigs cause \$800 million in damage to farms yearly.

Invertebrates are often consumed while foraging for vegetation throughout the year, including insects, worms, crustaceans, and snails. Studies have shown that, in some cases, invertebrates are highly selected for and seasonally make up over 50% of wild pig diets. Wild pigs will

also consume tissues of vertebrate species through scavenging and direct predation. Studies have documented intentional predation of various vertebrate species by wild pigs, including juvenile domestic livestock, white-tailed deer fawns, ground-nesting birds, and multiple species of reptiles and amphibians.

**Predators**

In Europe and Asia, predation by natural predators can account for up to 25% of annual mortality at the population level. In the United States, however, humans are the most significant predator of wild pigs. Predators such as coyotes, bobcats, and eagles may opportunistically prey upon immature wild pigs; it is only where wild pigs exist with American alligators, mountain lions, and black bears that any frequent intentional predation of the species may occur. Even where this predation occurs, it plays a minor role in wild pig mortality.

**Social Structure and Behavior**

Multiple generations of related females (sows) and piglets live in groups called “sounders.” By living in these sounders, hogs employ a safety-in-numbers strategy. Males leave the sounder around 16 months of age. These sub-adult males may associate in smaller familial groups, while mature males (boars) tend to be more solitary. Boars temporarily join sounders to breed.

Wild pigs have excellent hearing and smell and are most active at dusk, night, and dawn. However, they have been shown to significantly change their foraging behaviors and territories to avoid human contact. When faced with danger, their general response is

to run away, but wild pigs can be aggressive and very dangerous if cornered or defending their young.

**Environmental Damage**

Most damage caused by wild pigs is through rooting or the direct consumption of plant and animal materials.

Rooting is how wild pigs unearth roots, tubers, fungi, and burrowing animals. They use their snouts to dig into the ground and turn over the soil in search of food resources, altering the normal chemistry associated with nutrient cycling within the soil. Furthermore, the mixing of soil horizons that often accompanies rooting by wild pigs has also been shown to alter vegetative communities, allowing for the establishment and spread of invasive plant species.

A single wild pig can significantly disturb approximately 6.5 ft<sup>2</sup> in just one minute.

This large-scale soil disturbance can increase soil erosion rates and have detrimental effects on sensitive ecological areas and critical habitats for species of concern. When wild pigs root or wallow in wetland or riparian areas, it tends to increase the nutrient concentration and total suspended solids in nearby waters due to erosion.

Wild pigs also directly reduce water quality and degrade aquatic habitats. Impacts from wild pigs are positively correlated

with population density and vary in severity among ecosystems.

**Population Trends**

From 1982 to 2016, the wild pig population in the United States increased from 2.4 million to an estimated 6.9 million.

Wild pigs have expanded their range in the United States from 18 States in 1982 to 35 States in 2016. It was recently estimated that the rate of northward range expansion by wild pigs accelerated from approximately 4 miles to 7.8 miles per year from 1982 to 2012. This rapid range expansion can be attributed to an estimated 18-21% annual population growth. However, one of the leading causes is the human-mediated transportation of wild pigs for hunting purposes.

