

Outdoor Hog Production

Best Practices for Resource Conservation in the San Francisco Bay Area



Managing Wild Pigs

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Origin and Appearance: Domestic pigs were introduced to California in 1769 by Spanish missionaries and in the 1920's, Russian wild boar were introduced in Monterey County for sport hunting. The wild pigs found in California today are descendants of the domestic Spanish pigs and the Russian wild boar; as a result, their appearance can vary dramatically. See Table 1 for general physical characteristics of domestic pigs versus wild pigs.

General Characteristics: Wild pigs typically live to be four to eight years old. Full-grown males weigh, on average, 200 pounds, while full grown females weigh about 175 pounds. Wild pigs can grow larger than this, but it is not common. Females are sexually mature at six to nine months of age, though most females do not have their first litter until they are over a year old. The average litter size is five or six young, but litter size and success rates can vary and are highly correlated with annual precipitation.

Biology: Wild pigs live in matrilineal groups called sounders, where up to 80% of females remain with the sounder in which they were reared. Males are nomadic and known to move about within a home range. Wild pigs like to rest and nest in areas with low growing, dense vegetation. Pigs do not have sweat glands, so they wallow in seeps and springs to

cool themselves in hot weather. Additionally wild pigs show a dietary preference for a number of riparian plants, so their home range is often dictated by proximity to riparian ecosystems.

Physical Characteristic	Wild Pigs	Domestic Pigs
Hair	Amply covered with coarse, long hair	Sparse, short hair
Ears	Relatively small and erect	Relatively large and floppy
Tail	Straight, covered in hair	Curly, little hair present
Body	Razor-backed, shoulders higher and wider than hindquarters	Wide body, flat back
Tusks	Long and sharp	Relatively short
Head	Longer snout with flat profile	Shorter snout, concave profile
Color	Mostly black, some pied or russet	Usually white, sometimes russet or pink
Young	Dark with horizontal stripes	Same uniform color as parents

Table 1: Physical characteristics of wild vs. domestic pigs

			<p>Funding provided by the Natural Resources Conservation Service Conservation Innovation Grant # 86-9104-3-179</p>
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Wild pig. Photo courtesy of Billy Higginbotham-Texas A&M Agrilife Extension Service

Potential Conflicts between Wild and Domestic Populations

Major disease risk: Pigs, both domestic and wild, have been called a “petri dish” for diseases. They are susceptible to and can carry at least 30 viral and bacteriological diseases and can serve as hosts for up to 37 different types of parasites. As such, wild pigs have the potential to transmit diseases to nearby livestock operations, including domestic pigs, cattle, sheep and goats, as well as local wildlife populations. Pigs can also pose a threat to human health as numerous diseases that pigs can carry and transmit are zoonotic.

Diseases and Transmission: Some examples of diseases carried by pigs include: African swine fever, classical swine fever (Hog Cholera), E. coli, Hepatitis E, Foot and Mouth disease, Plague, Psuedorabies, Salmonella, Swine Influenza Virus, Swine Brucellosis, Toxoplasmosis, Trichinosis, and Tularemia. An outbreak of a disease like pseudorabies in wild pigs could mean serious economic loss for an outdoor pig operation, as well as nearby cattle operations, and a negative impact on domestic pets, and local wildlife. Disease transmission typically occurs from the passing of bodily fluids between animals, though the virulence of the disease causing pathogens varies.

Interbreeding and Crossbreeding: If domestic and wild pigs interact directly there is potential for them to breed, as wild and domestic pigs are from the

same species, *Sus scrofa*. In many cases, domestic pigs have been bred for specific production traits that would most likely be diluted by interbreeding with wild pigs. However, a growing number of outdoor pig operations in California have begun to intentionally cross domestic species with Russian Wild Boar in an effort to enhance the animal’s ability to utilize forage and thrive in a range or pasture context.

Impact: Wild pigs impact ecosystems by rooting, wallowing, foraging, and hunting. A conservative estimate of wild pig damage is \$1.5 billion in economic damage annually across the nation. Their rooting overturns and tills the soil, their wallowing disturbs seeps and springs and they are also known to cause damage to livestock water facilities. Their foraging behavior and diet preferences make them highly competitive with other wildlife species. It is



Rooting damage from wild pigs. Photo courtesy of the Alameda RCD.

estimated that they consume about 3% of their body weight in food daily; however, they will binge eat with one study reporting 49 toads in the stomach of one harvested pig. Domestic pigs can become feral quickly. It does not benefit the outdoor pig production operation or the natural resources of an area for

additional pigs to be added to the wild pig population through the release of domestic pigs.

Risk of Interaction: Some of the factors that can affect the relative risk of interaction between wild and domestic pigs include the number of wild pigs in the area; proximity to riparian areas; access to desirable feed including hay, grain, scrap food, lawns, etc.; past wild pig issues; current weather conditions (pigs only travel as far as they need to for food and water and a drought year will increase the likelihood of wild pigs invading as they search for

food and water); pig management of neighbors; and, current pig management efforts of the outdoor pig production operation.

One recent study identified the distance between pig paddocks and buildings, closeness to wooded areas, use of electric fences or use of fences lower than 2 ft as risk factors for contact between domestic and wild pigs.

Preventing Interaction between Wild and Domestic Populations

Fencing: The most effective fence to prevent interaction between wild and domestic pig populations would utilize woven or welded wire, strong enough to withstand significant pressure from full grown pigs. A strand of tightly stretched four-barb wire is recommended at ground level or even underground to discourage rooting. It is recommended that the facility maintain a perimeter fence, as well as interior fences for separating pastures. All interior fences should be placed four feet from the perimeter fence to prevent nose-to-nose contact and reduce disease transmission risks between wild and domestic pigs. A single strand of electric wire is not considered sufficient to prevent interaction between wild and domestic pigs, however, it may be sufficient to manipulate the foraging patterns of domestic pigs within a more rigorous perimeter fencing system.



Woven wire fencing between feral and domestic pigs. Photo courtesy of Jared Timmons, Texas A&M AgriLife Extension Service.

Population Management: Managing the local wild pig population and actively reducing numbers is the best way to reduce the likelihood of wild pig to domestic pig disease transmission. Active pig management efforts also discourage wild pigs from visiting and living near the outdoor pig production facility.

Resources

General information:

www.dfg.ca.gov/wildlife/hunting/pig/

<http://feralhogs.tamu.edu>

Feral Hog Biology, Impacts, and Eradication Techniques. USDA APHIS Wildlife Services New Mexico. Published November 1, 2010

West, B.C., A.L. Cooper, and J.B. Armstrong. 2009. Managing wild pigs: A technical guide. Human-Wildlife Interactions Monograph 1: 1-55.

Hamrick, B., M.D. Smith, C. Jaworowski, B. Strickland. 2011. A Landowner's Guide for Wild Pig Management. Publication 2659

Hunting and Shooting:

<http://www.dfg.ca.gov/wildlife/hunting/pig/>

Literature Cited

Feral Hog Biology, Impacts, and Eradication Techniques. 2010. USDA APHIS Wildlife Services New Mexico. Available online at [www.aphis.usda.gov/wildlife_damage/state_office/state_web/new_mexico/Feral%20Hog%20Biology%20Behavior%20and%20Management%20\(3\).pdf](http://www.aphis.usda.gov/wildlife_damage/state_office/state_web/new_mexico/Feral%20Hog%20Biology%20Behavior%20and%20Management%20(3).pdf).

Wu N., C. Abril, A. Thomann, E. Grosclaude, et al. 2012. Risk factors for contacts between wild boar and outdoor pigs in Switzerland and investigations on potential *Brucella suis* spillover. BMC Veterinary Research, 8:116. doi:10.1186/1746-6148-8-116.

Banner Photo credit from L to R: Wild piglets courtesy of Silvana Pietrosevoli & Feral pig, courtesy of NRCS.