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WILD PIGS

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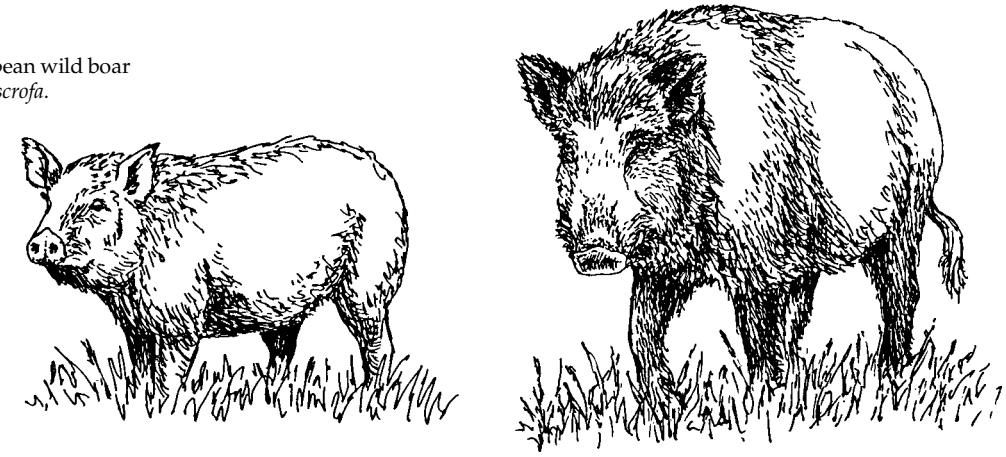
Fig. 1. Feral hog (left) and European wild boar (right). Both are the species *Sus scrofa*.



Damage Prevention and Control Methods

Exclusion

Heavy-mesh wire fences and electric fences may be effective, especially around gardens and other small areas.

Frightening

No methods are effective.

Repellents

None are registered.

Toxicants

None are registered.

Trapping

Stationary corral trap.

Portable drop gate trap.

Leg snare.

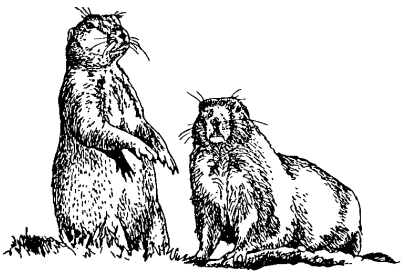
Shooting

Sport hunting, especially with dogs, can reduce pig populations in local areas.

Identification

Wild pigs (*Sus scrofa*, Fig. 1) include both feral hogs (domestic swine that have escaped captivity) and wild boar, native to Eurasia but introduced to North America to interbreed with feral hogs. Like domestic hogs, they may be any color. Their size and conformation depend on the breed, degree of hybridization with wild boar, and level of nutrition during their growing period.

Wild boar have longer legs and larger heads with longer snouts than feral



PREVENTION AND CONTROL OF WILDLIFE DAMAGE — 1994

Cooperative Extension Division
Institute of Agriculture and Natural Resources
University of Nebraska - Lincoln

United States Department of Agriculture
Animal and Plant Health Inspection Service
Animal Damage Control

Great Plains Agricultural Council
Wildlife Committee

hogs. The color of young boar is generally reddish brown with black longitudinal "watermelon" stripes. As the young develop, the stripes begin to disappear and the red changes to brown and finally to black. Both the male feral hog and wild boar have continuously growing tusks. Wild boar and feral hogs hybridize freely; therefore, the term *wild pig* is appropriate as a generic term for these animals.

Range

Christopher Columbus first introduced members of the family Suidae into North America in 1493 in the West Indies (Towne and Wentworth 1950). The first documented introduction to the United States was in Florida by de Soto in 1593. More introductions followed in Georgia and the Carolinas, which established free-ranging populations in the Southeast. Free-ranging practices continued until they became illegal in the mid-twentieth century. Populations of unclaimed hogs increased and spread throughout the Southeast. Domestic hogs were released in California in 1769 and free-ranging practices there also resulted in a feral hog population. European wild boar were released at Hooper Bald, North Carolina, in 1912, and from there introduced to California in 1925.

Wild pigs are found throughout the southeastern United States from Texas east to Florida and north to Virginia; and in California, Hawaii, Puerto Rico, and the Virgin Islands. The local introduction of these animals for hunting purposes occurred in North Carolina, Tennessee, Texas, Louisiana, and California. The National Park Service reports feral hogs in 13 National Park Service areas. They occur in many state parks as well (Mayer and Brisbin 1991). Feral hogs are also found in Hawaii, Australia, New Zealand, and several other South Pacific Islands.

Habitat

A variety of habitats, from tidal marshes to mountain ranges, are suitable for wild pigs. They prefer cover of dense brush or marsh vegetation. They are generally restricted to areas below snowline and above freezing temperatures during the winter. Wild pigs frequent livestock-producing areas. They prefer mast-producing hardwood forests but will frequent conifer forests as well. In remote areas or where human activities are minimal, they may use open range or pastures, particularly at night. During periods of hot weather, wild pigs spend a good deal of time wallowing in ponds, springs, or streams, usually in or adjacent to cover.

Food Habits

Types of food vary greatly depending on the location and time of year. Wild pigs will eat anything from grain to carrion. They may feed on underground vegetation during periods of wet weather or in areas near streams and underground springs. Acorns or other mast, when available, make up a good portion of their diet. Wild pigs gather in oak forests when acorns fall, and their movements will generally not be as great during this period. In the winters of poor mast years, wild pigs greatly increase their range and consume greater quantities of underground plant material, herbaceous plants, and invertebrates (Singer 1981). Stomach analyses indicate that wild hogs ingest flesh from vertebrates, but the extent to which animals are taken as prey or carrion is not known. Wild pigs are capable of preying on lambs (Pavlov et al. 1981), as well as goat kids, calves, and exotic game.

General Biology, Reproduction, and Behavior

Wild pigs are intelligent animals and readily adapt to changing conditions. They may modify their response to humans fairly rapidly if it benefits their survival. Wild boar have a greater capacity to invade colder and more mountainous terrain than do other wild pigs. Feral hogs feed during daylight hours or at night, but if hunting pressure becomes too great during the day, they will remain in heavy cover at that time and feed at night. In periods of hot weather, wild pigs remain in the shade in wallows during the day and feed at night.

The wild pig is the most prolific large wild mammal in North America. Given adequate nutrition, a wild pig population can double in just 4 months. Feral hogs may begin to breed before 6 months of age, if they have a high-quality diet. Sows can produce 2 litters per year and young may be born at any time of the year. Wild boar usually do not breed until 18 months of age and commonly have only 1 litter per year unless forage conditions are excellent. Like domestic animals, the litter size depends upon the sow's age, nutritional intake, and the time of year. Litter sizes of feral hogs in northern California average 5 to 6 per sow (Barrett 1978). Wild boar usually have litter sizes of 4 to 5 but may have as many as 13 (Pine and Gerdes 1973).

Damage and Damage Identification

Wild pigs can cause a variety of damage. The most common complaint is rooting (sometimes called grubbing), resulting in the destruction of crops and pastures. Damage to farm ponds and watering holes for livestock is another common problem. Predation on domestic stock and wildlife has been a lesser problem in North America.

Damage to crops and rangeland by wild pigs is easily identified. Rooting in wet or irrigated soil is generally quite visible, but can vary from an area of several hundred square feet (m^2) or more to only a few small spots where the ground has been turned over. Rooting destroys pasture, crops, and native plants, and can cause soil erosion. Wallows are easily seen around ponds and streams. Tracks of adult hogs resemble those made by a 200-pound (90-kg) calf. Where ground is soft, dewclaws will show on adult hog tracks (Fig. 2).

Wild pig depredation on certain forest tree seedlings has been a concern of

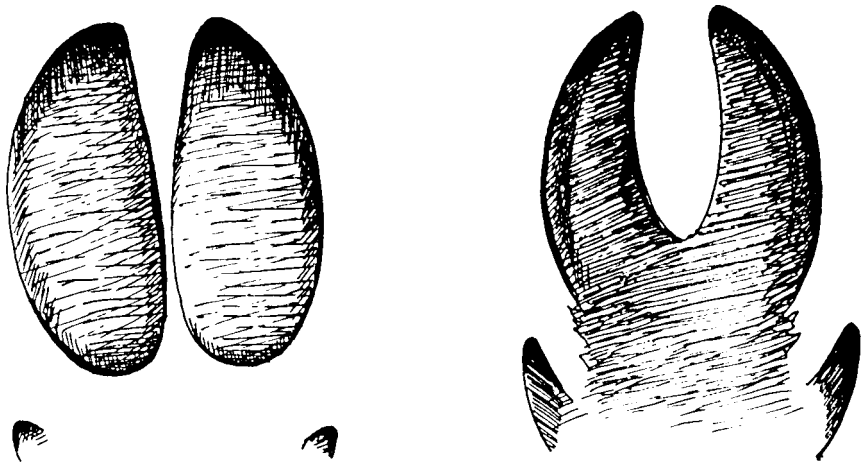


Fig. 2. Tracks of the feral hog (left) and European wild boar (right).

foresters in the South and West. Wild pigs have destroyed fragile plant communities in Great Smoky Mountains National Park and other preserves. They have been known to damage fences when going into gardens and can do considerable damage to a lawn or golf course in a single night.

In California, wild pigs have entered turkey pens, damaging feeders, eating the turkey feed, and allowing birds to escape through damaged fences. Wild pigs in New South Wales, Australia, reportedly killed and ate lambs on lambing grounds. Producers in Texas and California reported to USDA-APHIS-ADC that 1,473 sheep, goats, and exotic game animals were killed by wild pigs in 1991. Predation usually occurs on lambing or calving grounds, and some hogs become highly efficient predators. Depredation to calves and lambs can be difficult to identify because these small animals may be killed and completely consumed, leaving little or no evidence to determine whether they were killed or died of other causes and then were eaten. Determining predation by wild hogs is possible if carcasses are not entirely eaten, because feral hogs follow a characteristic feeding pattern on lambs (Pavlov and Hone 1982). Photographs and additional information on wild pig predation may be found in the booklet by Wade and Bowns (1982).

Always be aware of the potential for disease transmission when feral hogs are associated with domestic livestock. Cholera, swine brucellosis, trichinosis, bovine tuberculosis, foot and mouth disease, African swine fever, and pseudorabies are all diseases that may be transmitted to livestock (Wood and Barrett 1979). Bovine tuberculosis was transmitted to beef cattle by wild hogs on the Hearst Ranch in California in 1965. Pork that was infected with hog cholera brought into Kosrae Island in the East Carolinas resulted in the decimation of all domestic and feral hogs on the island.

Legal Status

Wild pigs are game mammals in California, Texas, Tennessee, North Carolina, Puerto Rico, Hawaii, and Florida (Wood and Barrett 1979, Mayer and Brisbin 1991). In California, a depredation permit is required from the Department of Fish and Game to conduct a control program or to take depredating animals. Contact your state wildlife agency to determine if a permit is required.

Damage Prevention and Control Methods

Exclusion

Fencing is generally not practical except in small areas around yards and gardens. Heavy wire and posts must be used, but if hogs are persistent, exclusion is almost impossible. Electric fencing on the outside of the mesh may be of some help, but it is difficult to maintain over large areas. Electric fencing has been used effectively in New South Wales, Australia. See the **Deer** chapter for details on electric fencing.

Frightening

No methods are effective.

Repellents

None are registered.

Toxicants

There are no toxicants currently registered for controlling wild pigs in the United States.

Trapping

Cage Traps. Trapping, especially where pig densities are high, is probably the most effective control method. Traps may not be effective, however, during fall and winter when acorns or other preferred natural foods are available. Hogs seem to prefer acorns over grain and other baits. Leg snares and hunting may be more productive control methods during fall and winter. Stationary corral-type traps and box traps have been used with success. The corral or stationary trap is permanent and should be constructed in locations where large populations of hogs are evident and where more than one hog can be trapped at a time (Fig. 3). Build the trap out of steel fence posts and 2 x 4-inch (5.1 x 10.2-cm) welded 12-gauge wire fencing. A gate frame can be made from 2 x 4-inch (5.1 x 10.2-cm) boards. Make doors from 3/4-inch (1.9-cm) plywood and mount them so that they open inward and close automatically with screen door springs. Heavier material may be used for the gate and frame in areas where exceptionally large hogs are to be trapped. Also, more steel fence posts may be needed to reinforce the wire fencing. The wire fencing should be put on the ground as well as at the top of the trap to prevent hogs from going under the sides or over the top. Fasten the sides to the top and bottom. One or two small hogs can be left inside the trap with adequate food and water to act as decoys.

2" x 4" x 24' wood
36" x 48" x 3/4" plywood
36' x 2" x 4" mesh welded wire
4 6" strap hinges
2 12" screen door springs
8 6" steel fence posts
4 lbs. 16-penny nails
1 lb. 12-penny nails
2 lbs. 1 1/2" staples
1 100' 12-gauge wire

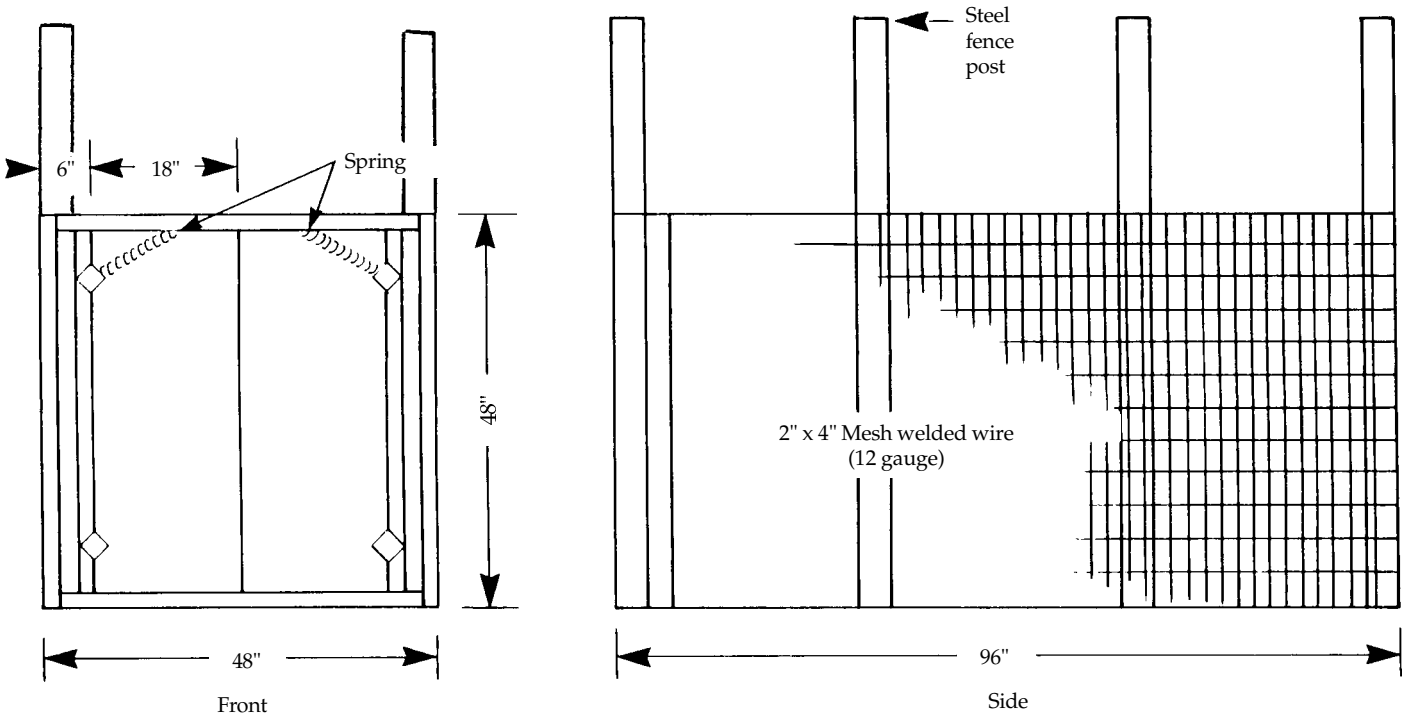


Fig. 3. Stationary hog trap.

A portable trap with a drop gate has been used very effectively and can be moved from one area to another (Fig. 4). It is especially effective where hogs occur intermittently. Build the trap out of 2 x 4-inch (5.1 x 10.2-cm) welded 12-gauge wire over a 2 x 4-inch (5.1 x 10.2-cm) wooden frame using a 3/4-inch (1.9-cm) plywood drop gate. Place loose barbed wire fencing around the outside of the trap to prevent livestock from entering and to protect both the traps and bait material. When traps are not in use make sure trap doors are locked shut to prevent the possibility of trapping livestock.

There are a number of different styles of live or cage traps. The two described here have been used effectively in California. As many as 14 hogs have been trapped during a night in one trap. It is important that the material used in the construction of these traps be strong and heavy enough to prevent escapes. Corral-type traps have captured up to 104 hogs in a single night and may have to be reinforced with extra fence posts and heavier fencing material.

Persistence and dedication are required if a feral hog control program is to be successful. Traps must be checked daily to be reset and to replace bait when needed. Many times control measures fail because operators fail to check their traps or provide bait in adequate amounts. Trapping hogs that are feeding on acorns may be difficult because they seem to prefer acorns to grain or other baits.

Traps should be checked from a distance when possible. If several large hogs are in a trap, the presence of a person or vehicle will frighten them and escapes can occur even out of well-built traps. A well-placed shot to the head from a large-caliber rifle will kill the hog instantly without greatly alarming other hogs in the trap. Shoot the largest hog first, if possible. When a trapping program is being conducted, all hunting in the area should cease, especially the use of dogs, as this may pressure the pigs to move to another area.

A prebaiting program should be conducted before a trapping program is initiated. Grains such as barley, corn, or oats make good attractants, as do vegetables or fruits, if a supply is available. If bait is accepted by hogs, replace it daily. Make sure enough bait is out to induce hogs to return the next day; if no feed is available, they may move on to other feeding areas. A place where hogs have gathered in the

8	2" x 4" x 6'
4	2" x 4" x 3'
6	2" x 4" x 2'
1	3/4" x 24" x 36" plywood
2	3' x 6' welded-wire fencing (12-gauge)
2	2' x 6' welded-wire fencing (12-gauge)
1	2' x 3' welded-wire fencing (12-gauge)
2	3" strap hinges
1	12" x 20" plywood
2	8' cable or nylon
2	1" x 1" steel pin
	16-penny nails

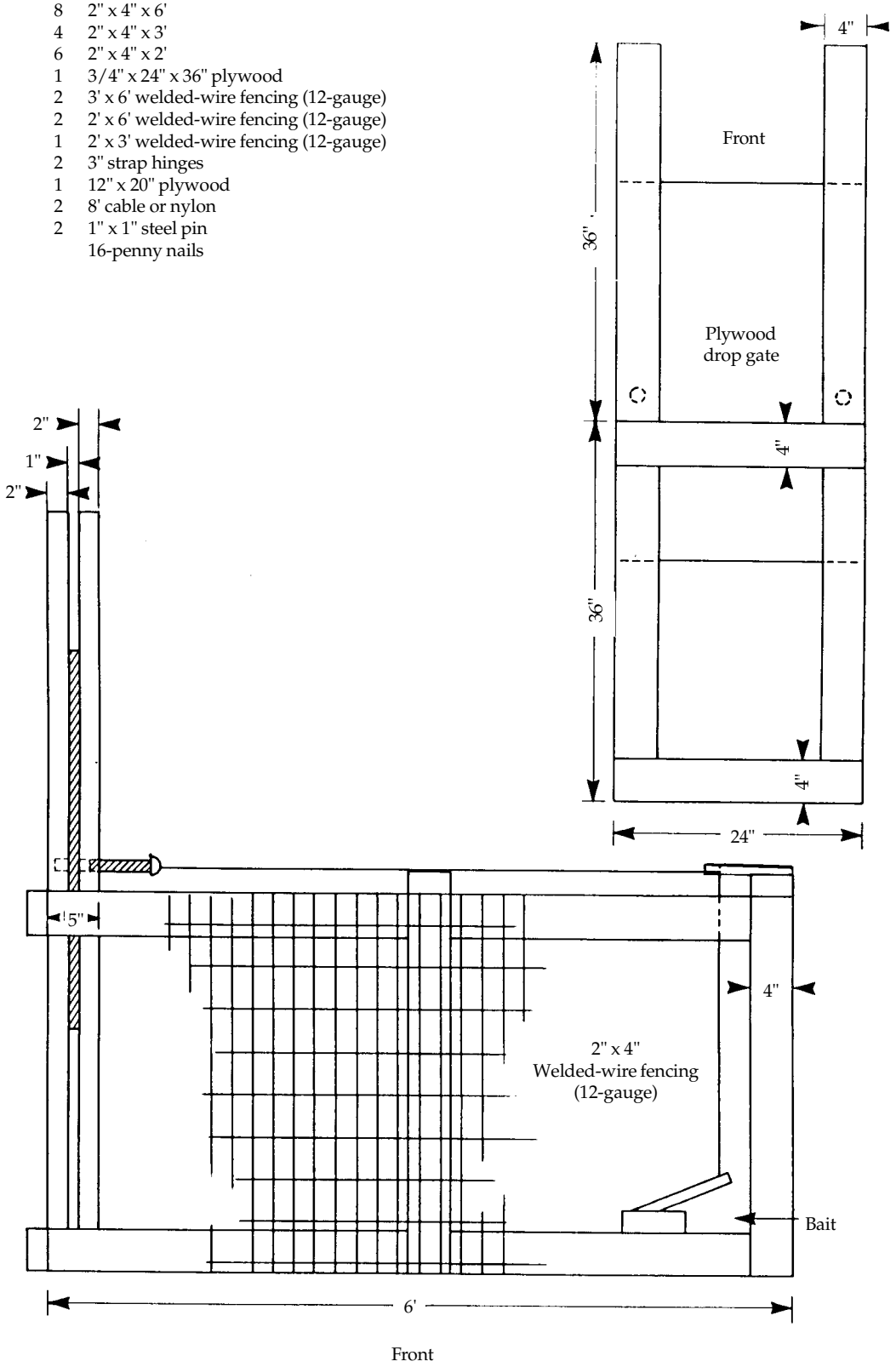


Fig. 4. Portable hog trap with drop gate

past and seem to frequent often, is probably a good place to build a corral-type trap. If only one or two hogs are attracted to the prebait, a portable trap should be installed.

If a swing gate corral trap is prebaited, prop the doors open so that hogs can move in and out. When it appears that the number of hogs that are accepting the bait has peaked, position the doors so that they will close after hogs enter the trap.

Steel Traps. Steel leghold traps are not recommended for pigs.

Leg Snares. Leg snares can be used with success where terrain prohibits the use of cage traps. Snares are not recommended if livestock, deer, or other nontarget animals are in the area. An ideal location for leg snares is at a fence where hogs are entering pens or on trails that hogs are traveling. Fasten the snare to a heavy drag, such as an oak limb, 6 to 12 feet (1.8 to 3.6 m) in length, or longer if large hogs are in the area. Make sure the size of the cable is heavy enough to hold a large hog.

Shooting

Sport hunting is used in certain areas to reduce wild pig densities and can be a source of revenue for ranchers. Success is highly dependent on local situations and terrain. Hunting is not recommended if there is a serious depredation or disease problem. Unsuccessful hunting will make wild pigs keep to cover and change their feeding habits. The use of dogs can increase hunter success. Good dogs chase pigs from cover where they can be shot by hunters.

Economics of Damage and Control

In most areas it is unlikely that wild pigs can be exterminated. It is theoretically possible, but the cost to do so is usually prohibitive. Landowners must generally accept the fact that they will always have some wild pigs and should therefore plan for a long-term control program.

Feral hog damage can be extensive and costly if not controlled. Control for disease suppression is extremely expensive because many hogs need to be eliminated. Crop depredations may cease after one or two hogs are shot or trapped, or intermittent hunting pressure is put on them. They simply move to new areas. If depredations are heavy enough to require a reduction in the overall population then a program can be very costly, depending on the size of the area involved.

Acknowledgments

Figures 1 and 2 by Emily Oseas Routman.

Figures 3 and 4 by Marilyn Murtos, US Bureau of Reclamation, Sacramento, California.

For Additional Information

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