

Rapid Sounder Removal: A Russell County, Alabama Wild Pig Control Project

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ABSTRACT: Rapid Sounder Removal™ is a time sensitive strategy where emphasis is placed on efficient removal of every sounder expanding at least 1,012 ha within 30 days of operation. The mission is to quickly and efficiently remove 100% of each individual sounder, on multiple properties, in the shortest time possible. Several Integrated Wild Pig Control strategies can be implemented in unison to eliminate wild pig escapes, education, and reproduction from large tracts of land at one time. This concept should be applied by all adjacent landowners to remove entire feral pig populations from a county, water conservation district, or wildlife management area at one time. In February 2016, 2 members of the Russell County, Alabama Soil & Water Conservation Committee requested wild pig control on approximately 1,214 ha of agricultural property. A single Hog Control Operator™ was hired to remove the total wild pig population from the property. The project eliminated 310 wild pigs (294 trapping and 16 thermal shooting) in 25 events (19 trapping and 6 thermal shooting). We recorded a 96.7% capture success rate deploying four M.I.N.E.™ Trapping Systems with 15.75 hours of trap construction labor. Two hundred and one feral pigs were removed during the first 28 nights of operation. Farmers, landowners, and land managers should weigh the relative cost and benefits of Rapid Sounder Removal™ when developing a large-scale wild pig control program.

Key Words Rapid Sounder Removal™, Integrated Wild Pig Control™, Hog Control Operator™

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Wild pigs, feral hogs, feral swine, wild boar, or “Russian” boar—all names to describe one of the most destructive animals in the United States (US) today (Foster and Mengak 2015). Wild pigs were first introduced to the US landscape in the 1500s by Spanish conquistadores (Barret and Birmingham 1994). When these explorers landed on the coast of Florida they left domestic pigs behind as a readily available food source upon their return. Seeing that pigs were a fantastic food source, Native Americans promoted pig populations. Early European settlers favored pigs as a livestock crop because of the lack of care needed to raise them. Settlers used free range practices for

centuries. Of course, many of these domestic pigs were never reclaimed and became a part of the wild population. The issue was further compounded with the introduction of the Eurasian boar in the early 1900s in both North Carolina and California. The two populations interbred and became what are now the wild pigs of today.

The unique biological characteristics of wild pigs allowed populations to explode. However, these populations were limited to only a few areas in the US. It has only been within the last 20 to 30 years that they have expanded to the densities that exist today. While their biological characteristics played a significant role in this expansion, humans

are the primary reason there are an estimated six million nationwide. The increased desire to hunt wild pigs has led to the capture, transport, and release of these animals across the country.

The increased density and distribution of wild pigs across the nation has greatly increased the amount of damage experienced by landowners across the country. Current estimates total \$2.5 billion annually in crop, pasture, turf grass, ornamentals, forestry, and livestock damages. With billions of dollars in lost commodities across the country, many landowners are striving to find ways to rid themselves of these nuisance animals. While there are several methods of control that have been employed over the years, there is no silver bullet answer to the problem. However, the strategic implementation of a combination of techniques greatly increases the likelihood of completely removing a sounder of pigs from a given property.

The goal of this publication is to outline the implementation of Integrated Wild Pig Control™ by using a case study from a Russell County, Alabama Hog Control Project. This approach to wild pig control utilizes a series of lethal control techniques applied in a specific sequence based on seasonal food availability. With this approach, emphasis is placed on the efficient removal of entire pig sounders at one time to eliminate escapes, reproduction, and education. The number of pigs eliminated is not as important as the number of pigs left behind.

STUDY AREA

The Speake's Farm was a 1,012-ha property located in Russell County, Alabama. The property consists of 2 separate tracts of land (Figure 1). The eastern tract was southeast of Fort Mitchell, Alabama and is largely comprised of agricultural row crops with interspersed hardwood islands between

fields. The crop fields were planted in peanuts the previous planting season and were planted in cotton by the end of control operations. The surrounding vegetation was dominated by planted loblolly pine and clear-cuts. The Chattahoochee River flows 266 m to the south and 970 m to the east of the southernmost crop field of this tract. There was an unnamed body of water 80 m to the northeast of the northernmost crop field. The vegetative cover between the water bodies and crop fields were mixed hardwood forests, predominately oaks and hickories. There was a 191-ha forest between easterly crop fields (Hog Pin, North Barn, Middle Barn, and South Barn) and westerly crop fields (Norman Drive, Big Highway Field, Small Highway Field, and Highway Field). However, trapping was not allowed on 89 ha of the forest. An 89-ha 30-year old stand of pines was located to the east of these crop fields and was bordered by the Chattahoochee River; this area was clear-cut after control operations and was also off limits to wild hog removal. A 77-ha subdivision was located to the west of the westerly crop fields.

The western tract of the Speake's Farm was located north of Holy Trinity, Alabama and was bordered by Highway 165 at the most westerly side of the property. Lonesome Duck Lake was located 50 m south of the western crop field. The eastern most crop field was located 415 m north of Highway 54 and 215 m west of a railroad track. The area between the 2 larger fields was approximately 66 ha of pine hardwood forest. Smaller crop fields were located to the east of the eastern field and to the southwest of the forested area between the 2 larger fields. The surrounding vegetation included a mix of hardwoods and planted loblolly pines. Much like the eastern tract, the crop fields on the western track had been planted in peanuts the previous planting season. The topography of both tracts of the Speake's

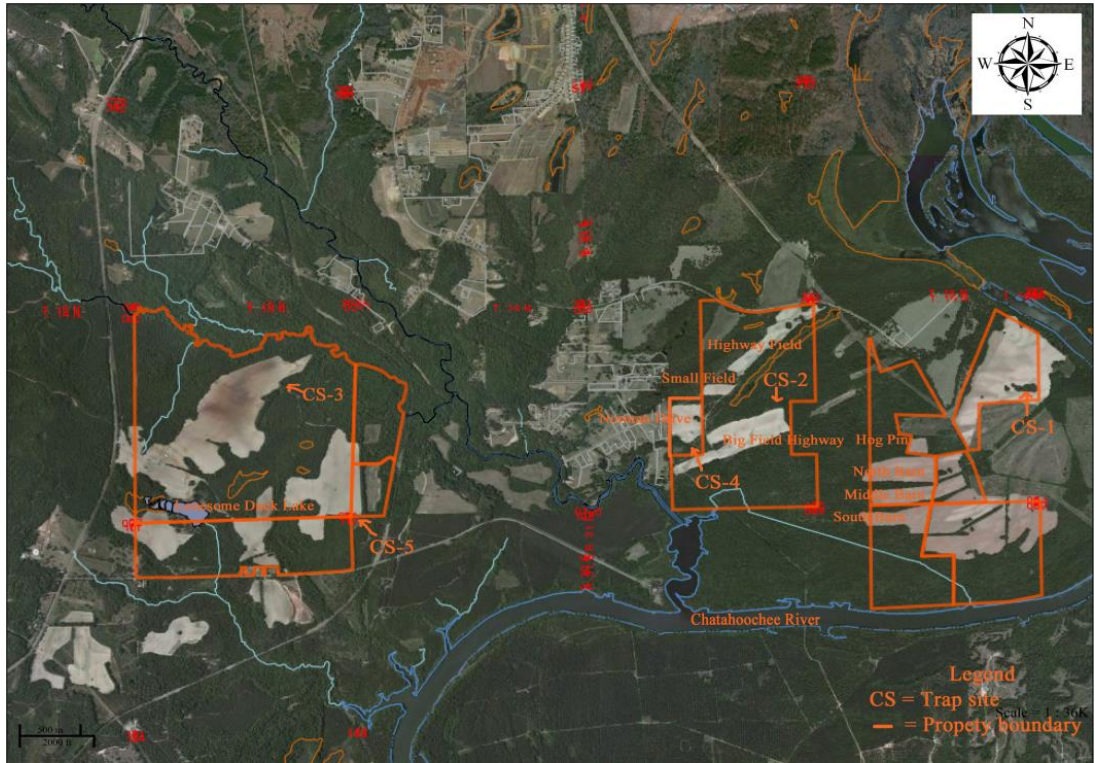


Figure 1: Speake’s Farm property boundaries and trapping locations.

farm was flat in the crop fields and slightly undulating hills in the surrounding areas. The average elevation was 140 m above sea level.

METHODS

Trapping Operations

In February 2016, the Russell County, Alabama Soil & Water conservation Committee requested wild pig control on approximately 1,012 ha of agricultural property. A single Hog Control Operator™ (HCO) from JAGER PRO Hog Control Systems was hired to implement JAGER PRO’s Integrated Wild Pig Control™ (IWPC) program. Trapping and shooting operations occurred in March, April, May, June, and August. The first step taken by the HCO was to scout the Russell County property. The HCO was not only looking for damaged areas, but travel corridors most heavily utilized by wild pigs. Much of the surveillance of sounders was done using high definition, infrared-triggered cameras

deployed throughout the property. The images gathered were used to determine direction and timing of travel from bedding areas to food sources, the number of sounders, and the size and demographics of each sounder. These travel corridors were key trapping locations. Trapping operations occurred throughout the entire 6-month control project.

Once the HCO located the primary travel corridors, 4 digitally timed automatic feeders were erected and filled with whole corn to condition wild pigs to a new food source. The automatic feeders were equipped with a metal shroud (termed a dinner bell) to retain disbursed corn inside a 4.6 m diameter circle around the feeder legs. In addition, this device familiarizes wild pigs with a metallic sound which conveys a new food source is available.

After wild pigs became conditioned to the feeders, the HCO deployed 4 Manually Initiated Nuisance Elimination (M.I.N.E.™)

trapping systems in several different locations on the Russell County property. A fifth trapping system was deployed; however, it was unproductive and was removed early in the project. The M.I.N.E.TM trapping system uses a 10.7-m diameter corral enclosure equipped with one or two 2.4-m guillotine gates. These traps are furnished with cellular wireless receivers allowing the HCO to trigger gates closed from a remote location using their cell phone, tablet, or computer. The traps used on this project were equipped with double guillotine type gates; one on either side of the trap. This strategy was often used on travel corridors to rapidly habituate wild pigs to the new structure as it provided 2 entry and exit points.

Rapid Sounder RemovalTM time limitations did not allow for long-term habituation of trap resistant individuals. Trap gates were closed within 5 nights of conditioning and any uncaptured pigs were immediately shot outside the trap enclosure with .308 caliber rifles equipped with thermal scopes. Trapped pigs were shot inside the trap using a suppressed .22 caliber rifle and removed from the trap after data was collected.

Night Shooting Operations

Most night shooting events during this project occurred during the summer months (June and August) due to the abundance of alternative food sources available outside trap enclosures or in an adjacent crop damaged field. Only singles or feeding pairs were targeted for night stalks. Any sounder located with thermal spotting scopes were strictly observed to better identify a future trap site for capture. The only exception to this standard occurred on 10 August 2016 during the final weeks of the project. Remaining time did not allow for an additional trapping scenario.

Night shooting operations involved 2 or 3 trained marksmen working in unison.

Semi-automatic rifles in .308 caliber were equipped with thermal imaging optics to properly identify and eliminate feral swine in complete darkness. The spot and stalk technique involved trained shooters stalking single file into the wind. Gunners took a tripod supported shooting position within 45.7 m of foraging animals while standing side-by-side for safety purposes. A 3-2-1 countdown was used to synchronize the initial shot from each shooter ensuring multiple targets were engaged at the same time.

RESULTS

In 25 events, (19 trapping and 6 thermal shooting) a total of 310 wild pigs were removed from the Russell County property (Table 1). However, a total of 324 wild pigs were identified in scouting efforts. Therefore, the combine success rate for this project was 92.8 %, which resulted in 14 pigs remaining across a 1,012 ha landscape.

The labor investment for shooting and trapping events was 49.75 hours. The hours invested yielded 9.63 minutes per pig removed. The overall cost of the Russell County Hog Control Project was \$29,500. This included 4 traps at \$3,500 each (\$14,000 total) plus an additional \$15,500 in HCO labor costs. The average loss due to crop damage is \$400 per pig; therefore, the total amount of damage prevented came to \$124,000. Subtracting the total investment from the loss prevented revealed a \$94,500 advantage which yielded a 320 % return on investment (ROI).

DISCUSSION

Trapping success varies with the time of year. Generally, higher trapping success is seen between December and March due to natural nutritional stress periods. During this time, the quality and quantity of food is limited, and pigs are more likely to utilize bait sites. However, baiting laws in Alabama

Table 1. Harvest efficiency data for a 6-month Integrated Wild Pig Control™ project in Russell County, Alabama.

	Juveniles	Adults	Trapping	Shooting	Number Killed	Number in Sounder	Building Traps (hrs)
Trapping Totals	176	118	19	0	294	304	15.75
Shooting Totals	2	14	0	6	16	30	0
Project Totals	178	132	19	6	310	334	15.75
Project Efficiency							92.80%

prevents the use of baits during deer hunting season.

Although trapping operations occurred throughout the entire removal program, the HCO was unable to take full advantage of the winter nutritional stress period due to the aforementioned baiting laws. Gaining 2 additional prime trapping months in January and February could have contributed to a higher success rate using fewer man hours in labor. It is important to remember that the baiting method used in the IWPC program revolves around the use of automatic feeders. This method, in addition to conditioning pigs to a timely available food source, is key to saving fuel, time, and labor because the HCO does not have to rebait daily which increases efficiency. In addition to working around state hunting regulations, we experienced opposition from local hunting clubs and surrounding landowners who were utilizing the wild pig population for profit along with one instance of vandalism. Despite the constraints and opposition, trapping efforts utilizing the M.I.N.E™ trapping system and a trained HCO were of greater success compared to traditional efforts employed by the landowners prior to hiring Jager Pro, LLC (only 88 wild hogs were captured the previous year).

MANAGEMENT IMPLICATIONS

Trapping and shooting continues to be the most effective means of controlling wild pig populations. However, the traditional methods utilized by untrained individuals require more time and labor and do not tend

to be as effective, often educating more pigs than are caught. The methods and technology utilized on the Russell County Hog Control Project significantly increased the overall effectiveness and efficiency of wild pig removal. The IWPC™ model promoted performance-based decisions with specific performance measures necessary to properly implement and evaluate each critical task. Focusing control efforts to first identify, then eliminate entire feral pig populations (one sounder at a time) will reduce long-term damage to agriculture, natural resources, and property. Implementing the most efficient methods and technologies to accomplish whole-sounder removal reduces fuel, time, labor and resource expenses while significantly increasing the landowner's ROI.

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