Unraveling the Challenges and Strategies in Feral Hog Management: A Case Study in the Southern United States.

The first pigs were brough to North America almost 500 years ago as livestock to feed the growing settler population. As pigs were transported from farm to farm, colony to colony, pigs escaped and became feral. Over the years since then, over 9 million have been spotted across 40 states in the US. This is not cause for celebration, as it is estimated that wild hogs cause $50 million a year in damage to farms nationwide. Many different methods have been deployed thus far to try and control the population. These methods range from intricate traps to aerial gunning from helicopters. However, this is an uphill battle due to feral hogs' reproductive cycle, starting as early as 6 months from its own birth, a hog is capable of birthing over 20 piglets each year until it reaches its elder years. This paper focuses on the ethical impacts of each method of population control on both the hogs and the native species. The effectiveness and cost of each method will be accounted for when determining its ethicality. This is done because the feral hog population needs to be drastically reduced as quickly as possible to minimize the unethical damage done to the natural wildlife.

The southern United States is home to much of the pasture farmland in the country. The area is rich in biodiversity and stems from the various rivers, forests, coastal zones, and grasslands. It's known for being one of the hottest areas in the US throughout the year. The invasion of hogs to this area has driven out many of its native species due to over-competing for food. Hogs are highly adaptable omnivores and opportunistic feeders, posing a threat to both flora and fauna. Ground-nesting birds such as quail and turkey have seen population declines in

the recent years. This is a result of the destruction of their habitat from activities like rooting, where large herds of hogs will dig dozens of holes by digging their snouts into the ground and upturn the dirt as well as being known to prey on their eggs and young. One often overlooked impact of the hogs is that invasive weeds in a way follow them. Wherever a herd will decimate a crop field, tough weeds will sprout up in the crops place by creating unfavorable soil conditions.

The first method is culling by trapping and eventually euthanizing. These traps are not typical snares, but sturdy wooden or steel cages meant to hold up to a dozen hogs at a time. Some other trap configurations include silo, mesh, and gate traps which are like lobster and crab traps found out at sea where the prey is funneled into the only entrance whether it be a one-way gate or narrow passage, preventing their exit. The gate traps are usually activated by the tripping of a wire set next to a pile of corn in the center of the trap. Some of the more affluent farmers have deployed “smart” traps which are often remote controlled, or motion sensed. A particularly extravagant trap is known as the “BoarBuster” where at the trip of a wire, the whole cage rotates down immediately, encircling the whole herd at once. The simple trapping of animals is usually one of the most ethical methods because the only pain they may feel is that of being trapped in a confined space for possibly hours at a time. Where it becomes unethical to the hogs is when they are often sent off to a butcher or most times euthanized by firearm. The traps must vary in complexity due to possible adaptation by the hogs where they can learn from other traps set in an area. Trapping is considered highly effective, more so than traditional hunting.

A unique method of hunting hogs has popped up relatively recently to even the odds for the farmers, aerial gunning. Aerial gunning is where a small helicopter is flown in search of hog herds and a passenger equipped with a semi-automatic rifle will pick them off from above. This method is wildly popular on social media due to its almost action movie-esque presentation. Due

to the expense of piloting aircraft, businesses have been created to monetize this by offering events such as bachelor parties while shooting hogs. This is the most unethical method of controlling the population for the hogs due to the indiscriminate killing of the hogs while they run for their lives. On the other hand, since this is the most effective method so far, culling the most hogs quickly spares the native species from habitat destruction and predation more than a less effective method, thus being more ethical for every other species. This method has also been known to cause hogs to adapt by avoiding all aircraft and staying under the cover of trees more than before.

This last method is untested with hogs specifically but has seen success in other applications. Genetic biocontrol is a practice where genetically modified organisms are released into a population to mainly disrupt the reproduction of the targeted species. As was said at the beginning, feral hogs are some of the fastest reproducing mammals in the world. This makes them perfect candidates for genetic biocontrol. Some of the strategies used to achieve this is through parasitic microbes such as Wolbachia, irradiation, and hormonal sex reversal. These strategies have been tried mostly on insects meaning some scientific discovery still needs to be made to successfully impact hogs. Hogs being part of the mammal family also raises the question of how to safely control the spread of such a method. Questions like, “how would we make sure this wouldn’t jump to similar species like Javelina, a smaller relative to the hog native to the southern US because feral hogs have been known to interbreed with other swine populations?” Overall, this is the most ethical option for the hog populations because they would not be getting diseased or killed directly, but rather bred into extinction. But since this is novel science, it is unclear if it will effectively reduce the population quick enough to save the already struggling wildlife.

End of draft.

I still need to work on my last two paragraphs (general opposition and conclusion). I also need to correctly format the citations and add a references page. I will also refine the clarity of some of my sentences before my final draft.

My sources so far:

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