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Game Farms for Wildfowl

Background

The hunting of wildlife has been around for millions of years, providing sustenance to humans. However, following the prosperity of the North due to the Civil War, there was a shift toward the hunting of waterfowl for sport. At this time, nature was seen as an inexhaustible resource and the demand for waterfowl was high. The meat was sold at fancy restaurants as a delicacy and feathers were sought after to be made into wealthy women’s hats (Eshelman 2004). Railroads allowed easier and quick travel for hunters, additionally making products of hunting easier to sell on the market. Subsequently, waterfowl populations were decimated by market gunners and sportsmen who were left unregulated. In 1900, the first federal law protecting wildlife was passed. It was called the Lacey Act and prohibited selling poached game across state borders (“The History and Evolution of the Migratory Bird Treaty Act” 2015). In 1918, Congress passed the Migratory Bird Treaty Act which outlawed market hunting migratory birds and regulated sport hunters, prohibiting baiting and putting limitations on firearms. Congress also passed the Migratory Bird Conservation Act of 1929 and the Migratory Bird Hunting Stamp Act of 1934 in order to aid conservation under the terms of the previous treaty (National Research Council Committee on Agriculture, Land Use and Wildlife Resources 1970). These acts provided birds with habitat on refuges and the funding to do so through the selling of duck stamps. The Pittman-Robertson Act of 1937 and the Dingell-Johnson Act of 1950 also aided in raising funds for wildlife conservation.

Introduction

Sport hunting continues to this day, but now there are the necessary laws put in place to protect the populations of waterfowl. Hunting largely contributes to funds for wildlife conservation due to the many acts passed in the 1900s. To generate interest in hunting, many states raise wildfowl on game farms and release them onto public land. The birds raised on these farms include mallard ducks and ring-necked pheasants and neither are native to North America. Mallard ducks raised on game farms are from Eurasia and are genetically different from the North American wild mallard populations (Hou et al. 2012). Ring-necked pheasants are native to Asia and were first introduced in Oregon in 1881 as a game bird (Paulson 2014). They were introduced to many other states, thriving in the Midwest, but have not been able to establish solid populations in the Northeast. Game farms have been around for centuries but now there are opposing arguments for and against them. There are both ecological and ethical concerns of releasing domestic birds into the wild. Ecologically, gamefarm mallards can interbreed with wild waterfowl which can result in offspring with lower survival rates. Ethically, putting a bird in the wild that has no survival instincts is cruel and there is no possibility of a fair chase scenario. However, there are also many positive aspects of game farms, encouraging hunting which is important both culturally and economically. Culturally, hunting has been around for a very long time and it is a tradition and way of life for many people. Economically, hunting raises a significant amount of money for conservation. There are many arguments for and against farming and releasing waterfowl and non native pheasants.

Main Points

The existence of game farms can be controversial but despite opposing opinions, there are pros and cons to releasing waterfowl and pheasants. Game farms are responsible for releasing thousands of birds into the wild each year for better or worse. The positive is that more birds to hunt encourages people to buy hunting licenses and equipment which in turn raises money for wildlife conservation. The Pittman-Robertson Act, now known as Federal Aid in Wildlife Restoration, puts an excise tax on firearms and ammunition, as well as archery equipment. The taxes collected are given to state wildlife agencies to pay for conservation efforts and hunter education programs (“MDWFP - Pittman-Robertson Act” n.d.). All of the funds from licenses, permits and tags also go straight to wildlife conservation agencies. The more people that hunt and spend their money, the more money that goes into conservation. Since hunting is such a popular sport across the United States, it provides millions to conservation annually. In 2016, it was reported that nearly 11.5 million people participated in hunting (U.S. Department of the Interior, U.S. Fish and Wildlife Service, and U.S. Department of Commerce, U.S. Census Bureau). Out of these 11.5 million hunters, approximately 2.6 million were waterfowler (migratory bird) hunters and 1.9 million hunted upland birds. In total, hunters spent $27.1 billion annually and migratory bird hunters spent $2.9 billion. Duck stamps also bring in a significant amount of money for waterfowl conservation specifically. Duck stamps are needed to legally hunt waterfowl in the US but many other people buy them including bird-watchers and stamp collectors. The proceeds from these stamps are used by the USFWS to secure waterfowl habitat. Approximately $40 million is yielded from around 1.5 million stamps annually (“Delivering for the Ducks” n.d.).

The negative effect of releasing these game farm birds in large numbers is that they tamper with the gene pool of the wild type mallards. Domestic mallards have low survival rates once released because of their game farm adaptations. These mallards interbreed with wild type mallards which may result in lowered survival rates of their offspring due to adaptations meant for living in a pen. Although they are both considered the same species, wild mallards and game farm mallards have a 5-10% difference in their DNA, while the wild mallard and American black duck are only about 1.5% difference (Schummer 2022b). Game farm mallards have been domesticated by humans for many generations resulting in such a large difference in DNA. Mallards in game farms have half the genetic diversity as wild mallards, which is likely to be due to the specific adaptations to be able to thrive in a pen. Game farm mallards weigh less, have different bill structures due to differences in diet, and have different breeding behaviors (“The Surprising Genetics of American Black Ducks and Mallards” n.d.). These pen adapted bill structures are not efficient in the wild and force game farm birds to use twice the energy it would take a wild mallard to get enough food. Female game farm mallards also have a longer breeding period with larger clutches and less parenting to the eggs, which is artificially selected for. However, although these traits are not as beneficial in the wild, game farm mallards still survive and breed with wild mallards. Currently, about 92% of the mallards analyzed in the Atlantic Flyway had a large amount of game farm DNA. This could potentially be a cause in the decline of the eastern native wild mallard species but there is no published research yet on the topic (“Understanding Waterfowl” n.d.). Dr. Michael Schummer, ESF’s resident waterfowl expert, is currently doing research on this topic.

Luckily, ring-necked pheasants and other non-native upland bird species released by game farms have not had any negative impacts on their environment in the Northeast. This could be due to the fact that they fill their own niche and don’t have any competitors or because they have a 99% mortality rate by predation so most do not make it through the year (Leif 1994). This raises more concerns with game farms. Since pheasants and other pen-raised birds are conditioned to humans, used to being fed, and have reduced reactions to predators, they have an incredibly low survival rate and will likely die before hunters can even access them. Even with the removal of predators, pen raised pheasants still have almost a 100% chance of mortality. They likely starve without any survival instincts. These birds are practically being “Released to die” which is not very ethical since they stand no real chance in the wild. Therefore, a con of releasing pen-raised birds into the wild is that fair chase is not possible.

Another positive for game farms releasing pheasants into the wild is that pheasant hunting is a good way to introduce new hunters including the youth. Pheasant hunting is easier than most other types of hunting, making it a good gateway hunt. Mornings are not usually as early so there is a little bit less commitment and it can be a social activity. Pheasant hunting can also be done with dogs, which makes it even easier. In our interview with Dr. Schummer, we asked him about his opinions on game farms. Even though he is against the release of game-farm birds, he explained existing positives to us, “It provides a really substantial opportunity for young hunters to be involved and get involved in hunting” Dr. Schummer explained, “As a kid, I went with my father all the time and those were really good experiences for me with him and his hunting dogs and friends. It became something culturally for us for years”. Hunting is an important cultural thing for many people and families as it gives them memorable experiences in the outdoors. It is so important that people find ways to connect with nature and hunting is a great way to do that. However, there are many other ways families can make good memories together outdoors. Regardless, getting the youth involved in hunting is a win-win situation. Kids get to make valuable memories growing up surrounded by nature and wildlife conservation benefits down the road due to a growing number of hunters spending money. Dr. Schummer also talked about how in Montana, some prisons have programs where the prisoners raise pheasants as part of their program for release (Schummer 2022a). This gives prisoners an activity to do and the pheasants are then used for youth hunts.

One last negative for game farms is that they can be reservoirs of disease. Since there are so many birds crowded together in one space, there is a chance that disease breaks out on the farm. The risk of diseases being spread to wild populations due to the release of contaminated birds is worrisome, however, the USDA mandates surveillance whenever there are confined animals (Schummer 2022a). If a bird gets a disease like the highly pathogenic strain of avian influenza, then the whole flock must be killed, burned and buried so the disease doesn't spread.

Conclusion

In conclusion, there are many arguments for and against farming and releasing waterfowl and non-native pheasants. The positives consist of both cultural and economic factors including hunting and raising money for conservation. The negatives touch on ecological effects and ethics including duck genetics and fair chase issues due to game farm adaptations.

We believe that game farm birds should not be released into the wild. Our main reason is to protect the genetics of wild mallards as well as other ducks that the domestic birds may interbreed with. We also believe there are some ethical concerns with releasing domestic animals with no survival skills into the wild.

When coming up with a solution or management plan, we turned to Dr. Schummer again. We asked him if game farms could breed wild type mallards so that the wild population wouldn’t be affected as much by their release, which turned out to be an idea with many issues. First of all, it would be illegal to bring a wild mallard into captivity due to the Migratory Bird Treaty Act. And even if it wasn’t illegal, artificial selection would still happen over time since only a certain type of bird will do well in a pen and also reproduce. Dr. Schummer said,

“You're going to end up with the same thing. The ones that we have now, the game farm mallards, came from Europe and were wild birds. Europe had them in captivity for around 200 years before we got them. And if you think about the lifespan of a duck, that's a lot of generations”. Since that idea wouldn’t work, we asked if there was any way that the wild mallard gene pool could be fixed. We concluded that game farms are not going away and it would take more than people’s ethical issues to get rid of them, maybe breakouts of avian influenza. There would need to be solid proof that the game farm mallards are the actual reason for the decline of the North American Mallard wild population for something to be done. Dr. Schummer stated that “It will probably take an amendment to the Migratory Bird Treaty Act to experimentally include captured wild mallards into these flocks to reinvigorate the heterozygosity in those game farm mallards. And then what the breeders would have to do is keep pedigrees just like zoos do and exchange birds every so often to keep a diverse pool of mallards in that population. That may help”. There is still research being done on this topic and until there is more evidence, there is no way to say for sure what the ecological effects will be with game farms continuing the release of these domestic birds into the wild. Conflicting opinions will continue, however, there are strong arguments both for and against the farming and releasing of waterfowl and non-native pheasants.

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