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Game farms are defined as an agricultural property where livestock is bred as game animals for the purpose of hunting or production of goods. White tailed deer game farms are often used for paid hunts, sale of meat, sale of antlers and velvet, sale of urine, and sale of breeding stock. This all sounds fine and dandy until you really think about it. These farms create an area where an already overpopulated species can overgraze and erode, not assist in ecosystem services, and spread diseases and parasites such as Chronic Wasting Disease. But it's not all bad; these farms help keep the hunting lifestyle alive, provide a great economic value, and are helpful for research. From a management perspective game farms are a nightmare; they are expensive to run and maintain, expensive to manage, and goes against the North American Model for wildlife management. This paper will focus on the pros and cons of these whitetail farms as well as the history and future of game farms as a whole.

Whitetail game farms are a thorn in the heel of the North American Model for wildlife management. Upon first glance you may think they fit in perfectly with the whole plan but in reality it goes against everything the model stands for. The North American Model was built for unique landscape and culture built around hunting and conservation here in N. America. For the "American Sportsman" it was always said; which checks out for the model as these game farms are set up for wealthy people to pay for a trophy hunt. On the contrary this directly goes against everything the model stands for in 3 of the main 7 tenets of the model. "Wildlife is a public resource...Elimination of markets for game...Democracy of hunting is standard" (Organ, et. al 2012). The fact you must pay for these expensive hunts makes it not available to everyone and the locking away of

public wildlife resources behind fencing and a paywall takes away the market elimination. These farms are a breeding ground for even worse things than overpriced meat I'm afraid...Chronic wasting disease! CWD is a transmissible spongiform encephalopathy unique to North American cervids that leads to strange behavioral changes and physiological problems resulting in more frequent wandering and accidental deaths of deer (Williams, et. al 2005). This disease has been ravaging captive and wild populations in the US leading to mass cullings of farms including a recent culling of over 300 whitetails in a Wisconsin farm (Schmitt 2022). Although there is a certain overpopulation of whitetails in the US we do not yet know how this disease will affect the population as a whole in the future with no sign of its spread stopping or slowing down. There is a clear link between deer farms and the spread of CWD into wild populations as when examined the pockets of wild populations infected are all in the surrounding areas of previously culled farms or currently struggling farms (Sigurdson, Aguzzo 2007). On top of spreading harmful parasites and diseases to the environment outside the farm, inside the farm they wreak havoc. Whitetails and other cervids are important for the ecosystem by grazing and keeping understory growth in check (Stokely, Betts 2019) as well as providing competition and food for other organisms. While in the fences of these farms they cannot provide any ecosystem services and instead will overgraze the grounds until they are barren, eroded, and unproductive. This overgrazing will erode soil and affect the micro biomes within the ground and water sources on the property stripping them of nitrogen and other nutrients (Sakai, et. al 2022). Problems like this are common among all kinds of livestock farms and can be fixed by moving where they graze yet on a hunting property this is hard to do as they are oftentimes wild animals. We interviewed Mike Sheppard, a former game farm owner in Ohio who had many Whitetails, mule deer, red deer, goat, and wild hogs for the purpose of hunting trips. He spoke of the horrors of CWD today and how scary it would be to still own a farm. He spoke of the difficulty of managing a large farm with a variety

of species that today would be very difficult as CWD spreads like wildfire (Sheppard 2022). Another problem he mentioned although not directly about whitetails but game farms in general was wild hog hunts would take place outside the fence and oftentimes majority of the hogs would not be killed and just escape to never be seen again (Sheppard 2022). Game farms as a whole seem to be an ecological ticking time bomb ready to be a disaster.

These farms aren't all bad though. Whitetail farms and other game properties are helpful for research purposes, they help bring in money for conservation, as well as keeping the culture of the "American sportsman" alive. A whitetail farm in Pennsylvania partnered with a group of researchers and helped figure out a genetic test that measures susceptibility of deer for CWD without killing them (Venesky 2022). On top of this many farms can help provide behavioral research and provide samples for all sorts of physiological studies. The presence of game farms also willingly supports wildlife conservation in the US by providing an excise tax on guns, ammunition, and other supplies used for hunting that goes directly towards the US Fish and Wildlife service (Rea, Connors 2022). The stigma around trophy hunters not caring about wildlife is another reason deer farms are becoming less popular as many people dislike that attitude yet the hunters are doing their part to help conserve wildlife for future generations. On top of the excise tax these farms help stimulate the economy with largely expensive hunts ranging from a few hundred dollars to 10s of thousands for the "better ones". They often also are centered near housing and lodging which helps provide tourism to an area that may not usually get the spotlight like a beach or resort would get. These farms and hunting camps can really help small remote towns get funding for local communities and governing bodies. These points have helped keep game farms alive and well today but is it enough to help them stick around in the future?

Personally I don't see game farms persisting in the future in the US and Canada as CWD ravages the populations with no sign of stopping any time soon resulting in a

scorched earth policy culling every deer in the farm and surrounding area. On top of that they are questionable for the North American Model of wildlife conservation going against almost half of its core pillars. Cervids are important ecosystem servers and with deer farms creating a breeding ground for a disease that can wipeout these animals they should cease to persist if we want deer to keep maintaining understory growth and food chain balance. Overgrazing by these captive deer in the farm grounds leads to erosion and nutrient depletion. Whitetail farms are expensive to establish with costly fencing, maintenance, and take away resources from the public only allowing the wealthy to hunt them. But game farms allow a variety of cervid and ecosystem research to be monitored, they provide money for conservation and stimulate the economy. In the end, the detriments outweigh the benefits and for that I say deer farms will cease to exist in the near future. Their lasting historical presence will live on through the effects of CWD on the population as a whole.

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