



Is game ranching the route to food and wildlife security?



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South Africa scores higher than most sub-Saharan countries for food security, but a recent government report suggested that only 20 per cent of households are food secure while more than 50 per cent experienced some degree of hunger.

Although the country produces a large amount of animal protein for consumption annually, there is a shortfall due mainly to a human population that has more than doubled in the past 30 years while the number of livestock has remained the same or decreased.

It has been estimated that, during the five month long hunting season, 20 per cent of red meat consumed annually in South Africa is from wildlife, making a significant contribution to food security. Game meat produced on wildlife ranches comes from the meat left after trophy hunting [the hunter usually only wants the skin/horn], from culling and from biltong hunting -- the hunting of non-domesticated animals by local hunters with the purpose of obtaining meat which is consumed by the hunter, their family and friends or sold to local butcheries.

The total value of game meat extracted from all wildlife ranches across South Africa was estimated to be \$21 million from trophy hunting and \$27 million from culled animals with dried, cured wildlife meat sold as biltong or sausages generating some \$58 million annually. In



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addition, individual wild animals hunted for specific traits like long horns or striking colours (trophy hunting) was reported to generate around \$175 million a year while live animals traded privately for breeding or hunting was estimated to have contributed about \$400 million in 2014.

Game ranching is clearly big business in South Africa with a study by the Endangered Wildlife Trust reporting that there are as many as 9,000 private game ranches covering 170,000 square kilometres. It is an industry that is relatively young as it was not until the passing of the Game Theft Act in 1991 that there was any incentive for landowners to conserve free-ranging wildlife. The Act granted legal ownership of wildlife to landowners who obtained a "certificate of adequate enclosure" having adequately fenced their land. From perhaps only 600,000 wild large herbivores on both government and private land combined in 1991, there are now believed to be 6 million on private ranches alone.

Ranching wild rather than domestic animals makes sound scientific sense in areas with low/inadequate rainfall or where there are certain

LEFT PAGE: Sable antelope sought after by sports hunters.

RIGHT: The Himalayan Tahr - an exotic species for sport hunting.

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diseases pressures. The rationale is that because wild animals have evolved locally over a long period of time, they will be more highly adapted than stock brought in from elsewhere. Studies have shown that wildlife are better capable of converting vegetable matter in to protein without causing habitat deterioration while also being better adapted in terms of water conservation and heat stress.

Wild ungulates such as oryx, impala, wildebeest and eland have specialised water conservation systems so need considerably less water than cattle under the same circumstances. Cattle need to be closer to water sources, the habitat around

HOWEVER, GAME RANCHING IN SOUTH AFRICA IS NOT ALL ABOUT WILD ANIMALS ROAMING FREELY ACROSS THE LANDSCAPE.

Lions live in the grassy, open savannahs of Africa, not in the jungle. Conservationists say that lion hunting is one of the most lucrative for trophy seekers.

which can become degraded while wildlife is able to disperse further and utilise a wider range of vegetation such as leaves and twigs. Diseases such as trypanosomiasis (sleeping sickness) are crippling to cattle while wildlife is known to be more tolerant and so may be able to utilise areas otherwise considered unproductive.

CONTROVERSIAL PRACTICES

However, game ranching in South Africa is not all about wild animals roaming freely across the landscape. Hunting, as the backbone to the industry, has led to some practices which have been heavily criticised. Most trophy hunt income is generated from lions with most hunters coming from the United States. In 2015, it was estimated that there were some 8,000 lions being kept in 200 captive breeding facilities often utilising intensive breeding methods. An individual lion could be hand-picked for the hunt, either in the field or on the internet, with the animal being released into a 'wild' area prior to the hunt. This

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practice of “canned hunting” has been widely criticised and the US Fish and Wildlife Service declared that it was of no conservation value and banned, in October 2016, the import of captive bred lion trophies into the US.

More controversy surrounds hunting due to the practice of intensive breeding. Trophies of individual animals possessing special characteristics – large and long horned buffalo and sable for instance – command premium prices especially if they make the record books of hunting organisations like the Safari Club International. This has led to increasingly sophisticated breeding methods, genetic testing, disease research and artificial insemination. Superstar stud animals sell for exceptional prices – in September 2016 a large and long-horned Cape buffalo bull was auctioned for some \$11 million!

Of particular concern is the practice of hybridisation where local sub-species are being crossed with non-indigenous sub-species. Sable antelope, with their black and white hides and long, arcing horns, are sought after by hunters. The type found in South Africa is known as the Matetsi sable, but it is of moderate size and horn length when compared with the Zambian type.

Biltong and dried sausage is a common sight in butcher shops all over the world. In South Africa, expect to see biltong everywhere you go. Biltong is South Africa's favorite snack and an intrinsic part of the country's culture. It is sold in gas stations, at supermarket counters, at transport hubs and even in upscale restaurants.

South African wildlife ranchers have imported sable from Zambia and cross bred them with the Matetsi type to produce more valuable stud and trophy animals. They have also imported sable from Tanzania to create new bloodlines.

This outbreeding has altered the genetic structure of many South African sable populations with no way of knowing what the consequences could be. Unique local ecotypes which have become especially adapted to their local environment may well be lost. This hybridisation, where different subspecies or ecotypes are mixed together, is known as genetic homogenisation.

Uniqueness can also be found in coat colour variation but such variation is often the result of genetic “freaks” - albino (completely white) and melanistic (completely black) individuals are sought after – and have no conservation value.

To facilitate intensive breeding, some ranchers have created special breeding “camps” - small enclosures heavily fenced – to control mating and prevent predation. The fences stop any wildlife movement which can cut animals off from traditional feeding and drinking areas and from potential mates, causing population collapse and landscape fragmentation. Some fences have a low

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strung, electrified trip line to prevent animals from digging in or out but which has also resulted in some being electrocuted, not-the-least of which are the conservation threatened ground pangolins.

Despite producing large numbers of potentially valuable animals, intensive breeding and hybridisation renders many of no conservation value. Indeed less than 10 per cent of sable and around 5 per cent of roan antelope on South African game ranches are considered to be “wild and free-roaming” such that they are considered at risk of extinction on the IUCN’s Red List of threatened species.

EXOTIC MAMMALS

Some ranches are trying to attract hunters by offering a wide range of species to choose from as a marketing ploy. Species such as warthog, impala and nyala which are indigenous to South Africa may be moved outside their natural range while



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LEFT: Biltong is a form of dried, cured meat that originated in South Africa, Zimbabwe and Namibia. Various types of meat are used to produce it, ranging from beef and game meats usually cut into strips following the grain of the muscle, or flat pieces sliced across the grain.

RIGHT: Grilled eland rump steak. Eland is a type of Antelope found in East and South Africa whose meat is very lean and mild in flavor and very High in omega 3 and protein.

others, called exotics, like the Himalayan tahr and European fallow deer, have been imported. A 2008 study showed that South Africa was second only to the United States in having the highest number of introduced exotic mammals. The effect of such introductions on local wildlife populations is unclear.

Despite the downsides that have been highlighted, those landowners concentrating on free-ranging, naturally breeding animals, have shown that private game ranching can contribute significantly to wildlife conservation while making good profits. It was reported that, in the period 2001 to 2015, many wildlife ranchers made higher profits than investors buying shares on the Johannesburg Stock Exchange.

The South African model of private wildlife ranching shows that wildlife stewardship motivated by profit can increase wildlife numbers, help threatened species and has the potential to bring new wealth to rural land owners. It has aided food security and with better regulation more could be achieved.

Wildlife ranching is not without risk if not properly controlled and governed. East Africa has seen massive losses of wildlife and habitat. Conserving species such as elephant and rhino entails high and increasing security costs. The potential exists to explore an ‘East African model’ to make more out of wildlife than simply ecotourism benefiting wildlife conservation and perhaps enhancing food security for the ever growing human population.