THE CATTLE THREAT

Our Taste for Beef Damages the Environment

Many environmental problems in the world today are related to the use of unsustainable methods of raising livestock, particularly cattle. Intensive livestock agriculture and livestock raising in inappropriate ecosystems require a vast investment of natural resources and have a major environmental impact. Animal agriculture that is ecologically unsound and, thus, not sustainable contributes to a variety of global problems. These include water depletion and pollution (especially from feedlots), soil erosion and desertification, deforestation, destruction of wildlife habitats, and the greenhouse effect.

The increasing rate of agricultural expansion and its related environmental impact is due in part to the burgeoning cattle industry. The World Resources Institute estimates there are more than 1.2 billion cattle in the world, two cattle for every five people. In South America, there are nine cattle for every ten people; in Australia, fifteen cattle for every ten people. The world cattle population has increased by 6 percent over the past decade.

Changing the Atmosphere

Environmental degradation caused indirectly by the cattle industry as a result of deforestation, excessive grazing, accelerated soil erosion, and soil misuse has devastating and far-reaching consequences. Clearing forests to provide grazing land for cattle not only destroys wild life habitat and leads to the extinction of plant and animal species and accelerated soil erosion (resulting in river silting, floods, and droughts), but it is also a major contributor to the greenhouse effect. Deforestation adds to atmospheric concentrations of carbon dioxide, a primary greenhouse gas that absorbs solar radiation, trapping heat and thereby warming the surface of the planet. The cattle industry plays yet another role in global environmental problems. Cattle produce significant quantities of methane gas, a greenhouse gas implicated in the destruction of the ozone layer. Recent research in the United Kingdom and Holland has also linked the dairy- and beef-cattle industries with acid rain. The liquid sherry excrement of cattle (as distinct from comprehended manure), stored in lagoon and later sprayed on fields, releases ammonia into the atmosphere. The ammonia interacts with sulfur dioxide (an industrial pollutant, especially from power plants burning fossil fuels), increasing the rate of oxidation of sulfur dioxide and the formation of ammonium sulfate on plant foliage. This "acid rain" causes the death of trees and the acidification of soils and surface waters.

Changing the Landscape

Deforestation by cattle grazing is a major contributor to land degradation, which leads to water pollution from animal wastes and sediments, accelerated soil erosion, and desertification. Deforestation by agricultural expansion, including crop and livestock production, is a worldwide problem. In the United States, more than an estimated 200 million acres of agricultural land was formerly forest. The Worldwatch Institute has estimated that the global rate of clearance of tropical mount forests is 28.2 million acres per year.

Many Third World countries in Central and South America and Africa are looking at expanded cattle production as an aid to economic recovery, since meat exports provide much needed foreign currency and a means of reducing international debt. However, the long-term environmental and social costs of such economic recovery programs cannot be ignored. Otherwise, as Mohandas Gandhi once remarked, "The cattle of the rich steal the bread of the poor." Perhaps central America and Amapoara can use the examples of the direct relationship between the cattle industry and deforestation. Almost two-thirds of Central America's original rainforests have been cleared or severely degraded, in large part due to cattle ranching undertaken for exports to the United States. According to the U.S. Department of Agriculture Foreign Agriculture Service officials, approximately 18 percent of Central America's beef production and 95-100 percent of its beef exports are utilized in the United States. These exports are utilized in the U.S. fast-food industry and in processed-beef products. In Amapoara, tax incentives and subsidies led to the establishment of 469 cattle ranches that were responsible for 30 percent of Amapoara's deforestation. Despite documentation of the accelerating extinction of wildlife and of serious climatic changes following the deforestation of large tracts of habitat, particularly rain forests, the Third World continues to be encouraged to adopt unsustainable systems of agricultural livestock production. Not only unique and fragile rainforests are being destroyed so cattle can survive, other habitats, as well, are being utilized for cattle production. With ostensibly the best intentions, animal scientists, veterinarians, and government agencies have been doing their utmost to help the countries of the Third World develop more productive cattle- and sheep-raising systems. Yet, in many parts of the world, such activities are ecocidal: the wrong species are being put in the wrong places. Cattle, in particular, are not well adapted to semi-arid or seasonally arid climates, such as some regions of the United States and the Asian and African continents. This means that they periodically suffer the ravages of drought conditions, dying of thirst, starvation, and heat exposure. In contrast, range cattle in more northern regions suffer and often die from cold exposure in severe winters. Cattle require much more water than indigenous species of gazelle and antelope and are also more destructive of natural vegetation in their grazing patterns. Perhaps even more destructive is the trampling that comes with the search for food, causing severe compaction damage and degradation to the soil and landscape. When the soil is no longer held together by the roots of natural vegetation, the exposed ground becomes vulnerable to erosion, leaving behind a desert.

In Kenya, cattle are occupying more and more of the savannas and grasslands formerly occupied by wildlife. David Hofcraft, a wildlife ecologist in Kenya, described to me what happens when nonindigenous and inappropriate species are introduced into a low-rainfall, grassland/plains ecosystem:

"Tracking and increasing devastation around water holes reduces not only the amount of..."
Many environmental problems are related to unsustainable methods of raising livestock.

No Where Left to Go

Alongside its role in the disappearance of wildlife habitats, cattle ranching also interferes with wildlife migration. Open range lands are staking crosed with fences that inhibit the movements and migration of wildlife both in the United States and worldwide. Botswana, one of the last wilderness regions of Africa, has developed cattle ranching as its second largest industry, with livestock numbers growing at rates of 4-8 percent per year. The European Economic Community not only provides funds to Botswana's livestock industry but also imports approximately 80,000 tons of beef annually, primarily for the beef importing market in France. In many countries, there are large cattle herds that suffer from a variety of diseases that greatly lower their productivity. In order to offset lowered productivity (and to ensure the survival of breeding stock in case of drought), among other reasons, every effort is made to increase the cattle population. Ironically, increasing the population only helps increase the likelihood of disease, drought, and desertification.

Poorer nations cannot afford appropriate drugs and vaccines. Great harm has been done to wildlife by the wholesale spraying of pesticides to control insects that transmit diseases to cattle in tropical countries. The suffering of both intensively and extensively raised cattle from a host of chronic, debilitating, and fatal viral, bacterial, and parasitic infections is not only a major economic concern. It is also of concern to all animal protectionists, since such sickness and suffering are responsible for the death of millions of animals. Many cattle coming off of the range are crowded together with unfamiliar animals. Resulting disease problems include lactic acidosis, enterotoxemia, blast, laminitis, and the rumenitis-lover-abcess complex. While diet related disease is a major problem in feedlots, there are additional welfare concerns, including overcrowding, the lack of appropriate shade and shelter, the lack of dry places to lie down, the mingling of large numbers of unacclimated animals, insufficient veterinary preventive medicine, and disease problems created by having huge numbers of animals confined together in one place. The transportation and handling of beef cattle in the United States is another area of great humane concern. Most beef cattle are transported at least twice in their lives, once to a feedlot and then to the slaughterhouse. Many cattle pass through four or five auction yards before reaching the feedlot, often being born on branded at each new location. During transport, they are frequently subjected to rough handling, temperature extremes, long periods without food or water, and the stress of being crowded together with unfamiliar animals. Many cattle coming off of the range are branded, dehorned, castrated, vaccinated, and dipped in disinfectant immediately prior to shipment. All these procedures add to stress that often results in diseases such as "shipping fever," a common cause of death associated with transportation in cattle. When very few exceptions, most countries also need to improve their slaughter methods and care of livestock prior to sulfur.

More enlightened agricultural and animal policies now see the wisdom of increasing livestock production by reducing the cattle population, toward smaller herds of healthier and more productive animals. They are also realizing the economic wisdom of insuring that cattle are handled and transported humanely to reduce the losses associated with stress, disease, and physical injury.

Goals to Live with

Those farmers in the United States and abroad who wish to continue livestock production into the twenty-first century are also beginning to see the connections between agriculture's contribution to slowing down environmental degradation and the adoption of organic, sustainable, and humane farming practices. When cattle or any livestock are raised "intensively," they require more drug treatments (dips, worming, live vaccines, antibiotics, and other drugs) because they are more vulnerable to diseases than are less intensely raised animals. When it comes to livestock production, organic farming by its nature is a more humane method of raising farm animals. In such methods (using neither overgrazing nor overcrowding), the animals suffer less stress and present less danger of contracting worm-infected and preventive medications.

Integrated with other diverse and sustainable agricultural practices, the livestock industry in developed and Third World nations alike can become a viable enterprise, but not until its present and continuing damage to the environment is recognized and addressed and not until the stress, suffering, and sickness of the animals cease. In time, improved improvements in husbandry, transportation, handling, and slaughter. Such sickness and suffering are symptomatic of an economic and environmentally unsound, not unethical.

Without a reduction in the rate of destruction of forests, woodlands, and rangelands and a concomitant shift to sustainable livestock and crop production systems, the earth's ecosystem will be irreparably harmed. The health and vitality of the earth and of humanity is inseparable and interdependent. Our wellbeing and security, and that of future generations, ultimately depend upon responsible planetary stewardship. The preservation of nature's diversity and restoration of its lands cannot be postponed but, rather, must be recognized as a major international cooperation of all nations.