An Inconvenient Cow:
The Truth Behind the U.N. Assault on Ruminant Livestock

By Matthew J. Rales

In late November of 2006, the United Nations Food and Agriculture Organization released a startling report. Its official title is "Livestock's Long Shadow: Environmental Issues and Options."[1] References to this report have been frequent in the last year, especially on environmental and nutrition-related fronts. The report accuses the cow of the worst environmental crimes—land degradation, water pollution, acid rain, biodiversity and habitat loss, desertification, deforestation, and foremost among the headlines, global warming. Cows and other ruminants are responsible for generating 65 percent of anthropogenic nitrous-oxide, 64 percent of ammonia, and 37 percent of the world's methane, the U.N. scientists declare.

Ancillary reports that expound upon these figures are everywhere. The American media have enjoyed selling the annihilator-cow theme to an audience conditioned by anti-animal foods propaganda and environmental fabrications, such as the "fact" that greedy farmers in the Amazon eradicate rainforest for more and more land to graze their cattle.

Syndicated nutrition columnists present us with lists of environmentally friendly food choices, invariably free of any and all animal products, and environmentalists cite the report as further evidence to keep cattle out of national parks and "protected" public lands.

But it's not just the mainstream news networks and publications that have circulated these accusations against livestock. Alternative energy and sustainable living magazines have produced a smattering of recent articles: "Eat Less Meat," "Meat is Methane," "Save the World; Go Vegan." These catchy titles sit on the magazine rack at your local natural foods co-op. And so the readership of these publications continues to patronize those trendy pseudo-foods like soy milk and veggie burgers—the production of which is a principle reason for deforestation in the Amazon. The other use for soybeans from these degrading land use practices is feed for confinement animals—beef and dairy cattle, pigs, poultry and fish—for which pastured cows continue to be blamed.

INDUSTRIAL ENVIRONMENTALISM

Make no mistake; rainforests are not cleared in any drastic measure by independent farmers who want to graze a few steers. They are cleared by United Nations-supported corporate giants under the guise of feeding the world and alleviating poverty—all for the production of more of their patented seed. This seed, of which the U.N. and its "green" lobbyists are so fond, assumes the role as displacer of traditional food and farming all over the world. That means health-giving foods like lamb tallow for frying, lard for baking, and real butter, which the industry-led dietitians have condemned from on high, are the foods these GMO seeds are displacing. It is no wonder the U.N. has so urgently launched its campaign against livestock—these animals represent the only food source that can supply the people with enough good nutrition to empower them (both physically and emotionally) to resist the global onslaught of food police, biotech crops and chemicals.

A recent article in *Business Week*[2] reports that Brazil alone grows over 25 million acres of soybeans—all of which are genetically engineered. The *Wall Street Journal*[3] reports that Monsanto's stock has tripled in the last year due to Brazil's demand for Roundup Ready soybeans—a genetically engineered plant that can withstand multiple, frequent applications of toxic herbicide.

Allan Nation, editor of *The Stockman Grass Farmer*, reports back from his recent trip to Argentina that "eight dollar" soybeans for world export are edging out the domestic, sustainable grass-fed beef industry.[4] Why don't we hear environmentalists denouncing this supreme symbol of industrial agriculture with the same passion they muster for condemning beef? Why are the green-conscious not boycotting the oilseed plant that literally drinks Middle Eastern oil in the form of petrochemical herbicides? That's because our society has been conditioned to support a co-opted environmental movement in the name of a chemical-intensive vegetable bypass industry, at the tragic expense of good health to both man and environment via the qualities of grazing animals (those methane-belching creatures that we love to hate) and their products—meat and milk for people, manure for the soil—none of which our society can afford to lose.

DESTRUCTIVE PARADIGM

The real paradox of the report is the way in which it avoids dealing with the twin-conundrum of mass-scale monocultural grain production and confinement animal feeding operations (CAFOs). These are the two destructive pillars of an industry gone wrong, yet the U.N. points its global finger not at bad management practices like feedlots and confinement dairies, but at the cows themselves; not at Monsanto, but at real farmers, who raise livestock in accordance with nature's principles—on grass.

The U.N.'s accusations ought to be directed at chemical-intensive, industrial CAFO agriculture. Yet the U.N. only presents solutions that fit within the confines of the industrial framework—the framework they are obliged to uphold through the preordained results of taxpayer-funded university research.

Indeed, the solutions have already been written, and at best they are dubious and vague. They include "improved diets for ruminants, which reduce enteric fermentation." These diets, you can be sure, are grain-based, laced with all kinds of chemical concoctions. No mention of the carbon

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released into the atmosphere in the production of these "improved diets," just as there is never any mention of the petroleum requirements to produce corn-based ethanol. Another U.N. solution is an overarching vaccination protocol also aimed at reducing fermentation activity in the rumen. Aren't these solutions brilliant? The U.N. cuts a check to the likes of Monsanto for the "improved diets," and to the likes of Merck and Pfizer for the vaccines, all the while reducing "harmful emissions" so that you can enjoy beef from an animal that's been pumped full of genetically engineered viruses and aluminum, and has had all of its gut flora eradicated, but at least you can eat that beef without a guilty conscience. This is indeed U.N. science at its finest, and it does not have the best interests of the environment, the cow, or the consumer in mind. Its interest lies in perpetuating consumer fear, so as to further its campaign for global governance and corporate farming all over the world.

NATURE'S SOLUTIONS

Such U.N. research will not yield low-cost, common sense solutions—like freeing the world's beef animals from their feedlot bondage, and returning them to the world's grasslands and deserts so that their manure may become a product that gets recycled by earthworms into soil wealth—becoming a healing agent—rather than a product of volatile nitrous-oxide generation. The U.N.-sponsored research will not yield solutions like shutting down our confinement dairy camps and using these animals to return the Midwest's eroded and degraded cropland to the fertile prairie of yesteryear. That thick layer of black gold upon which a blanket of robust native grasses once grew was a priceless gift to us from the American bison—a gift we have chosen to send to the Gulf of Mexico on the order of millions of tons per year via the erosion caused by mass-scale grain production to feed concentration camp cows—animals not designed to eat grain in the first place.

Indeed, if the U.N. chose to, they could suggest the above solutions, which would sequester carbon and add it to the soil bank, thus reducing this apparently harmful greenhouse gas from the atmosphere. As it currently stands, our farming practices both in the field and in the feedlot oxidize carbon into the atmosphere causing an historic increase in CO_2 levels. A shift from a carbon-releasing agriculture to a carbon-sequestering agriculture requires nothing more than a shift from CAFOs and monocultures to grain-free, all-grass livestock farming. In the process, we could restore the floral and faunal ecology of the Great Plains to its pre-colonial status—a phenomenal, yet highly achievable prospect.

One of the greatest ironies of this whole scenario is that many of the world's environmental activists stand behind the U.N. without examining the agenda behind the "green" façade. This is in large part because many environmentalists have no better understanding of nature and its functions than the apologists of industrial agriculture. These seemingly opposing sides share a common vision for the future—a world devoid of farmers and domesticated animals, with fields of monocultures that stretch to the horizon, and token wildlife preservation zones that remain locked up for eternity. These zones will inevitably begin to deteriorate, as most of them already have, for lack of good land management and husbandry by man and livestock.

In short, what we are lacking from an environmental perspective is precisely that which the U.N. would like to annihilate: farmers who use livestock to enhance and embellish landscapes. These are the wonderful people who supply us with raw milk and butter, grass-fed beef and lamb, pastured poultry and eggs. I would argue that these farmers, those sturdy individuals presented with the daily task of managing plants and animals in harmony with one another for the benefit of their land and their patrons, hold the most supreme understanding of ecological processes and are the world's true environmental activists. The managed landscapes of these pasture-based farms are the healthiest, most biologically diverse places on earth, and the sheer volume of life in their soils proves it. And had it not been for the advent of an artificial support system called chemical fertilizers and farm subsidies, healthy soil—via livestock and their manure—would be the foundational vehicle for our prosperity and propagation upon the earth.

Let's now examine the U.N.'s foremost accusation against livestock, specifically as it applies to global warming, and determine whether or not

this accusation deserves the merit it is currently receiving in the public arena. Perhaps if we remove the cow from the industrial context within which the U.N. would like her to reside, and put her back into nature's context—where she ought to be and where grass farmers have put her—she will become our best ally for a future free of environmental devastation and an escalating health crisis.

THE WAR ON METHANE

The U.N. claims that "the livestock sector is responsible for 18 percent of greenhouse gas emissions measured in CO_2 equivalent, a higher share than transport. The sector emits 37 percent of anthropogenic methane (with 23 times the global warming potential (GWP) of CO_2) most of that from enteric fermentation by ruminants."

Here we have a process as elegantly natural as the fermentation of forage in the rumen, a process that has occurred since time immemorial, probably on much vaster scales than today, being declared an environmental crime. Unfortunately, our society relies on these world police for the most up-to-date scientific data. The fact is that these data have nothing to do with good science, but are instead science manipulated to support the industrial agenda to plant the earth with more GMO soybeans (see sidebar, page 22). Such an agenda sends profits in the direction of the fossil fuel giants and corporate farms.

I would like to ask the U.N. scientists whether the vast herds of wild methane-generating ruminants are also guilty, or if the world's wetlands, gurgling methane from their anaerobic decomposition processes on the order of ten times that of cows, or our politically correct forest trees, now found to emit huge amounts of methane through their leaves, are also charged with crimes against the environment. If methane generation regardless of its origin were the problem, the U.N. would be launching a campaign to

METHANE AND MICROORGANISMS

Methane is a colorless, odorless gas widely distributed in nature. It is the main component of natural gas, and is highly combustible. It is nontoxic if inhaled, but can produce suffocation if abundant enough to reduce the concentration of oxygen in an enclosed space. Current scientific consensus deems methane a powerful greenhouse gas with a global warming potential of 25 over 100 years. According to Wikipedia, "This means that a methane emission will have 25 times the impact on temperature of a carbon dioxide emission of the same mass over the following 100 years. Methane has a large effect for a brief period (about 10 years), whereas carbon dioxide has a small effect for a long period (over 100 years). Because of this difference in effect and time period, the global warming potential of methane over a 20 year time period is 72. The Earth's methane concentration has increased by about 150 percent since 1750, and it accounts for 20 percent of the total radiative forcing from all of the long-lived and globally mixed greenhouse gasses."

Natural sources of methane occur in water-logged and submerged soil where organisms called methanogens exist in anaerobic conditions. The methanogens use CO_2 for energy and produce methane. Marshes, wetlands and peat bogs account for the greatest source of naturally produced methane, with unknown quantities locked in the soil of permafrost and the ocean floor that may be released as world temperatures rise. Ruminants produce methane as a byproduct of their digestive process, and termites also produce a surprising amount of methane via their digestive systems—a yearly amount estimated to be twice that emitted by wetlznds and bogs.

Methane from human activities mainly accrues from losses occurring during oil, coal and gas extraction, waste treatment, landfill sites, rice cultivation (which employs regular flooding of fields) and biomass burning.

Two other recently discovered and surprising sources of methane are manmade dams and. . . trees! Industry groups have described dams as "climate-friendly" compared to coal-powered energy plants, but scientists have now discovered that large manmade bodies of water emit methane as bacteria break down organic matter in the water. And findings reported in the journal *Nature* indicate that a range of plants produce methane, even when oxygen is plentiful, and this source may account for 10-30 percent of the world's methane emissions. "We now have the spectre that new forests might increase greenhouse warming through methane emissions rather than decrease it by sequestering carbon dioxide," said David Lowe of New Zealand's National Institute of Water and Atmospheric Research.

Last year a methane-eating organism was discovered that lives in the high-temperature, high-acid conditions of geothermal zones. The bacterium is a member of the family of methanotrophs, bacteria that use methane as their only source of energy. Methanotrophs are normally found in abundance in soils where methane is naturally produced, such as oceans, mud, marshes and other underground environments. Climate researchers worldwide are studying the newly discovered, extra-hardy bacterium as it holds promise for reducing the amount of methane entering the atmosphere.

While it does seem that atmospheric carbon dioxide levels are much higher than they have been historically, the long-term trend for methane is unclear. Scientists tell us that atmospheric methane levels have doubled since the industrial revolution but methane levels have stayed nearly flat for the past seven years, following a rise during the two previous decades.

Sources: http://www.eoearth.org/article/Methane; http://www.gns.cri.nz/news/release/20071122methane.html; http://www.commondreams.org/headlines02/0612-07.htm; http://news.bbc.co.uk/2/hi/science/nature/4604332.stm; http://www.cbc.ca/technology/story/2006/11/21/methane.html.

backfill the earth's wetlands and we would lose these divine mechanisms for water purification and retention, these supremely diverse corridors that bridge terrestrial and aquatic life. My point is that even a standardized, globalist bureaucracy like the U.N. would never dream of launching such a campaign, yet without any qualms, they take the fermentation of plant material in the rumen, a perfectly stable, natural process that somehow is in conflict with their current political agenda, tailor it into an environmental offense, and call for its annihilation. On top of that, they use environmental pawns to vigorously spread the word. PETA, The World Conservation Union, Al Gore and the growing vegan contingency are among the many whistleblowers disseminating a politically correct falsehood.

Rumen fermentation is the process, remember, that gives us fats like conjugated linoleic acid (CLA), and bone-building nutrients like vitamin K. The miraculous conversion process, achieved only by ruminants, that takes grass—nature's most nutritious vegetable but undigestible for humans—and converts it into metabolically available, exponentially superior nutrition for people. With these accusations brought to the table, we can confidently surmise that the rumination process along with the ruminant are certainly under assault, and we must be prepared to defend these animals and our right to consume their products with the same valiant effort with which we have defended raw milk.

The ploy to displace the products of the ruminant from the world's table is not new. Public relations campaigns from the self-righteous, plant-based diet community have been at work since 1871, when the first butter substitute entered the U.S. marketplace.[5] In 1984, the Center for Science in the Public Interest began its anti-saturated fat crusade, and by 1990, beef and lamb tallow had been replaced by partially hydrogenated soybean oil as the collective, commercial frying fat in the Unites States.[6] I hope we've noticed that obesity, diabetes, cancer and heart disease have all increased since we switched from animal fats to vegetable oils. Yet these public interest groups, despite their addiction to lawsuits and bureaucratic control of our nation's food supply, are not held accountable for the destruction to our nation's health caused by this politically correct charade.

We are currently witnessing the physical, emotional and moral decay that results from living without animal foods. Remember the "displacing foods of modern commerce" that Weston A. Price spoke of? Today many of these are based on soy and its many derivatives, and any of the other rendered vegetable products from the biotech trough, all sanctioned by the U.N as the foods that will feed the world and eliminate global poverty. A glance at the status of many of these Third World peoples reveals that we further impoverish these once robust, self-reliant communities with every bag of soy flour we deliver to them.

SIXTY MILLION BISON

In his fascinating recent book, *1491: New Revelations of the Americas Before Columbus*, Charles Mann paints a picture of wild ruminant populations before the arrival of Europeans: "North America at the time of Columbus was home to sixty million bison, thirty to forty million pronghorns, ten million elk, ten million mule deer, and as many as two million mountain sheep."[7] That's just North America. We have not even considered the enormous herds pounding the African plains, nearly all of which are methane-producing ruminants including wildebeest, Cape buffalo, giraffes, gazelles, antelope, kudu—you get the point. Even today, these animals number in the hundreds of millions; their numbers were many fold greater in the past. How can it be that we have been able to overlook this perfectly natural scenario and move forward with casting the blame on the world's 1.5 billion domesticated cattle?

Nature's herds are by no means light on the land. Reports from the travels of Lewis and Clark attest to the fact that the herds of bison left not one scrap of fodder for their horses to eat, and the land was coated with a sheet of manure so thick, it turned vast expanses of prairie black. This manure, with the help of sage grouse, prairie chickens and dung beetles was then quickly recycled into some of the richest soil on the planet; this is the same manure that the U.N. blames for poisoning our atmosphere with nitrous-oxide.

MIMICKING NATURE

Managed grazing, which attempts to mimic the grazing patterns of these great wild herds,

can produce an abundance of nutritious animal foods, while sequestering massive amounts of atmospheric carbon. We are told by the global warming gurus that the earth is heating up due to excess carbon dioxide in the atmosphere. Through specific grazing strategies we can sequester this excess carbon and form rich, productive topsoil in the process. We do this not by planting more trees, or even setting aside more wildlife preserves. We do this with domesticated ruminants—pulsing the landscape with large numbers of animals for short periods of time.

In nature, bison and wildebeest graze in huge mobs, remaining in one location briefly, and then they move on to fresh ground. They keep bunched together tightly for fear of pack-hunting predators. These ruminants are Nature's soil-building and fertility management mechanism. We also know that the soils under which these animals graze are our largest land-based carbon sinks on earth. All we need to do, then, is to mimic these native grazing patterns with our domestic stock, and we have an easily achieved, rapid solution to the excess carbon in the atmosphere.

The hoof action, manure, urine and saliva all act as bio-stimulants on the pasture, encouraging the grass plants to thicken, bare spots to fill in, and species diversity and succession to accelerate forward from simplicity to complexity. The productive grasslands of the world and the massive herds of herbivores that grazed them coevolved together. One cannot exist without the other. The grass relies on the ruminant for its full expression just as much as the ruminant relies on grass. Without ruminants to fertilize the soil and break down cellulose in dry climates, prairies quickly become deserts; and with managed grazing of ruminant animals, deserts can be restored to productive land.

GRASS-FED BUTTER: MOST ENVIRONMENTALLY FRIENDLY FOOD

Grass farmers produce the most ecologically sensible food on earth, food derived nearly in its entirety from solar energy. Grass-fed butter is perhaps the finest example of solar energy converted into nutrient-dense food for people. Grass-fed meat and other grass-based dairy products are equally wonderful, earth-friendly foods. However, I use butter here to illustrate how we can derive pure, nutrient-dense animal energy from solar energy with very few steps in between. Here's how it works: Grass plants convert solar energy (and atmospheric carbon dioxide) into plant biomass, and the cow synthesizes that plant material into her own energy via the cellulose-digesting microbes in her rumen. From this energy she then produces milk, of which the energy-rich portion (the cream) is separated. The cream is then made even more energy-dense through churning into butter. No chemicals or petroleum required (except electricity for churning

THE CARBON FACTS

For some hard facts about carbon sequestration through grass-based agriculture, I turn to the pioneering work of Allan Savory, one of the most practical and productive environmentalists of our time. Savory is the founder of Holistic Management International and advocate for a holistic approach to resource management and land healing with livestock. In a recent article published in the *Green Money Journal,*[8] Allan Savory and Christopher Peck, a principal with Natural Investment Services, LLC, ran the numbers on carbon and how we ought to manage it to halt global warming. If these gentlemen are correct, we can stop global warming in its tracks in the next 15 years if not sooner—this assuming that the U.N. does not stymie the effort with their obstructive anti-livestock policy initiatives. The model documenting the potential for carbon sequestration using grass-based agriculture is presented in hectares, but to make it more user friendly, I've converted it to acres.

To set the stage, we must consider the 180 gigatons of legacy carbon—that's the anthropogenic carbon that's been emitted into the atmosphere since the onset of the industrial revolution. The procedure for removing this legacy carbon load involves cows—lots of cows—and the utilization of the multifaceted behaviors and qualities of these ruminants, described above, to build soil organic matter. Savory and Peck argue that a mere 0.5 percent increase in soil organic matter (defined as atmospheric carbon sequestered as soil carbon) on 75 percent of the world's rangelands, which is roughly 11.25 billion acres, would sequester 150 gigatons of atmospheric carbon. This scenario bars the fact that we can certainly increase soil organic matter by much higher margins within a decade or less. The biggest paradox of course is the fact that livestock—the problem according to the bureaucratic wisdom of the U.N.—are really our best solution.

As evidenced by the above scenario, no terrestrial ecosystem sequesters carbon at the rate and volume of productive grasslands. The tired argument to plant more trees, or designate more national forest land, amounts to a net *release* of carbon. It is another example of a feel-good policy backed by a powerful extreme environmental lobby and bloated conservation funds. Just because a policy is backed by a strong PR campaign does not make it holistically sound. In fact, by clearing more forests and establishing perennial grasslands in their place, we can accelerate the carbon cycle by vast proportions. Trees take far too long to grow and die to have a significant effect on mitigating the excess load of atmospheric carbon. The real solution to global warming is to build deep, fertile topsoil using large herds of domesticated cattle stocked at high densities and moved very frequently.

the butter); just the sun, the grass and the cow (and her rumen flora) in an elegantly simple process.

Let's run a quick comparison to the production of a food that the U.N. and its whistleblowers tell us has a smaller ecological footprint—the production of vegetable oil. First the soil must be plowed; a process that requires immense amounts of diesel fuel. Then the seed, whether it's rapeseed (canola), soybeans, corn or any other oil-producing seed, must be planted. This is accomplished by a tractor as well, thus more diesel fuel. After the plant begins to grow, the field must be cultivated to kill the invading weeds. Then the fields are sprayed several times by a tractor-mounted rig, dowsing the weeds in oil-derived petrochemical herbicide. If bugs are a problem out comes the pesticide, also derived from oil. Harvest time, and massive combining ensues. The seeds are then trucked cross-country to a factory where a multi-step refining process takes place. The factory is similar in design and practice to a crude oil refinery.

After much chemical and mechanical refining of our seed, we have a product, which is not food, but which the U.N. tells us is the earth-friendly substitute for our solar energy-derived butter. The average environmentalist pays little attention to these details, turning his back to the truth. He is not really concerned with the details of how our choices about what we eat influence our soil, our landscape, or our environment as a whole. He is ultimately concerned only with saving one more tree, lobbying for one more acre to be locked away from human influence, which is certainly a reductive proposition. And therein lies the problem with the national park mentality: the lobby to spare land from "negative" human influence also denies it positive human influence. Without warm bodies consciously and periodically disturbing the landbase, whether we use livestock, chainsaws, or other land-healing measures, we will ultimately witness deterioration. Ecosystems are meant to be dynamic, with a lively growth and decay cycle, not held in artificial suspension by political boundaries.

IS THE WORLD REALLY HEATING UP?

The topic that has defined our decade is Global Warming, used as an argument for vegetarian diets and vast international bureaucracies. The "science" that bolsters the fear-mongering premise of catastrophic climate change is the famous "hockey stick" graph prepared by Michael Mann for the Intergovernmental Panel on Climate Change (IPCC). The graph seems to show that the earth's climate was very stable from AD 1000 to 1900, when temperatures began climbing very dramatically to levels never reached before. The implication is that manmade industrial activities—including, apparently, cattle raising—have caused a rapid increase in global temperatures, which threaten the whole world with famine and suffering. But when mathematicians tried to duplicate Mann's hockey stick graph using his own data (reports of variations in tree ring growth from various parts of the world), they were unable to do so. They found that Mann had used an unusual type of data analysis that allowed him to put greater emphasis—390 times greater—on the few data sets that resulted in a hockey stick graph and thus create the impression that global warming is a unique modern event. (This kind of statistical manipulation will be familiar to those who know about the phony science used to promulgate the cholesterol theory of heart disease.) Furthermore, tree ring data is apparently a poor proxy for temperature. For example, tree rings may be misleadingly wider during cold years that happen to have a warm period in the late spring, when trees accomplish most of their growth.

The real spoiler for the proponents of global warming is something called the MWP—the Medieval Warm Period—when temperatures in Europe were at least 2 degrees C higher than they are today—when it was so warm that wine grapes flourished in England and Chaucer's pilgrims could set out in April, a month of warm showers. Proponents of global warming argue that the MWP was a local event, but worldwide evidence—from cherry blossom festival records in Asia to lake sediment samples in Africa—indicate that the entire planet was warmer during the period. The MWP was followed in about 1500 AD by the Little Ice Age, when temperatures plunged, the Thames regularly froze in winter, and people suffered from famine, plague and political unrest. In Sweden, for example, extremely cold weather 1696 caused harvests to fail and 100,000 people to die. The Little Ice Age ended around 1840, and since that time temperatures have slowly climbed. Another warm period occured during the time period of the Roman Empire, followed by a cold period corresponding to the Dark Ages. In other words, the earth's climate goes through fluctuations of warm and cold that obviously have nothing to do with man's activities.

The most likely explanation for climate fluctuation is changes in solar activity, which can be monitored by sunspot activity. The Little Ice Age, for example, corresponds exactly with something called the Maunder Minimum, when there were virtually no sunspots at all. Even the smaller 11-year climate variation cycle corresponds with an 11-year sunspot cycle. When solar activity is high, less cloud-forming radiation enters the atmosphere and the planet heats up.

Perhaps what we really should be concerned about is global cooling. Satellite data indicate that the earth's temperature hit a high point in 1998 and has been steadily cooling ever since.

Source:http://www.john-daly.com/hockey/hockey.htm

A REVERENCE FOR LIFE

What has the world come to when today's young teens contemplate childlessness in order to reduce their carbon footprint, and the U.N. is prescribing "defaunating" agents for ruminants to kill their gut flora, and when the predominant rural landscape consists of endless expanses of corn and soy with not one cow and not one farmer in sight? We are certainly entering the age of sterility, not to mention infertility. A reverence for life and all things that give richness to life has taken a back seat to the idea that we must reduce our "impact" on the planet. Our children are now being brought up to believe that their daily activity is a detriment to the earth, and we wonder why the self-esteem of our young people has hit a record low.

Ironically, the call to reduce our environmental impact has caused more degradation than it has spared. Seventy-five percent of the world's rangelands are considered degraded, not because there are too many cows but because there are too few.[8] National forests are ablaze because of campaigns to silence the chainsaw—this is fuel that could be utilized and instead it is left to burn out of control. Nevertheless, in the midst of lifeless landscapes all over the world, real farmers and livestock husbandmen are asked to seek jobs somewhere outside the livestock sector—in sterile fields of soybeans, I suppose—what the late Mark Purdey referred to as the "vegan ecological wasteland." What we are witnessing now is our own, modern version of the "Trail of Tears," where both man and beast are forced off the land to toil in confinement houses and feedlots where their activities can more easily be regulated and so that the land can be "freed up" for the production of more "efficient" vegetarian fare.

THE FUTURE

Now imagine a world in which we revere and hold our animals sacred, the soil so sweet and so fertile that our farms become inevitable wildlife corridors—we may even have to hunt to keep these wildlife populations in check. But this just means supplementing our diets with a little wild venison or gazelle now and then. The vast Great Plains of North America are restored to their original deep black loam by vast herds of beef cattle mimicking their native cousins the bison. African men, displaced from their traditional cattlekeeping by the U.N.-sanctioned call to vegetarian efficiency, return to their native lands to take on the noble pursuit of land healing, leading great herds of cattle through the bush under the thoughtful tutelage of Holistic Management®. Parched river beds become vegetated and begin to run again, bare soil heals over with a thick carpet of green, all due to the life-giving forces of the cow in great numbers. Our redemption is not in her annihilation as the U.N. would have it, but in truly understanding her environmental and nutritional restorative traits, and putting those traits to work for us.

These land-healing processes generate a new food supply. This food supply is unique in the fact that it produces grass-finished meat and dairy as a byproduct of innovative land management and carbon sequestering strategies. With these processes, we are not merely sustaining the land but enhancing and embellishing it, turning the deserts green. That should be our goal. While the U.N. continues to dabble in their industrial, government-funded solutions based on tax incentives and negative reinforcement, we will just vote with our food dollars for environmentally enhancing, animal agriculture. Soil building, grass-based farming, utilizing livestock to our environmental and nutritional advantage is the key to our future prosperity. Can you imagine the diversity of traditional foods we could revitalize on a grand scale through a worldwide effort to restore degraded landscapes with cows, sheep and goats? The potential to flood the marketplace with old-fashioned animal fats would be endless. I'm ready to live off the (grass-fed) fat of the land and I hope you are, too. Let's move forward, full speed ahead, with this special life-respecting movement, and instill in the next generation a reverence for life and all that gives richness to it. Our movement to curb climate change will be validated by the beauty of rich soil, green pastures and healthy generations to come. For this, we owe immense gratitude to the ruminant livestock of the world, and their enduring service to mankind.

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REFERENCES

1. Steinfeld, H and others. *Livestock's Long Shadow: Environmental Issues and Options*. November 29, 2006.
2. Hindo, Brian. Monsanto: Winning the Ground War. *Business Week.* December 17, 2007. pp. 35-41.
3. *The Wall Street Journal.* January 3, 2008.
4. Nation, Allan. Allan's Observations. *The Stockman Grassfarmer. January 2008.*
5. Margarine Manufacturers of America. Data available at www.margarine.org.
6. Enig, Mary. *The Tragic Legacy of the Center for Science in the Public Interest.* www.westonaprice.org/knowyourfats/cspi.html.
7. Mann, Charles C. *1491: New Revelations of the Americas Before Columbus*. 2005. p.318.
8. Savory, Allan and others. Moving the World Toward Sustainability. *Green Money Journal*. www.greenmoney.com.

Whether or not the planet is warming up or cooling down, the fact is that atmospheric carbon dioxide levels are at an all-time high and, with the growth of the middle class in China and India, demands for limited resources are rapidly increasing. In addition, the world's population is experiencing an increasing sense of restlessness as the paradigms of corporate control and industrial agriculture reveal their inherent limitations and dangers. Many commentators have predicted not so much a global change in climate as a global change in consciousness.

It has been suggested that the age we live in now be called the "Anthropocene," indicating that as the dominant species, we humans are capable of changing the planet on a geological scale. It is interesting to note that already in the early 1900s, Vladimir Vernadsky, a Russian geochemist, coined the term "noosphere" to indicate a new era, which he believed the earth was entering. Vernadsky believed that the noosphere, or sphere of human thought, was the third stage of planetary development following the biosphere (biological life) which in turn had transformed the geosphere (inanimate matter). "Just as the emergence of life fundamentally transformed the geosphere, the emergence of human cognition fundamentally transformed the biosphere. In this theory, the principles of both life and cognition are the essential features of the earth's evolution, and must have been implicit in the earth all along."[1] Vernadsky's concept of the noosphere was one of optimism, in which a transhuman consciousness would emerge from the interaction of human minds. The visionary concepts of Vernadsky were not popular in the West, but may be worth reconsidering today. After all, we ourselves are our only real shot at staving off ecological disaster.

A February 2, 2008 *New York Times* article related a story about Ireland's tax on plastic bags and the remarkable aftermath. In 2002, in an effort to rise above the sea of discarded plastic bags in that country, Ireland passed a law taxing the bags at 33 cents each. "There was an advertising awareness campaign," the article continues, "and then something happened that was bigger than the sum of these parts." In a matter of weeks, national use of plastic bags dropped by 94 percent, and today just about everyone uses cloth shopping bags. Using plastic bags became socially unacceptable almost overnight, "on a par of not cleaning up after one's dog."

This sort of mass change in behavior can be viewed as interrupting "business as usual," and it will require many such interruptions on small and large scale to add up to a real difference. From the point of ethics, however, and wanting to see our children alive on a hospitable planet, how can we but do otherwise?

There are many opportunities to positively alter "business as usual" in our daily lives. It has been estimated that every single American generates 12,000 pounds of carbon a year, 39 percent of that from electricity production, 32 percent from transportation. We are conditioned by, and often blind to, our habits and comfort—business as usual—but we know these can be changed. Here are just a few routine behaviors that can be significantly improved with new habits:

- Reduce by half the number of trips you take by car. Take note of how many times you find yourself in your car each day. Let that number sober you up, and then act: consolidate errands, postpone or cancel non-essential trips, commute with others in one vehicle, walk, take public transport, and so on. According to the experts, living close to work so that you can walk or take public transport is the number one way to reduce your energy usage.
- Dry your clothes outside or hang indoors. The clothes dryer is a colossal waste of energy and is hard on clothes, which we tend to wash too frequently anyway. Erecting a clothes line is very simple, and the sun and wind do a beautiful job of drying, disinfecting and whitening laundry. You can also hang clothes outside to dry in the winter—winter air is very low in humidity and clothes dry outside even if they take longer. Damp laundry hung inside in winter helps raise indoor humidity. Hanging clothes to dry also obviates all those collateral laundry "aids" made from petroleum products and toxic, endocrine-disrupting, disgusting fragrances. You don't need any of them!
- Opt out of the commercial, industrial food system. Spend your food dollars with the farmers and producers in your locale who grow most of what you eat. Especially support grass farmers! Choose to eat seasonally, learn to put food by as it comes in season, make or grow as much of your own food as you can. If enough of us take the lead, it will soon become as politically incorrect to consume supermarket food as it is to use plastic bags!
- "There is no bad weather, just bad clothing," goes an old saying, and it's worth taking to heart. We can heat our homes more economically even if we can't afford to install thermal windows or extra insulation by insulating ourselves in layers. Many layers! Try a thin silk undershirt, then a cotton shirt or blouse, then a wool sweater. You may not even need to turn on the heat. Most homes and businesses are overheated, which is enervating and unhealthy. It's especially healthy to breathe cool air at night when we sleep—so turn down the thermostat and wear a cap and socks to bed! In summer, resist using air conditioning as long as possible—install awnings or reflective window shades to deflect the sun. And be sure to make your house temperature friendly. It's not necessary to install expensive double glazed windows. A tube of caulk pays for itself in energy savings as soon as it is applied; and curtains and blinds can be opened and closed according to the weather and position of the sun.

1. http://en.wikipedia.org/wiki/Vladimir_Vernadsky