

Why Bigger Is Not Better; The Impacts of Industrial agriculture on Land and Peopleⁱ

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Aldo Leopold was a philosopher, scientist, ecologist, forester, and conservationist. His writing, particularly in his classic book, *A Sand County Almanac*, has been a guiding light for many in the environmental movement. Leopold's *Land Ethic* is credited with defining a new relationship between people and nature and setting the stage for the modern conservation movement. Simply stated: "*A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise.*"¹ Again, in the words of Leopold, "The land ethic simply enlarges the boundaries of the community to include soils, waters, plants, and animals, or collectively: the land."²

Today, I believe we need a new "sustainability ethic" – as a guide for purposeful living, in farming, food production and all other walks of life. I propose: *A thing is right when it tends to enhance the quality and integrity of both human and nonhuman life on earth by honoring the unique responsibilities and rewards of humans as members and caretakers of the earth's integral community. A thing is wrong when it tends otherwise.*³

The ethic of sustainability enlarges the boundaries of Leopold's "land" to explicitly include humans as *caretakers*, as well as members, of "the land" or the earth's integral community. All life on earth is inherently interdependent with other life on earth. Thus, the sustainability of human life on earth is inseparable from the sustainability of the life in "soil, water, plants, animals, or collectively: the land." If we cannot sustain the quality and integrity of the other living things on earth, we cannot sustain human life on earth. We are gathered here tonight in an attempt to fulfill our moral and ethical human responsibilities as caretakers of the land – the earth's integral community. We are not here to serve our economic self-interest, feed our egos, or gain political advantage; we are here to find ways to be responsible stewards of the land, simply because it is the "right thing to do."

We are here to find ways to protect the Buffalo River watershed – a specific piece of "land" that is a precious part of the earth's integral community. The stated purpose of the Buffalo National River, created by congress in 1972, is: "to preserve, conserve, and interpret a clear, clean, free-flowing river and its Ozark Mountain setting of deep valleys, towering bluffs, wilderness, and pastoral landscapes. It is not one single quality, but the combination of natural, scenic, cultural, and scientific features that are protected for the benefit and enjoyment of present and future generations."⁴ We as a nation officially accepted a moral and ethical responsibility to

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preserve, conserve, and care for this part of the earth's integral community, not just for the benefit of those of us of current generations but also for all generations of the future.

The Buffalo River watershed is as ecologically fragile as it is beautiful. The watershed is characterized by karst topography, which is a type of landscape formed when soluble rocks, such as limestone, dissolve. Karst is characterized by cracks or fissures in the bedrock underlying the soil surface layer which allow surface waters to escape quickly into underground drainage systems that have formed in the bedrock. Sink holes and caves are visible signs of karst topography, but karst is also characterized by springs that sometimes surface but often flow unseen into streams. Human encroachment and economic development are constant threats to the ecological integrity of such areas – a primary reason for making the Buffalo a National River.

It is understandable that people who accept stewardship of the Buffalo River as a personal responsibility were upset when the Arkansas Department of Environmental Quality approved the construction of a 6,500 head hog confinement animal feeding operation or CAFO in the watershed. The CAFO, which was built in 2013, was approved to spread more than 2.2 million gallons of raw waste per year on fields within the watershed. Estimates comparing the public health risks of hog manure with raw human sewage vary, but a facility of this size is equivalent to a municipality of 20,000 to 30,000 people. The ecological impact could be equivalent to the city of Russellville, AR spraying its untreated human sewage onto fields believed to be atop karst geology near a creek that drains into the Buffalo.

I don't know enough about this particular situation to evaluate the specific nature of the environmental and public health risks. However, more than 50 years of scientific studies and the actual experiences of people living near CAFOs provides more than enough reason for public concerns. CAFOs have polluted thousands of miles of streams and countless ground sources of drinking water with excess nitrogen and phosphorus, antibiotics, antibiotic resistant bacteria and toxic biological organisms originating in animal manure. These contaminants represent obvious threats to the *land*, including people, because we are critically interconnected with the *land*.

In preparation for enforcement of the Clean Water Act against corporate CAFOs, a 1998 study by the EPA found 35,000 miles of streams in 22 states and ground water in 17 states polluted by wastes from confinement livestock operations.⁵ With a change in the political administration in Washington DC, no action was taken. The CAFO operators were asked to “monitor” their pollution and voluntarily address any problems that might arise. Obviously, they haven't. No similar studies have been done since. Advocates claim that manure management for CAFOs have improved significantly since the late 1990s, and that CAFO operators are at least better manure managers than the independent hog farmers they replaced. The facts simply do not support either claim. For example, according to the Iowa Department of Natural Resources, the number polluted or “impaired waters” in Iowa increased by almost 5-fold, from 157 to 754 between 1998 and 2014, a time when CAFOs were rapidly replacing independent hog farms.

While water polluted by CAFOs is an obvious threat to the environment, it also presents significant, well-documented risks to public health. Excess nitrogen in drinking water can kill babies and cause severe health problems for vulnerable adults. Biological contaminants originating from CAFOs include antibiotic resistant bacteria, such as MRSA, E-Coli O157:H7,

Salmonella, Listeria, and Campylobacter. These pollutants not only affect the health of workers and neighbors of CAFOs but can also contaminate drinking water and food products consumed by people living in rural municipalities and distant cities.

For example, a 2013 report by the U.S. Center for Disease Control and Prevention removed any doubt about the potential for transference of antibiotic resistant bacteria from animals to humans: “Scientists around the world have provided strong evidence that antibiotic use in food-producing animals can harm public health... Use of antibiotics in food-producing animals allows antibiotic-resistant bacteria to thrive while susceptible bacteria are suppressed or die. Resistant bacteria can be transmitted from food-producing animals to humans through the food supply.”⁶

That being said, the pollution of water with agricultural wastes is just one symptom of deeper concerns about industrial agriculture in general, and CAFOs in particular. The human body is mostly water – ranging from 50% and 70%. So, “Water is life” – the very essence of life. A lack of respect for water then is a lack of respect for life. If life is sacred, then water is sacred. Thus, protection of water is a sacred trust. In fact, when factory farms pollute our water and our air, degrade and erode our soil, destroy our family farms, and leave our rural communities in decline and decay, they are corrupting the very heart and soul of America.

Numerous scientific studies by reputable health institutions have linked air pollution from CAFOs to a variety of respiratory ailments not only of people working in CAFOs but also of people living nearby. Unlike traditional hog farms, where manure decomposes in open fields, the chemical compounds associated with noxious odors from the manure pits and lagoons of CAFOs include hydrogen sulfide, ammonia, methane, nitrous oxide, and dozens of other potentially harmful emissions and particulates.⁷ Studies have shown these pollutants to be particularly detrimental to the health of elderly neighbors and children in nearby schools, such as the school near the big hog CAFO in this area.⁸ This isn’t just a public health issue. A legal permit to operate a CAFO does not constitute a moral right to expose little school children to toxins that may affect their health for the rest of their lives. The fact that something has been legally approved by a government agency doesn’t mean it’s morally right.

In 2016, the International Panel of Experts in Sustainability reviewed more than 350 studies documenting the failures of industrial agriculture and the necessity for fundamental change. They wrote that the evidence as “overwhelming” in concluding: “Today's food and farming systems have succeeded in supplying large volumes of foods to global markets, but are generating negative outcomes on multiple fronts: widespread degradation of land, water and ecosystems; high greenhouse gas emissions; biodiversity losses; persistent hunger and micronutrient deficiencies, alongside the rapid rise of obesity and diet-related diseases; and livelihood stresses for farmers around the world.”⁹ These negative outcomes are not just ecological and economic, they are moral and ethical. They threaten the quality and integrity of life.

Those in the “agricultural establishment” suggest that people in rural communities shouldn’t oppose or even question industrial agriculture because the future of rural economies dependent on CAFOs and the industrial crop production systems that support them. To the contrary, industrial agriculture has never been a logical strategy for rural economic development, and the industrialization of agriculture has had a devastating effect on rural economies as well as rural

communities. Over the past 50-plus years, across the U.S. and around the world, the industrialization of agriculture consistently has replaced independent family farmers with a far smaller number of farm workers, most of whom are poorly paid. Nationally, between 1980 and 2008, as CAFOs replaced independent livestock farmers, the number of beef cattle operations fell by 41%, hog farms declined by 90%, and dairy farms fell by 80%.¹⁰ Rural communities suffered both economically and socially from this loss of traditional farm families.

This devastation is well-documented. The 2008 Pew Commission report concluded, “Economically speaking, studies over the past 50 years demonstrate that the encroachments of industrialized agriculture operations upon rural communities result in lower relative incomes for certain segments of the community and greater income inequality and poverty, a less active ‘Main Street,’ decreased retail trade, and fewer stores in the community.”¹¹ A 2006 study commissioned by the State of North Dakota Attorney General’s Office reviewed 56 socioeconomic studies documenting the socio-economic impacts of industrial agriculture on rural communities. The studies consistently “found detrimental effects of industrialized farming on many indicators of community quality of life, particularly those involving the social fabric of communities.”¹²

Unfortunately, the negative environmental, economic, and social impacts of industrial agriculture are inherent within the industrial system or approach to agricultural production – and, CAFOs are the epitome of industrial agriculture. Contrary to popular opinion, industrialization is not defined by the shift from an agrarian to a manufacturing economy, which is simply a symptom of industrialization. The basic strategies of industrialization are specialization, standardization, and consolidation of control.

Specialization increases productivity and economic efficiency – a.k.a, division of labor. Specialized functions must be standardized to create a complete and coherent product process – a.k.a, an assembly line. Standardization allows the production to be routinized and mechanized, further increasing efficiency and simplifying the management process. This allows management control to be consolidated into larger, and eventually corporate, economic entities – a.k.a, economies of scale. In order for some farmers to expand or get bigger to achieve the economies of scale of industrial agriculture, other farmers had to either leave farming voluntarily or be forced out of farming by unprofitable prices. There is a limited amount of farmland in the U.S. and limits to the quantities of agricultural commodities that can be sold at a profit. Industrial agriculture, by its very nature, employs fewer farmers as independent decision makers and employs fewer farm workers in lower-skilled, lower-paying jobs.

Today consolidation of control has progressed beyond large farms, with CAFOs operating under comprehensive corporate production contracts. Control of agriculture is being consolidated into a handful of multinational corporations whose only commitment is to the economic bottom line. The resulting economic and social depression in farming communities is not only inevitable, it was widely anticipated by those who advocated the shifts in government farm programs during the 1970s to subsidize the industrialization of American agriculture. They said that farmers who were forced out of farming would simply find better paying jobs elsewhere – if not in a nearby town, then in a distant city. Farmers should either *get bigger or get out*.

To agricultural economists, the social relationships and cultural values that hold rural communities together simply don't matter. Economic value is individual, instrumental, and impersonal. To economist, the social and spiritual connectedness of farmers and families to their particular farm, to their *land*, the little piece of God's earth that they care for, doesn't matter. But, it takes people to support rural communities, not just production. It takes people to shop for clothes, cars, shoes, and haircuts on Main Street. It takes people to justify local health care, to send kids to local schools, to fill church pews, to volunteer for fire departments, and serve in local government. When farm families were forced to leave rural communities, other were forced to leave as well. Eventually rural communities withered and died – economically, socially, and culturally.

Bigger has not been better, for farmers, for rural communities, for consumers, and certainly not for the land or the earth. This isn't just some "Ivory Tower" social theory. All across this great country, we see once thriving rural communities turned into rural ghettos. We see crime rates, drug abuse, spousal and child abuse, and neglect of the elderly once associated only with urban ghettos. In addition, the rural environment is being degraded now, much as the earlier forms of industry degraded and destroyed the environment of urban areas – to the point where it rained sulfuric acid and rivers caught fire. Today, it is raining glyphosate, the active ingredient in the pesticide "Roundup" – identified by the World Health Organization as a "probable carcinogen."¹³ And, our once pristine and scenic rivers areas are being turned into open sewers for industrial agriculture.

The *get big or get out, cheap food* policies that we have had since the 1970s have been an absolute failure. The justification for industrial agricultural policies were to reduce the cost of food production and make good food affordable for everyone. Industrial agriculture succeeded in producing cheap agricultural commodities but still failed to provide "domestic food security." In spite of reducing the percentage of the average American's disposable income spent for food, they have failed to provide everyone with enough good food to support healthy, active lifestyles. A far larger percentage of people in the U.S. are "food insecure" today than during the 1960s. Nearly 15% of Americans are classified as food-insecure and more than 20% of our children live in food insecure homes.¹⁴ The "temporary" food assistance programs of the 1960s have been extended and expanded but have failed to fill the gaps left by the industrial food system.

In addition, the diets of many Americans are high in calories but lacking in essential nutrients, leading to an epidemic of obesity and other diet-related health problems. Diabetes, heart disease, hypertension, and various diet-related cancers, are projected to claim about one-in-five dollars spent for health care in the U.S. by 2020 – erasing virtually all of the gains in public health over the past several decades.¹⁵ While the percentage of America's total economic output required for food dropped by one-half, the percentage going to health care more than doubled.¹⁶ *Change is no longer just an option; it is an absolute necessity.*

Since the problems in U.S. agriculture are systemic or ingrained in the industrial system of production, they can't be solved without fundamentally changing the agricultural system. Again from the IPES report, "The key is to establish political priorities, namely, to support the emergence of alternative systems which are based around fundamentally different logics... Incremental change must not be allowed to divert political attention and political capital away

from the more fundamental shift that is urgently needed, and can now be delivered, through a paradigm shift from industrial agriculture to diversified agroecological systems.”¹⁷ Small, diversified family farms already provide food for least 70% of the global population and could double or triple yields without resorting to industrial production methods.¹⁸ America’s factory farms are not needed to feed the rest of the world. The facts are that the rest of the world doesn’t want or need our agricultural exports or our industrial approach to farming.

“Diversified agroecology” is the IPES’s terminology for one of several different farming systems or systemic approaches to sustainable agriculture. “Permaculture” and “nature farming” are other popular international approaches to sustainable farming. In the U.S., organic, holistic, ecological, biodynamic, innovative, and practical farming are more popular terms. The current “local food movement” is an attempt to create a new sustainable food system – “from farm to fork.” All of these sustainable alternatives have the potential to compete with industrial agriculture in terms of efficiency and total production – without adopting the industrial model. These new systems of farming could provide food security where industrial agriculture has failed. These new agri-food systems can continue growing without government support and in spite of industry attempts to block or coopt the sustainable agriculture movement. Communities also can work through their local governments to develop sustainable local food systems and grow local food systems into regional food networks.

However, a fundamental change in federal farm policy could have a dramatic effect on the future of farming and the ecological and social integrity of food production in the U.S. – as it did in the 1970s, but in a fundamentally different direction. The farm and food policy changes needed to protect the Buffalo River watershed, and all of the other ecologically and social precious places and people, will not be possible without the support of a new public consensus to accept our moral responsibility as caretakers of the earth and of each other. The good news is that in the United States we have the constitutional right, and with it I believe a constitutional responsibility, to meet this challenge.

Admittedly, the U.S. constitution doesn’t mention the right to a clean water, clean air, and healthful food. However, the rights of the people of the United States are not limited to rights specifically named or enumerated in the U.S. Constitution. Amendment 9 of the Constitution specifically states: “The enumeration in the Constitution, of certain rights, shall not be construed to deny or disparage others retained by the people.” It makes clear that “other” rights, in addition to those named, are to be “retained by the people.” Some of those “other” rights were later added to the Constitution, such as the prohibition of slavery and women’s right to vote. Others have been interpreted by the courts to be covered by enumerated constitutional rights, such as freedom of speech and religion and the right to privacy. Some un-enumerated rights, such as self-determination and self-defense, are so well-established or self-evident that they have never been seriously questioned.

The American Declaration Independence identifies some of the most basic of these un-enumerated rights. It states: “We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty, and the Pursuit of Happiness.—That to secure these rights, Governments are instituted among Men.” What can be more important to the basic right to *life* than the right to clean air, clean water, and safe food?

Despite compelling evidence to the contrary, defenders of industrial agriculture argue there is not yet a “scientific consensus.” This is what I call “the tobacco defense.” The tobacco industry argued for decades that there was no “scientific consensus” linking tobacco smoking to public health risks, although even their own research indicated otherwise. A basic difference between the tobacco controversy of 30 years ago and the CAFO controversy of today is highly credible scientific information is readily available to anyone. The conclusions drawn by reputable scientists from virtually every significant study regarding the negative impacts of CAFOs are readily available on the internet – including many articles published in refereed journals. The American people are perfectly capable of drawing their own conclusions and arriving at a scientific consensus on their own. The unquestioned rights of self-determination and self-defense gives us the right to do so.

We also have the Constitutional power to claim our rights. The 10th Amendment to the Constitution states: “The Powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, *or to the people [emphasis added]*.” We, the people, have the constitutional authority to claim our unalienable rights to clean air, clean water, and healthful food. We only need to find the means of protecting and claiming what individually and collectively is rightfully ours.

Your battle to protect the Buffalo River is simply one front in a major war to reclaim the ethical and moral values of this great nation. It’s not just about water. Water is life and if life is sacred, then water is sacred. *A thing is right when it tends to enhance the quality and integrity of both human and nonhuman life on earth by honoring the unique responsibilities and rewards of humans as members and caretakers of the earth’s integral community. A thing is wrong when it tends otherwise.* Industrial agriculture “tends otherwise.”

The economic rights of agricultural industrialists are being given priority over the basic human rights of their neighbors and society in general. Protection of the Buffalo River is not a question to be answered with some economic cost-benefit analyses. It is a question of ethics and morality – of what is fundamentally right and wrong. It is a question of basic human rights. As for me, I stand firmly in support of the rights of all people to life, liberty, and the pursuit of happiness; to clean air, clean water, and healthful food; and the right to fulfill our uniquely human responsibilities as both members and caretakers of the earth’s integral community – as caretakers of the *land*, of the earth. It is our right and our responsibility.

End Notes:

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- ¹³ Chicago Tribune, "World's most popular weed-killer labeled probable carcinogen," March 23, 2015 <http://www.chicagotribune.com/business/breaking/chi-weed-killer-roundup-carcinogen-20150322-story.html> .
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