

## The Facts about Factory Farms (CAFOs)<sup>1</sup>

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A variety of controversies have seriously eroded public trust in American agriculture. Genetically modified crops (GMOs), agricultural chemicals, and concentrated animals feeding operations (CAFOs) or “factory farms” are but a few on a growing list of public concerns. With respect to GMOs, more than 30 states are considering legislation requiring labeling of food products that contain genetically engineered ingredients.<sup>i</sup> Maine and Connecticut already have labeling laws that are pending implementation. The world's most popular weed-killer, Roundup, has just been identified by the World Health Organization as a “probable carcinogen.”<sup>ii</sup> The most commonly used herbicide on U.S. farms, Atrazine, has long been identified as a probably endocrine disruptor linked to a host of potential adverse health impacts.<sup>iii</sup>

Nowhere are the public concerns and controversies about agriculture more prominent than for CAFOs –frequently called “factory farms.” CAFOs actually are far more like factories than farms. Nine states have banned the use of gestation crates in CAFOs, which continuously confine breeding hogs in spaces so small they can't even turn around.<sup>iv</sup> Only a veto by Governor Christie prevented New Jersey from becoming the tenth, and bans are under active consideration in several other states. McDonalds has been joined by a growing list of restaurant chains demanding “cage-free” eggs for their customers.<sup>v</sup> Legislation that has been persistently proposed in the U.S. House of Representatives would ban the routine feeding of antibiotics to animals – a common practice in factory farms. The legislation has been blocked thus far by the large drug companies.<sup>vi</sup> Under growing pressure for action, the FDA reluctantly adopted “voluntary guidelines,” for antibiotic use in CAFOs, which the drug companies endorsed.<sup>vii</sup>

In Illinois, Peter Goldsmith of the University of Illinois recently completed research examining the public “legitimacy” of factory farms. He wrote: “as animal production sites grow larger they create more problems and the intense controversy surrounding CAFOs incites strong local public participation.”<sup>viii</sup> He found people in Illinois who participate in public hearings consistently indicate they have “no confidence” in Illinois laws regulating CAFOs or the government officials who are supposed to enforce CAFO regulations. Goldsmith revealed that “seventy percent of the individuals opposed the proposed facilities and 89% of statements made by local residents and other interested citizens challenged the legitimacy of proposed CAFOs.”

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He found a mere 5% of the residents supported CAFOs – the vast majority of supporters being outside consultants for CAFO operators and government officials.

The Illinois livestock industry recently ran paid “advertisements” proclaiming the economic benefit of consuming Illinois meat and dairy products and encouraging Illinois livestock producers to “stand up” for their industry. These advertisements were part of an ongoing nationwide, multimillion-dollar propaganda campaign designed to – in their words – “increase confidence and trust in today's agriculture.”<sup>ix</sup> This national campaign is an attempt to stem the tide of growing public concern about industrial agriculture. *Food Dialogues*, just one initiative of the broader campaign, is sponsored by the U.S. Farmers and Ranchers Alliance—an organization whose funders and board members include the American Farm Bureau Federation along with Monsanto and DuPont – both of which have pledged \$500,000 per year to the campaign. The campaign features the “faces of farming and ranching”—articulate, attractive young farmers, obviously chosen to put the best possible face on the increasingly ugly business of industrial agriculture. The campaign has hired some of the nation's top public relations firms to try to clean up the tarnished public image of industrial agriculture – and they are very good at what they do.

Americans are being challenged to separate truth from fallacy in deciding what kind of agriculture and food system they want, or at least are willing to tolerate. For decades, defenders of industrial agriculture had accused their critics of relying on emotions and misinformation rather than “sound science.” Now that the scientific evidence is mounting against industrial agriculture, public relations experts are advising advocates to emphasize “emotional appeals,” such as “the faces of farmers” – dismissing “sound-science” as no longer effective in shaping public opinion. The American people must ultimately decide for themselves which emotional appeals they find believable and which assertions they believe are truth and which are fallacies.

In spite of persistent claims to the contrary, the growing public concerns about industrial agriculture are confirmed in reams of highly-credible scientific studies. For example, an extensive 2½-year study of industrial farm animal production was commissioned by the Pew Charitable Trust, a highly-reputable, non-partisan organization. Their 2008 report concluded: “*The current industrial farm animal production (IFAP) system often poses unacceptable risks to public health, the environment and the welfare of the animals themselves.*”<sup>x</sup> The prestigious commissioners, including a former governor and a former U.S. Secretary of Agriculture, stated: “*the negative effects of the IFAP system are too great and the scientific evidence is too strong to ignore. Significant changes must be implemented and must start now.*” Five years later, an assessment of the industry's response to the Pew Report by the Johns Hopkins Bloomberg School of Public Health indicated that few if any positive changes had been made.<sup>xi</sup> Meanwhile the scientific evidence supporting the initial indictment of CAFOs has continued to grow.

With respect to specific public concerns about water pollution, the PR campaign claims today's modern farmers are responsible stewards of the environment. In fact, industrial agriculture has long been known to be the major cause of huge “dead zones” in the Gulf of Mexico, Chesapeake Bay, and elsewhere. While mismanagement of fertilizers is the major contributors to the dead zones, CAFOs also are documented polluters of streams and groundwater. For example, 1998 EPA study found 35,000 miles of streams in 22 states and ground water in 17 states that had been polluted by industrial livestock operations.<sup>xii</sup> At the time,

the EPA was preparing to sue CAFO operators for violating the Clean Water Act. But there was a change in the political administration in DC, so no action was taken, and no similar studies have been done since. As a last defense, CAFO operators claim they are doing a better job of manure management than the traditional independent farmers they displaced. However, the Iowa Department of Natural Resources has documented a three-fold increase in “impairments” of water bodies in Iowa between 2002 and 2012, years when CAFO were rapidly replacing independent Iowa family hog farms.<sup>xiii</sup>

Water pollution isn't just an environmental issue. The public health risks of CAFOs posed by water polluted by livestock manure are essentially the same as those posed by untreated human sewage. A “small” CAFO, meaning 1,000 animal units or 2,500 head of hogs generates biological waste equivalent to the human waste from a municipality of 7,500 to 10,000 people.<sup>xiv</sup> There are logical reasons for requiring sophisticated, multi-stage waste treatment systems for municipalities of 7,500 to 10,000 people. It would be unthinkable that the people in a municipality of 10,000 people would be allowed to spread their untreated sewage in their backyards to be flushed away with the storm water. Yet it is legal to spread even far larger amounts of raw sewage from CAFOs. Effective waste treatment systems for CAFOs are available but have consistently been deemed “economically infeasible.”

With respect to the inhumane treatment of farm animals, the PR campaign claims that factory farm operators have an economic incentive to treat their animals well in order to keep them healthy and productive. In fact, most farm animals are sent to slaughter at young ages, before most injuries or chronic illnesses can cause significant weight loss or death. For example, the natural lifespan of a chicken is 7 to 20 years, but broiler chickens today are slaughtered at 6 to 8 weeks and laying hens at around 18 months. A dairy cow in a CAFO is lucky to last 4 to 5 years, about one-third the normal lifespan of a healthy dairy cow. Hogs have a 10-15 year lifespan but most are killed at 5-6 months. In fact, CAFO operators see sick and dying animals as undesirable but necessary economic costs of doing business. The physical and mental suffering of animals is given no consideration other than the impact on the economic bottom line.

A person doesn't have to be a vegan or “radical animal rightest,” or even a member of HSUS, to be concerned about the inhumane treatment of farm animals. Animals are sentient, feeling, living beings, not inanimate mechanisms. I visited Poland a few years ago and had an opportunity to visit the Majdanek Nazi concentration/extermination camp near Lublin. The rows of barracks where prisoners lived short, miserable lives awaiting extermination was an eerie reminder of the rows of CAFO building that line the roads of the Midwest where animals live under similar conditions with a similar fate. There are not humane “concentration camps.” Research in the past 50 years has confirmed that: “intensive production systems and severe confinement invariably leads to greatly reduced animal welfare.”<sup>xv</sup>

With respect to food safety, the corporately-funded PR campaign proclaims that Americans have the safest, most healthful food system in the world. While this may have been true in the past, there is growing scientific evidence that food safety has diminished with industrialization of the American food system – including industrial agriculture. Recalls of food products of animal origin contaminated with salmonella, listeria, Campylobacter, and E-Coli, even if not yet routine, have become far from uncommon.<sup>xvi</sup> Studies consistently have shown that significant

percentages of livestock and poultry products in retail food markets are contaminated with a variety of infectious bacteria.<sup>xvii</sup> A large percentage of bacteria found in contaminated animal food products have been resistant to multiple antibiotics, including the deadly MRSA.<sup>xviii</sup>

Most instances of contaminations of food with infectious bacteria likely take place in slaughter houses where meat is accidentally exposed to the contents of the stomachs and intestines of slaughtered animals. However, studies have verified that the high energy rations fed to animals in CAFOs to maximize feeding efficiency provide an ideal breeding environment for organisms that are particularly toxic to humans, such as the deadly E-Coli 0157:H7. Switching animals from high-concentrate to high-forage rations have been found to reduce the shedding or potential contamination risks from E-Coli 0157:H7, suggesting that livestock raised on pasture or in grazing systems, rather than in factory farms, present lower food safety risks.<sup>xix</sup>

The ongoing legislative efforts to ban routine feeding of antibiotics to animals to promote growth are also backed by compelling scientific evidence. In fact, the FDA has known since the 1970s that routine feeding of antibiotics to livestock and poultry in CAFOs is a common source of antibiotic resistant bacteria, such as MRSA. An estimated 80% of all antibiotics in the U.S. are used for livestock and poultry and 70% is routinely fed at sub-therapeutic levels. A comprehensive 2004 U.S. General Accounting Office review of the scientific literature on antibiotic resistance clearly linking antibiotic resistance to livestock feeding reported: “many studies have found that the use of antibiotics in animals poses significant risks for human health, but a small number of studies contend that the health risks of the transference are minimal.”<sup>xx</sup>

By 2013, a U.S. Center for Disease Control and Prevention report confirmed that any doubt about the potential for transference of antibiotic resistant bacteria from animals to humans has been resolved: “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.”<sup>xxi</sup> Antibiotic resistant bacteria is a major public health risk and clearly linked to CAFOs.

Noxious odors are usually the first and probably most frequent concern expressed by neighbors of CAFOs. Proponents claim that while odors from CAFOs may be an occasional nuisance, they are no different from other agricultural operations which, by their nature, emit dust particles and odors into the air. While defenders of factory farms label complaining neighbors emotional or overly sensitive, a growing body of scientific evidence confirms that their concerns are well-founded. In fact, the anaerobic processes by which animal manure decomposes in the large manure pits and cesspools associated with CAFOs are quite different from aerobic decomposition of manure in open fields. Chemical compounds associated with noxious odors from factory farms include antibiotic-resistant bacteria, viruses, E. coli, Salmonella, parasites, antibiotics, hormones, nitrate, hydrogen sulfide, ammonia, and more.<sup>xxii</sup>

Numerous scientific studies by reputable health institutions have also linked air pollution from CAFOs to a variety of respiratory ailments not only of people working in CAFOs but also of people living nearby. Studies have shown CAFOs to be particularly detrimental to the health of children in nearby schools.<sup>xxiii</sup> As with water pollution, new technologies to control odors,

have been promised for decades, but no effective controls have been deemed “economically feasible.” The Sierra Club, Iowa Citizens for Community Improvement, and Humane Society of the U.S. have recently sued the EPA for failure to enforce the Clean Air Act by regulating air emissions from CAFOs.<sup>xxiv</sup> Hopefully, this case will bring the compelling evidence that odors from factory farms represent public health risks to widespread public attention.

In spite of growing opposition, rural people are told they have to endure nuisance and public health risks because industrial agriculture is the foundation of the rural economy. In truth, the industrialization of agriculture has had a devastating effect on rural economies. The economic benefits of industrialization arise from reducing costs of labor and management by reducing the number of workers and skill-level of workers. As a result, the industrialization of agriculture has replaced independent family farmers with a far smaller number of farm workers, most of whom are paid poorly. In 1960, farmers were still more than eight percent of the U.S. workforce but are less than one percent today. Between 1980 and 2008, as CAFOs replaced independent livestock farmers, USDA statistics indicate the number of beef cattle operations fell by 41%, hog farms declined by 90%, and dairy farms fell by 80%.<sup>xxv</sup> Rural communities have suffered both economically and socially from this loss of traditional farm families.

A 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.”<sup>xxvi</sup> A 2006 study commissioned by the State of North Dakota Attorney General's Office reviewed 56 socioeconomic studies documenting the economic impacts of industrial agriculture in general 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.”<sup>xxvii</sup> The only kinds of economic development attracted to “industrial agricultural communities” are other environmentally polluting and socially degrading industries. This is not sustainable economic *development*; it is industrial economic *exploitation*.

A clear message of the industry PR campaign is that Americans in general must be willing to accept the environmental, public health, and food safety risks of industrial agriculture to avoid raising “food prices” and massive global starvation in the future. In fact, there is nothing to indicate that industrial agriculture has produced more food that could have been produced with more sustainable methods, only that industrial agriculture has employed far fewer farmers. Any production costs advantages have been more than offset by higher marketing margins and profits elsewhere within the corporate food supply chain of which industrial agriculture is a crucial link.<sup>xxviii</sup> Over the past 20 years, an era of intensive agricultural industrialization, U.S. retail food prices have risen faster than overall inflation rates.<sup>xxix</sup>

In fact, there are viable alternatives to CAFOs and other industrial production systems. A comprehensive review in the journal *Nature* compared studies of *organic* and conventional crop yields in “developed” countries concluding: “Under certain conditions—that is, with good management practices, particular crop types and growing conditions—organic systems can ... nearly match conventional yields.”<sup>xxx</sup> In fact, these studies underestimate the potential for

sustainable farming systems because they were carried out by researchers on research farms rather than on actual farms of experienced sustainable farmers. Furthermore, sustainability, not yields or production, is the major challenge of farming the U.S. and the rest of the so-called developed world.<sup>xxxii</sup> More than 30% of U.S. farm income today comes from “exports” rather than domestic consumption, 40% of the U.S. corn crop has been going to produce ethanol, not food, and Americans waste nearly half of all food produced.

In addition, the rest of the world doesn't need our agricultural exports or our industrial agriculture. Small, diversified farms already provide food for least 70% of the global population and could double or triple yields without resorting to industrial production methods.<sup>xxxiii</sup> Numerous global food studies sponsored by the United Nations have exposed the myth that industrial agriculture produces food for the hungry. For the example, after showing early promise, much of the increased food production attributed to the *Green Revolution* ended up being exported rather than used to alleviate domestic hunger. Recent global studies call for the development of sustainable farming systems, such as permaculture and agroecology.<sup>xxxiii, xxxiv</sup> The world doesn't need industrial agriculture, and we Americans don't need to sacrifice the natural environment, public health, or the future of our rural communities in order to “feed the world.”

The studies and reports I have cited here are readily available on the Internet; so why don't most people already know the truth about industrial agriculture? The primary reason is that industrial agriculture is treated as “farming” rather than as “industry.” This is the reason the corporate propaganda campaign is trying so hard to convince people that industrial farmers are no different from traditional family farms by featuring the “faces of farmers and ranchers.” This is a fallacy. In truth, in virtually every important respect, industrial farming operations are very different from traditional family farms. Farming traditionally has been a way of life, not just a business that makes money to support a family.

On traditional family farms, the family and farm are inseparable, and both are inseparable from their community. What is good for the community is good for the farm. Traditionally, farmers manage a diversity of farm enterprises, including crops and livestock to mimic the mutually beneficial relationships among the diverse elements of healthy living ecosystems. Wastes from some enterprises become productive inputs for others, and products from some become raw materials for others. Wastes not utilized by farm enterprises are of magnitudes and concentrations easily assimilated in sustaining the biological health of natural ecosystems. Traditional farmers respect the bounds as well as the bounty of nature.

As a result, traditional family farms need only minimal public oversight and regulation. Regulations are only needed to correct occasional lapses in responsibility or to restrain the few who stray from the traditional culture of agriculture. Current laws and regulations of farming are based on the nature of traditional family farms, not today's so-called modern industrial farms. Current regulations obviously are not adequate for industrial agriculture, even if the “farms” are owned and operated by families. Such farming operations need to be continually monitored and regulated, much as other industrial operations are monitored and regulated. Families that operate factory farms are not necessarily better or worse people than families on traditional farms. They

are just managing an industrial operation, a factory, rather than a traditional farm, and they must be regulated accordingly.

Finally in desperation, the defenders of industrial agriculture proclaim, that in spite of public concerns, industrial agricultural practices are legal and therefore farmers have a legal right to use them. Perhaps so, but the fact that something is legal does not mean that it is moral. Slavery was once legal, but slavery was never moral. Women were once treated as the legal property of their husbands, but it was never moral to do so. It was once legal to smoke in airplanes and other public places, but it was never moral to impose needless health risks on someone else.

Ultimately, people in both rural and urban communities must separate the truth from fallacy and find the courage to stand up for their basic human rights of self-determination and self-defense, regardless of what our current laws or constitutions may allow. As our forefathers wrote in their Declaration of Independence, whenever people are confronted with situations that “reasonable persons” would find threatening to their basic right of “life, liberty and the pursuit of happiness,” they have right to defend themselves – even if it requires rejecting the rules of laws that fail to “effect their safety and happiness.”

Even as the scientific evidence mounts against them, industrial agriculturists cling to the futile “tobacco defense,” by claiming the science is still inconclusive. As did the evidence linking tobacco smoking to public health, the scientific evidence against industrial agriculture eventually will become so large that it cannot be denied. It took several decades to change regulation of the tobacco industry, even after the evidence against the tobacco industry was clear. We need to continue to proclaim the truth and reject the fallacies. We need to inform the citizenry of the negative impacts of industrial agriculture in general and CAFOs in particular on the safety and happiness of both rural and urban residents. Eventually, the growing public consensus of concern will become so strong that it simply can no longer be denied.

In the meantime, there are occasions when individuals must act collectively, as communities rather than simply as individuals, to defend their rights against common threats. Our founding fathers stated in their Declaration of Independence that the fundamental purpose of government is to protect the unalienable rights of the governed which are endowed to all equally by the Creator. Among those rights, the listed “life, liberty, and the pursuit of happiness.” There is no more fundamental right than the right to life, and live in inherently dependent on clean air, clean water, and wholesome food. Among the liberties ensured by the Constitution is the right to peaceful enjoyment of our homes and our surrounding environment. We also are ensured the right of self-determination – the right to decide when our well-being is threatened and to defend ourselves when necessary. These are rights essential to our pursuit of happiness – and all are currently being infringed or denied to rural people by industrial agriculture or factory farms.

Industrial farmers may have a “legal right” to continue polluting streams with chemical and biological wastes and destroying their neighbors' health and quality life, while producing unsafe and unhealthy foods. But that does not mean they have a “moral right” to do so. We Americans have a basic human right supposedly guaranteed by our Constitution to protect our health and the health of our social and ecological communities. I suggest that we all also have a *moral responsibility* to inform ourselves – to separate truth from fallacy – and to take whatever actions

we deem necessary to protect our individual and collective health and well-being – even if it means changing our laws or even our government.

## End Notes

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<sup>iii</sup> U.S. Environmental Protection Agency, Atrazine Chemical Summary, U.S. EPA Toxicity and Exposure Assessment for Children's Health, 2007, [http://www.epa.gov/teach/chem\\_summ/Atrazine\\_summary.pdf](http://www.epa.gov/teach/chem_summ/Atrazine_summary.pdf) .

<sup>iv</sup> One Green Planet, “9 States That Have Banned Cruel Gestation Crates for Pigs,” <http://www.onegreenplanet.org/animalsandnature/states-that-have-banned-cruel-gestation-crates-for-pigs/> .

<sup>v</sup> The Huffington Post, Cage Free Eggs, <http://www.huffingtonpost.com/news/cage-free-eggs/> .

<sup>vi</sup> Brian Kranz, “Politics Stall Antibiotic Ban in Congress, *Healthline*, <http://www.healthline.com/health/antibiotics/politics-pork-and-poultry-why-legislation-has-not-passed> .

<sup>vii</sup> Carey Biron, “Drug makers agree to U.S. ban on livestock antibiotics,” Inter Press Services, <http://www.ipsnews.net/2014/03/drugmakers-agree-u-s-ban-livestock-antibiotics/>

<sup>viii</sup> Karen Hudson, “In the Spotlight: Illinoisans still not protected from livestock factories,” Peoria Journal Star, February 22, 2014. <http://www.pjstar.com/article/20140222/Opinion/140229701> .

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<sup>xi</sup> Johns Hopkins Center for a Livable Future, “Industrial Food Production in America; Examining the impacts of the Pew Commissions primary recommendations.” [http://www.jhsph.edu/research/centers-and-institutes/johns-hopkins-center-for-a-livable-future/\\_pdf/research/clf\\_reports/CLF-PEW-for%20Web.pdf](http://www.jhsph.edu/research/centers-and-institutes/johns-hopkins-center-for-a-livable-future/_pdf/research/clf_reports/CLF-PEW-for%20Web.pdf).

<sup>xii</sup> U.S. Department of Agriculture Natural Resources Conservation Service and U.S. Environmental Protection Agency, “Unified National Strategy for Animal Feeding Operations,” draft, September 11, 1998, as quoted in *CAFO: The Tragedy of Industrial Animal Factories*, Myths, Dan Imhoff, editor, [http://www.cafothebook.org/thebook\\_myths\\_6.htm](http://www.cafothebook.org/thebook_myths_6.htm) .

<sup>xiii</sup> Iowa Department of Natural Resources, Iowa's Section 303(d) Impaired Water Listings, <http://www.iowadnr.gov/Environment/WaterQuality/WaterMonitoring/ImpairedWaters.aspx>

<sup>xiv</sup> Carla Klein, “The Facts about CAFOs and Health Ordinances,” Sierra Club, Ozark Chapter, 2006, <https://missouri2.sierraclub.org/newsletter/facts-about-cafos-and-health-ordinances> .

<sup>xv</sup> World Society for Protection of Animals, “What's on Your Plate? The Hidden Costs of Industrial Animal Agriculture in Canada, 2012, [http://richarddagan.com/cafo-ilo/WSPA\\_WhatsonYourPlate\\_FullReport.pdf](http://richarddagan.com/cafo-ilo/WSPA_WhatsonYourPlate_FullReport.pdf) .

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<sup>xxx</sup><sub>iv</sub> Olivier De Schutter, United Nations General Assembly, Human Rights Council, “Report submitted by the Special Rapporteur on the right to food,” 20 December 2010, [http://www.srfood.org/images/stories/pdf/officialreports/20110308\\_a-hrc-16-49\\_agroecology\\_en.pdf](http://www.srfood.org/images/stories/pdf/officialreports/20110308_a-hrc-16-49_agroecology_en.pdf)