



Photo Courtesy of John Ikerd

John Ikerd is Professor Emeritus of Agricultural Economics, University of Missouri - Columbia. He was raised on a small dairy farm and received his BS, MS, and Ph.D. degrees from the University of Missouri. He worked in private industry for a time and spent thirty years in various professorial positions at four different state universities before retiring in early 2000. Since retiring, he spends most of his time writing and speaking on issues related to sustainability.

• [Website](#)

Where is Industrial Agriculture Taking Rural Iowa?*

JOHN IKERD

I care about rural communities. I have spent my entire life living and working with farmers and others in rural communities. I grew up on a small dairy farm in southwest Missouri. I was fortunate enough to attend the University of Missouri where I received my BS, MS, and PhD degrees in agricultural economics. I spent 30 years as an extension agricultural economist on the faculties of four different Land Grant Universities. I held various titles and positions but always worked with farmers and people in rural communities. After I retired, the college town of Columbia, Missouri eventually became too large to suit me. My wife, Ellen, and I moved to Fairfield, Iowa about three years ago – a town of about 10,000 people. I wanted to spend what time and energy I have left living and working with people in rural communities.

I think Iowa still has more viable rural communities left than most other states. That was one reason I was willing to leave my home state of Missouri for Iowa. I didn't see many vibrant rural communities left in states where I had worked—in North Carolina, Oklahoma, and Georgia. I came back to Missouri in the late 1980s, hoping to find some communities like those I had left behind 20 years before. However, I found the farm financial crisis of the 1980s had pretty much decimated rural Missouri. I spent my last five years at MU working on a grant-funded project with rural communities in North Missouri. When Premium Standard Farms brought their big, concentrated animal feeding operations or CAFOs into North Missouri in the early 1990s, the negative impacts on the quality of life splintered social fabric of the community and pretty much destroyed the hopes of people in that area for rural revitalization.

**Endnotes listed in Appendix*

During my later years in Missouri, I had several opportunities to visit Iowa. The traditional values of family farming culture seemed to be more deeply rooted in Iowa than in other areas where I had worked. The houses and businesses in rural Iowa still seemed to be well-kept and the small communities still seemed to be “alive” – and hopeful. Iowa had steadfastly rejected the large-scale, confinement animal feeding operations, until growth in hog CAFOs in North Carolina and the incursion of PSF in North Missouri seemed to threaten Iowa’s status as the leading hog producing state in the nation. In response, Iowa rolled out the welcome mat for CAFOs, which complemented its chemically-intensive, industrial corn and soybean operations. I guess Iowa farmers felt they had to maintain the proud status of Iowa as the “agricultural state.”

That being said, when I moved to Iowa I thought there was, and still think there is, real hope for a rural renaissance in Iowa that could provide new hope for rural communities everywhere. Admittedly, some Iowa communities already look like those further south, but many of Iowa’s rural communities are still good places to live. The air and water are still clean, the soil is still fertile, the landscapes are pleasing, the people are friendly, and the economies are still healthy. Good places to live are becoming scarce and more difficult to find, which makes them more economically valuable. To realize this hope for rural renewal, however, Iowans need to understand what has led to the demise of rural communities elsewhere. Iowans need to understand what agricultural industrialization does to rural communities and where industrial agriculture is taking rural Iowa today.

First a bit of history. European settlers established communities primarily for the purpose of extracting economic value from the natural resources located in rural America. Of course Native Americans were already using the land, but their purpose was quite different from what the Europeans had in mind. Natural resources—such as land, minerals, landscapes, and climates—must be utilized, at least initially, in the geographic locations where they exist. So, the settlers traveled west, dispersing themselves across the countryside in relation to the productivity of the natural resources they sought to extract or exploit.

Some early settlements were mining and logging towns. However, the resource that brought settlers to most rural communities was agricultural lands—particularly in places with fertile soil, like Iowa. Distances between early community centers tended to reflect how long it took farmers and ranchers to travel into town to trade their surplus production for necessary supplies. But the size or density of rural populations was determined largely by the number of farmers or ranchers needed to tend the land. Rangelands of the West were sparsely populated, and vegetable growing areas around cities were densely populated. The Midwest was settled by diversified family farmers, which supported a corresponding density of population and size of rural communities.

Historically, non-farm economic activity in rural communities reflected the numbers and sizes of farms and farm families. More farm families supported more schools, churches, doctors, and other providers of social services. As early farmers moved beyond self-sufficiency and began to specialize and trade, communities evolved into economic centers. More farmers means more need for markets, credit, machinery, feed, and fuel. The farms grew larger in size, but also larger in numbers, and farming was still a “way of life”—not just a bottom-line business. Rural communities became places of refuge during the Great Depression of the 1930s, when the number of farms in the U.S. reached an all-time high. Rural communities were still considered good places to live and do business through World War II and the post-war years of the 1950s.

However, the industrial technologies developed for the war effort during World War II were redirected to agriculture, where they brought dramatic changes in American agriculture. Factories that had built tanks were converted to producing farm tractors, munitions plants switched to producing nitrogen fertilizer, and chemical warfare technologies were used to produce agricultural pesticides. These new technologies facilitated the industrialization of agriculture. A farm could now be managed as a bottom-line business rather than a multi-faceted way of life. Agriculture could be transformed into an industry

Contrary to popular belief, industrialization is not

defined by the shift from an agrarian to an urban manufacturing economy and society. Urbanization is but a characteristic of industrialization. The basic strategies of industrialization are specialization, standardization, and consolidation of control. Specialized functions are standardized so various tasks can be routinized and mechanized—as on assembly lines. This simplifies management and allows control to be consolidated into larger organizations to achieve the economic efficiencies of large-scale production.” This basic process was first employed in manufacturing, resulting in the assembly of large workforces in urban areas.

The industrialization of agriculture had to wait for new chemical and mechanical technologies that allowed farmers at least to tame, if not standardize, the vagaries of nature. With standardization and mechanization, management and control could be consolidated into larger specialized farming operations—resulting in economies of large-scale agriculture. Industrialization initially resulted in economic benefits in both manufacturing and industry, but both had unanticipated environmental and social consequences. For agriculture, the benefits have been fewer and the costs have been greater, because agriculture doesn’t fit the mechanistic model of industrialization. Healthy living ecosystems, such as those on real farms, are inherently diverse, not specialized monocultures. Living things cannot be “standardized,” they are self-making, and thus cannot actually be controlled. In agriculture, industrialization inevitably had and still has unintended consequences.

Following World War II, millions of farm families were destined to abandon farming as a “way of life” and transform their farms into industrial enterprises. We see the ecological consequences of this transformation in the pollution of air and water in rural areas with agrochemicals from large monocropping operations and biological wastes from animal factories or CAFOs. The primary economic advantage of industrialization comes from the ability of industrial operations to produce more output with fewer, less-skilled workers and managers. This meant fewer farmers and diminished economic opportunities in farming. We see the social and economic consequences in the demise of small and mid-sized family farms and the social and economic

decay of rural communities, which had depended on farm families.

During the late 1950s and early 1960s, farms became fewer and larger, and by 1970, farm numbers in the US had dropped by more than one-half from their peak in the 1930s. The global economic recession of the 1980s caused roughly one-fourth of the remaining farms to go out of business. Since then, the number of farms has continued to decline and average farm size and farming operations have increasingly come under the control of large, agribusiness corporations—through ownership as well as comprehensive contractual arrangements. Farms have been turned into biological factories and agriculture has been turned into an industry.

Some rural communities have survived as agribusiness centers, as the remaining farmers became more reliant on mechanization, markets, and purchased inputs. But, managers of large operation are businesspeople; they buy equipment and farm inputs wherever they are the cheapest, not necessarily in their local communities. In addition, it takes people, not just production, to support communities. It takes people to buy houses, cars, and clothes on Main Street; people to justify local doctors and health care, and people to serve on school boards and city councils. It takes kids to keep the local schools open and to regenerate the population of rural communities.

Some communities attempted to diversify their economies and others abandoned agriculture entirely. Industry hunting became a preoccupation of many small town councils and chambers of commerce. Jobs, any kind at any cost, seemed to be a priority development objective of many declining rural communities. Many of these development activities were rooted in nothing more than short-run exploitation of undervalued human and natural resources in rural areas. The number of “working poor”—workers with full time jobs who live below the poverty line—in rural areas has continued to rise. In addition, many manufacturing companies and branch plants that initially relocated to rural areas eventually have moved to other countries where laborers can be exploited to work even harder for far less money.

The highest valued “economic” use for rural plac-

es has become as dumping grounds for the wastes of an industrial economy. Rural communities compete for “economic opportunities” such as prisons, urban landfills, and toxic waste incinerators. However, many rural communities, including many in Iowa, remain awash in the chemical and biological wastes of an industrial agriculture that no longer supports the local economy or community. Some rural communities dream of opportunities such as tourism, vacation homes, retirement communities, and rural residences. However, prisons, landfills, toxic waste incinerators, and industrial farming operations have destroyed any hope of “quality of life-based” development for many rural areas. This is the sad legacy of industrial agriculture in the South, the West, and increasingly across the Midwest. This is where industrial agriculture is taking rural Iowa. Most rural communities, including many in Iowa, are “places in search of a purpose.”

I awakened to what was happening to family farms and rural communities during the farm financial crisis of the 1980s. I was forced to reevaluate what I had been taught and was teaching. The 1970s had been a rare time of prosperity in farming, when many farmers decided to follow the advice of us so-called experts.” They decided to “get big” rather than “get out” and borrowed a lot of money at record high interest rates to finance their expansion. Unexpectedly, the booming export markets, which had fueled the farm profitability of the 1970s, collapsed under the weight of the global economic recession in the early 1980s. Many of these new “big farmers” were caught with large debts that they couldn’t repay. Farm bankruptcies and foreclosures were regular fare on evening network news programs. Stories of farmers committing suicide were not uncommon. American agriculture was in crisis.

I was head of the Department of Extension Agricultural Economics at the University of Georgia at the time. The responsibility for helping farmers survive the crisis fell upon my department. If we couldn’t help farmers find ways to survive, we counseled them to “get out” farming while they still had some equity left—or at least not to commit suicide. In counseling with dozens of farm families, I was forced to conclude that the crisis was not really the fault of farmers who had made

bad management decisions, although some obviously had. The farm crisis of the 1980s was an inherent consequence of the industrial system of farming that I and other so-called agricultural experts had been promoting. The only way for some farmers to “get big” was for others to “get out.” In other words, some farmers had to fail so others could survive—but only until the next time when it might be their turn to have to “get out” rather than “get big.”

Conventional farmers in rural areas today are the survivors of decades of agricultural industrialization, their neighbors having been forced out of business by the relentless economic forces to either get bigger or get out. This is not going to change until the basic approach to agriculture is changed. Regardless of how big today’s independent farmers may be, they are not nearly as big as the giant agribusiness corporations that eventually will control the whole of American and global agriculture if the relentless trend toward agricultural industrialization is not stopped. It’s time to stop and think about where industrial agriculture is taking us.

Margaret Wheatley, one of the leading thinkers in the U.S. on issues related to institutional and cultural change, recently returned from an extended retreat where she contemplated the major trends shaping U.S. society. She identified three:

- 1) “A growing sense of impotence and dread about the state of the nation,”
- 2) “The realization that information doesn’t change minds anymore,” and
- 3) “The clarity that the world changes through local communities taking action—that there is no power for change greater than a community taking its future into its own hands.”¹

I agree with Wheatley. First, I think “a growing sense of impotence and dread” accurately describes the prevailing mood about and within rural America today. Fred Kirschenmann of the Leopold Center at Iowa State University has written that the “predominant attitude toward rural communities is that they have no future. In fact, this attitude seems to prevail even within rural communities.” He quoted a 1991 survey conducted in

several Midwestern rural communities. The survey revealed that people in most rural towns harbor only two visions for their communities. “One vision sees their town’s death as inevitable due to economic decline.” The other vision is also of “a dying town” with only a fading hope that “they can keep the town alive by attracting industry.” These were the visions I found in the rural areas of the South and increasing in the Midwest. I suspect they are becoming more prevalent even in rural Iowa.

Secondly, I agree that information no longer changes minds, at least not about issues such as global climate change, genetically modified organisms (GMOs). For decades the proponents of industrial agriculture have consistently called for decisions based on “sound science.” The bits of research available early on had come from the agricultural colleges—the academic allies of industrial agriculture. Now, a large and growing body of scientific information from highly credible academic institutions provides compelling evidence of the negative ecological, social, and economic impacts that industrial agriculture has had on rural America.

Now that the sound-science has turned against them, the defenders of industrial agriculture have resorted to a multi-million dollar, nationwide propaganda campaign.² One public relations initiative alone, *The U.S. Farmers and Ranchers Alliance*, reportedly has an \$11 million annual budget pledged by the agricultural establishment, including major commodity organizations and the American Farm Bureau Federation, the USDA (using farmers’ check-off funds), and large agribusiness corporations—including \$500,000 each annually from Monsanto and DuPont.³ The campaign appeals to emotions and feelings rather than to factual information.

If Margaret Wheatley and the corporate public relations campaign are correct, as I suspect they are, the destructive forces of industrial agriculture on rural Iowa cannot be reversed by simply making people aware of the facts. However, although I may be an idealist, I believe the truth must ultimately prevail. If Americans are to make “informed” decisions, which I believe ultimately we must, people must be made aware of where industrial agriculture is taking rural communities and where it ultimately will take the rest of America if we do not

reverse its destructive course. It’s just that information will not bring about the necessary changes in public policies and government regulations until change is demanded by public consensus. It will take time, energy, and commitment to develop the consensus for change—but lasting change must be based on truth.

Rather than cite individuals studies, I have increasingly come to rely on comprehensive studies or broad reviews of research that include many studies. I think these “meta-studies” create the correct impression that our concerns are rooted in a growing scientific consensus. Research regarding the impacts of CAFOs provides a useful example, since CAFOs are the epitome of industrial agriculture, and CAFOs are perhaps the greatest current threat of industrial agriculture to the future of rural Iowa.

For example, A comprehensive assessment supported by a 2008 Pew Charitable Trust report cites more than 200 sources in drawing its conclusions: “The current industrial farm animal production (IFAP, i.e. CAFO) system often poses unacceptable risks to public health, the environment and the welfare of the animals themselves... 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.”⁴ Five years later, a follow-up by the Johns Hopkins School of Public Health concluded that instead of addressing the problems “the Administration and Congress have acted ‘regressively’ in policymaking on industrial food animal system issues.”⁵

A recent comprehensive study and report by the Center for Disease Control and Prevention relies on dozens of studies linking CAFOs to antibiotic resistant bacteria, such as MRSA: “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. Resistant bacteria can be transmitted from food-producing animals to humans through the food supply. Resistant bacteria can cause infections in humans. Antibiotics should be used in food-producing animals only under veterinary oversight and only to manage and treat infectious diseases, not to promote growth.”⁶

A Canadian study sponsored by the World Society for the Protection of Animals cites numerous studies documenting inhumane treatment of animals in CAFOs: “In the 20th century, intensive agriculture (ILOs i.e. CAFOs), broke the ancient rule that militated in favour of good welfare for farm animals. No longer was it necessary to respect animal nature... Modern agriculture put animals into environments for which they were ill-suited, yet still assure production and profitability. Modern intensive production practices were first criticized on animal welfare grounds in the 1960s. Research in the subsequent 50 years has shown that these criticisms were well-founded.”⁷

A 2006 study commissioned by the State of North Dakota Attorney General’s Office reviews 56 socioeconomic studies documenting the negative social and economic impacts of CAFOs on rural communities: “We conclude that public concern about the detrimental community impacts of industrialized farming is warranted. This conclusion rests on five decades of government and academic concern with this topic, a concern that... has grown more intense in recent years, as the social and environmental problems associated with large animal confinement operations have become widely recognized. Five decades of social science research which has found detrimental effects of industrialized farming on many indicators of community quality of life, particularly those involving the social fabric of communities.”⁸ There have been no significant studies since that cast any doubt on these conclusions.

I could provide similar comprehensive reports that include hundreds, probably thousands, of scientific studies that point to similar negative ecological, social, and economic impacts associated with industrial cropping systems, such as the overuse and misuse of fertilizers, pesticides, and genetically engineered crops (GMOs). The evidence indicting industrial agriculture for destruction of the rural environment, rural econo-

mies, rural culture, and the quality of rural life is clear and compelling. Margaret Wheatley obviously is right in the case of agriculture and rural communities: *Information no longer changes minds.*

So where is the hope for the future of rural Iowa? The hope is in Wheatley’s final observation: *There is no power for change greater than a community taking its fu-*

ture into its own hands. I believe rural communities should focus their efforts for change on issues of broad public concern, including their own concerns, such as environmental protection, public health, and animal welfare—not because they will succeed in the political arena, but because such issues have the power to change public opinions and attitudes.⁹ These issues can be used to promote a wide range of policy initiatives, such as opposing various “right to farm” laws, which exempt industrial agriculture from various regulations and ensure the rights of industrial agriculture to continue to exploit rural areas. In the

process of promoting specific issues, communities can form local advocacy groups and join political coalitions with the power to change public opinion.

Local crises, such as threats posed by CAFOs, can bring concerned citizens together around a common cause. I have often said that local organizing in opposition to CAFOs is creating the future leaders of rural America. By focusing on broad public concerns, coalitions can be formed between rural and urban community groups, with support from large nonprofit organizations. Local resistance against the continued destruction brought by industrial agriculture can help build strong communities—both rural and urban. Industrial agriculture not only affects rural communities, it affects the entire food system and the health and well-being of all Americans.

We already see rural and urban communities joining together to replace industrial agriculture with new sustainable food systems. New kinds of farming are emerging to meet the ecological, social, and economic challenges of agricultural industrialization. The

Industrial agriculture not only affects rural communities, it affects the entire food system and the health and well-being of all Americans.

new farmers may call their farms “organic,” “ecological,” “biological,” “holistic,” or “biodynamic.” Their farming methods may be called “agroecology,” “nature farming,” or “permaculture.” They all fit under the conceptual umbrella of sustainable agriculture. They are meeting the needs of the present without diminishing opportunities for the future.

Unlike industrial producers, these farmers share the values of traditional family farmers. They are committed to caring for the land, caring about their neighbors, and building strong communities, as well as themselves. To them, farming is a way of life, not just a bottom-line business. They market their produce locally, to people with whom they have a trusting relationship. They sell through farmers markets, community supported agriculture organizations, and through multi-farm local food networks. These new farms are good places to work and to raise a family. They are good places to “live around” as well as “live on.” They help make rural communities good places to *live* rather than good places to *leave*. While still a small minority of all farms, with the support of caring communities, their numbers are rapidly growing.

Much has been lost, but there are still many vibrant and viable rural communities left in rural Iowa. There are places that still have clean water, clean air, scenic landscapes, and people who care about the land and about each other. These are “quality of life” communities. This is the kind of community my wife and I were seeking when we moved from Missouri to Fairfield, IA. There are still possibilities for vibrant agricultural communities wherever rural people are willing to reject industrial agriculture and create a new approach to agriculture that produces good food while contributing to a desirable quality of rural life. Rural people need not continue to live with the sense of “impotence and dread;” there are positive possibilities for a new and better future.

I agree with Margaret Wheatley, the success of this new vision for rural America and rural Iowa ultimately depends on the *power of community*. Ultimately, people in both rural and urban communities must 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 the right to defend themselves—even if it requires rejecting the laws that fail to “effect their safety and happiness.”

There are occasions when individuals must act collectively, as communities, to defend their rights against common threats. Any “reasonable person” or “reasonable community” in rural Iowa now has more than just cause to feel that their safety and happiness are threatened by industrial agriculture. The public health risks of CAFOs are real; they can and have destroyed the health and even lives of individuals within rural communities. MRSA, which clearly is cultured in and spread by CAFOs, now kills more people in the U.S. than AIDS. The air and drinking water clearly is being polluted by chemical and biological wastes from industrial agriculture. In such situations, people have no moral imperative to wait for expert opinions or changes in laws before they rise up and claim their basic human right to defend themselves.

Even as the scientific evidence mounts against them, industrial agriculturists cling to the futile “tobacco defense,” 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 tobacco use was clear. We need to continue to proclaim the truth, informing the citizenry of the negative impacts of industrial agriculture 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.

Even if we lose a few political battles, we will be forming enduring personal relationships within and among communities that can empower rural people to fight the next battle, and the next battle, and with each battle, strengthening our communities and coalitions, until the battle to reclaim the soul of rural Iowa is won.

In the words of Margaret Wheatley, “Having observed [the empowerment] process in so many different communities has led me to eagerly affirm: Whatever the problem, community is the answer.” The problem is industrial agriculture, the answer is community. 🌿



Photograph: David Ottenstein

Appendix

IKERD, “WHERE IS INDUSTRIAL AGRICULTURE TAKING RURAL IOWA?” ENDNOTES

- 1 Margaret Wheatley, “The Big Learning Event,” Prepared for presentation at the University of Wisconsin, Madison, WI, June 2011.
- 2 Food Dialogues, U.S. Farmers and Ranchers Alliance. <<http://www.fooddialogues.com/>>
- 3 Julia Moskin, “In Debate About Food, a Monied New Player,” New York Times, September 27, 2011. <http://www.nytimes.com/2011/09/28/dining/in-debate-about-food-a-monied-new-player.html?_r=0>
- 4 Pew Commission on Industrial Farm Animal Production: Putting Meat on The Table: Industrial Farm Animal Production in America, 2008. <http://www.pewtrusts.org/news_room_detail.aspx?id=38438>; full report, <<http://www.ncifap.org/>> .
- 5 Johns Hopkins Center for Livable Future, “Analysis of Impact of Pew Commission on Industrial Farm Animal Production Finds Administration and Congress Have Exacerbated Problems in the Food System.” <http://www.jhsph.edu/research/centers-and-institutes/johns-hopkins-center-for-a-livable-future/news-room/News-Releases/2013/pew_2013.html>
- 6 U.S. Center for Disease Control and Prevention, “Antibiotic Resistance Threats in the U.S. 2013,” Page 6. <<http://www.cdc.gov/drugresistance/threat-report-2013/pdf/ar-threats-2013-508.pdf>>
- 7 World Society for Protection of Animals, “What’s on Your Plate? The Hidden Costs of Industrial Animal Agriculture in Canada, 2012, page 136. <http://richarddagan.com/cafo-ilo/WSPA_WhatsonYourPlate_FullReport.pdf>
- 8 Curtis Stofferahn, “Industrialized Farming and Its Relationship to Community Well-Being: an Update of the 2000 Report by Linda Labao,” special report prepared for the North Dakota, Office of Attorney General. <<http://www.und.edu/org/ndrural/Lobao%20&%20Stofferahn.pdf>>
- 9 John Ikerd, “Growing Public Concerns about CAFOs,” Prepared for presentation at CAFO Conference, sponsored by Peach Bottom Concerned Citizens Group, York, PA; September 7, 2013. <<http://web.missouri.edu/~ikerdj/papers/PA%20-%20York%20-Going%20Public%20CAFOs.htm>>

KOETHER, “IOWA’S BISON” ENDNOTES

Note: All quotes from specific individuals are derived from various personal interviews with the bison herd managers that took place in October 2011.

- 1 Arthun, Dave, and Jerry L. Holechek 1982. The North American Bison. *Rangelands* 4(3):pp. 123-125.
- 2 Knapp, Alan K., John M. Blair, John M. Briggs, Scott L. Collins, David C. Hartnett, Loretta C. Johnson, and E. G. Towne 1999. The Keystone Role of Bison in North American Tallgrass Prairie. *Bioscience* 49(1):39.