

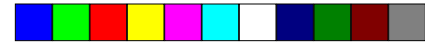
# Beyond Factory Farming



## Corporate Hog Barns and the Threat to Public Health, the Environment and Rural Communities

**EDITED BY**

**Alexander M. Ervin, Cathy Holtslander,  
Darrin Qualman, and Rick Sawa**



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Corporate Hog Barns and the Threat  
to Public Health, the Environment,  
and Rural Communities



Edited by  
Alexander M. Ervin  
Cathy Holtlander  
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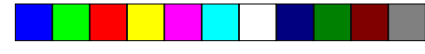
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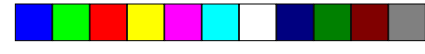
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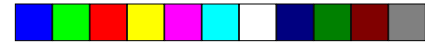
This book has been almost a year in the making. The authors presented their papers at the 2<sup>nd</sup> Annual National Conference on Intensive Livestock Operations entitled Beyond Factory Farming held in Saskatoon, Saskatchewan on November 9, 2002. The editors would like to thank the wide variety of organisations that sponsored and organized the conference and provided seed money for this publication: Global Resource Action Centre for the Environment (GRACE), the Grain Services Union, Saskatchewan Federation of Labour, Saskatchewan Union of Nurses, the Saskatchewan Office of the Canadian Centre for Policy Alternatives (CCPA), National Farmers Union, Saskatchewan Eco Network, Environmental Defence Canada, The Sierra Club of Canada, The Sierra Club of Canada-Saskatoon Parklands Group, The Sierra Club (U.S.), The Council of Canadians, Hog Watch Manitoba, the College of Arts and Sciences—University of Saskatchewan, the Department of Religious Studies and Anthropology—University of Saskatchewan, Oxfam Canada, and the Saskatchewan Environmental Society. The conference organising committee is deserving of recognition: Lisa Bechthold, Sandy Ervin, Loretta Gerlach, Cathy Holtslander, Larry Hubich, Glen Koroluk, Isabel Muzichuk, Simon Neufeld, Darrin Qualman, and Rick Sawa—conference coordinator. The editors are grateful to the National Office of the Canadian Centre for Policy Alternatives for its assistance with publishing this book.



## About CCPA-Sask

The book you hold is the first book-length publication of the Saskatchewan Office of the Canadian Centre for Policy Alternatives (CCPA-Sask.). Nationally, the CCPA was launched in 1980 and works to promote research on economic and social issues facing Canada. Through its activities the CCPA wants to demonstrate that there are thoughtful alternatives to the limited perspective of business research institutes and many government agencies. To achieve





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its ends the CCPA publishes research reports, newsletters, and books; sponsors conferences; and organizes briefings.

CCPA-Sask. was launched in 2001 and is a non-partisan, non-profit research institute dedicated to producing and promoting progressive economic and social policy research of importance to Canadian and Saskatchewan citizens. To contact CCPA-Sask., call (306) 978-5308.

This book is partly based on a conference that CCPA-Sask. helped organize in 2002.





## Introduction

Modern hog production does not merely mean more hogs in larger barns, any more than a Nike factory is a bunch of cobblers in one big building or a Wal-mart is just a bigger version of the old general store.

Hog mega-barns—also known as Intensive Livestock Operations (ILOs) or Confined Animal Feeding Operations (CAFOs)—are tightly linked to corporate packing plants and have completely transformed how hogs are produced: the ownership and control of the barns, their relationship to the communities in which they are located, the destination of profits, conditions of work; treatment of animals, the barns' impact on the environment, and the relation of local citizens to their government.

Part industrial revolution and part globalization, the shift towards factory farm hog production mirrors and drives larger changes in our communities and economies. The debate over hog production is part of the larger debate on globalization—the power of transnational corporations, the questions of who should own the economy, and who the economy should serve.

## Vertical Integration

Today's hog mega-barns are linked—either through contracts or outright ownership—to transnational pork packers and food processors. Furthermore, these corporate packer/producers often own feed mills, grain collection facilities, and livestock sales yards. They characterize their approach as “barley to bacon” or “squeal to meal.” They practice “vertical integration.”

Vertical integration profoundly changes the economics of hog production in a way that is toxic to independent, family farm hog producers. While independent farmers need to make a profit on the hogs they raise and sell, vertically-integrated corporations are far less dependent on profits from hogs. For integrated producers, low hog





prices mean lower profits from their barns but this is offset by the corresponding larger profits from their packing plants.

Vertically integrated packers take their own hogs first, so independent family farmers competing with them have difficulty gaining access to the market. Mega-barns are driving family farms out of the business, not because family farms cannot produce hogs as cheaply, but because, in an industry dominated by large sellers and buyers, small producers are often denied access to markets.

### The Extraction of Wealth

When families produce hogs on farms they own, they receive the profits and they spend those profits in their communities. When corporations produce hogs, the profits—and management salaries—are extracted from the area, often to an urban financial centre.

Family farmers buy most of their supplies locally while large producers tend to bypass local stores and purchase supplies in large distant cities, threatening the survival of local businesses.

Corporate mega-barns—like corporate-owned retailers, restaurants, or services—channel the wealth away from the places in which it is produced. This extraction process usually leaves the wealth-producing area economically disadvantaged while concentrating money and power in the hands of a few in the dominant financial centres. This process is paralleled by a global extraction of wealth from developing countries to the world's dominant nations.

### The Dumping of Wastes

While the industrial livestock system efficiently concentrates and moves the wealth out of the countryside, it concentrates wastes and deposits them in rural air, water, and soil. Each hog mega-barn creates millions of gallons of liquid manure slurry which is stored, then spread on the land, threatening groundwater aquifers as well as surface water bodies with its leaks, spills, or contaminated run-off. Excessive manuring can lead to problems with soil fertility. Barn venti-





lation and off-gassing from manure “lagoons” (more like open septic tanks) lead to health problems, exacerbate global warming, drive down property values, and drive away economic enterprises that require fresh air and pure water. The touted “efficiency” of factory farming is simply a matter of off-loading the costs of maintaining air, water, and soil quality onto the environment and neighbours.

### The Transformation of Work

In the 1980s, many North Americans learned the word “entrepreneur.” The impression given by the media was that more and more of us would be self-employed—prosperous masters of our own destinies. The opposite was occurring, however. Even as magazine covers touted the age of the entrepreneur, corporations were busy flushing local families out of the economy. Grocery stores, confectionaries, movie theatres, and restaurants, once owned by local families, were being snapped up by transnationals, either through direct ownership or through franchising.

Farming is the only major sector in the North American economy where the means of production is still owned by local families. The corporate and industrial restructuring of Canada’s hog sector (and an identical restructuring of the U.S. poultry and dairy sectors) is just the latest stage in a corporate drive to displace local family ownership within our economy.

In 1991, there were nearly 30,000 Canadian farm families producing hogs. Ten years later, half were gone—pushed out by the industrialization of the sector. As corporations seize control of hog production from local families, the work of raising hogs is completely transformed: the people inside of the barns no longer own the hogs or control their work, their experience of quality of work life decreases, and their health risks multiply.

High levels of animal dander and fecal dust combined with high levels of ammonia can result in unsafe working conditions in hog barns. On a family farm, hog production is usually one part of a mixed operation. The farmer works in the barn for part of the day





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but he or she also works in the field growing crops and in the home office managing the business. In contrast, mega-barn employees work almost exclusively and for long hours inside the hog barn. This prolonged exposure to noise and polluted air greatly increases the potential for health damage.

### Links to the Local Community

Just as the move from family farm to corporate ownership severs the links between the barns and the people working inside of them, so too does it sever the links between the barns and the people living in the community around them.

When hogs are raised on family farms, the family usually lives in the same yard as the hogs. The owners, who are also the workers, are intimately connected to the hogs and decisions about the hogs affect the family owners first. In contrast, corporate mega-barn owners live hundreds of miles away and even the workers usually live off-site.

When barns are corporate-owned, decisions that affect the barn or its community may be made thousands of miles away. Further, the expected life of the mega-barns is only 15 to 20 years. Unlike local families who have close, multi-generational links to their farms and communities, corporate owners' obligations are only to shareholders.

Perhaps the most distressing effect upon community members occurs when the entry of a mega-barn operation breaks bonds of friendship and drives a wedge of animosity between family members as conflict escalates between proponents and opponents of the industry. Experience shows that such tears in the social fabric are nearly impossible to mend.

### The Hogs

Industrialization requires large-scale production, centralized control, and uniform and predictable products and inputs. The industrialization of the hog sector follows this model. While family farms are





more able to adapt to diversity and unpredictability, industrial hog production demands predictability and the control of as many variables as possible. This need for control and uniformity is hard on the hogs.

In hog mega-barns, sows are caged in “farrowing crates.” Never allowed outside the sealed barn, never allowed to socialize or to forage or dig in straw, the animals’ lives must be restructured to accommodate the mass-production process.

Furthermore, hogs from the mega-barn are not the product themselves, but merely an input to an equally industrialized packing sector that also demands uniform and predictable inputs. This need has fostered keen interest in hog genetics and in “improved” hog rearing practices: the aim is to turn out hogs that are nearly identical in their uniformity. By producing increasingly uniform hogs, corporate packers/producers can lower the skill needed to work in packing plants and thus reduce the pay.

## The Role of Government

In destroying family farm hog producers and industrializing pork production, governments have been the handmaidens to industry. Governments in Canada have dismantled farmers’ single-desk marketing boards, weakened environmental laws, taken siting jurisdiction away from local governments, refused to grant worker protections, facilitated migrant workers, promoted—and even financed—mega-scale pork production. Governments have utterly compromised their legitimate role as servants of the citizens by entering into clear conflicts of interests—becoming the promoters, investors, owners, inspectors, regulators, and legislators in charge of the industry.

In lowering standards to attract corporate packer/producers, governments seem genuinely frightened—scared that, in the new global economy, powerful mobile capital will leave their community or province behind. In the new global economy, governments negotiate investment and trade agreements that limit governments’ ability to legislate or regulate in the interests of their citizens. The result is a





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race to the bottom, where the “winner” is the one who can give away the most resources and give away the most control to corporations.

## Organization of the Book

This book will take the reader through the broad setting of factory farming in Canada and the U.S. to the front lines where people are dealing with specific issues and locales.

Articles by Kendall Thu and John Ikerd present political economic outlooks that place the emergence of vertical integration and corporate farming in historical and economic perspective. Thu’s anthropological approach shows us the ominous impact of factory farming in the context of globalization. He reminds us that regular and often devastating patterns of social change come from transitions in the ways that we produce food. Ikerd points to the recolonization of North America where farmers and communities are marginalized to interests far beyond their regions.

Next we move into case studies and details of ILO impacts. Fred Tait’s article moves from the political economy into the story of Manitoba’s hog industry transformation, where “single desk marketing” that helped level the field for independent hog farmers was eliminated, through to the building of the giant meat packing plant in Brandon.

Rick Dove presents devastating evidence from North Carolina where politicians in collusion with transnational corporations brought about a chronic, state-wide, environmental and health disaster. Dove’s tireless and generous work in reaching out and telling of North Carolina’s experience provides a warning to Canadian activists as American jurisdictions create barriers to ILO expansion and corporations in turn seek out Canadian locations.

Next, Bill Weida, through examples from western U.S., shows that people have often been considered merely obstacles to be removed in order to make way for mega-barn development and expansion.





Biologist Bill Paton from Brandon University has prepared a comprehensive indictment of the biochemical impacts (especially odour) that will give community activists much ammunition for their resistance to intensive livestock operations.

Providing comic relief and clever reminders of negative consequences, Brian Storey gives us a song patterned on Dr. Seuss's "Green Eggs and Ham."

The next section focuses on action by citizens opposing factory farming. Lisa Bechthold tells the tale of her Alberta community's resistance to hog barn expansion. Her appendices provide practical models for community activists showing how to organize and mobilize community efforts.

An issue that has always bedevilled resistance is the rights of workers at hog barns. Through "right to farm legislation" corporate interests have been able to bypass fair labour standards. Larry Hubich's work with the Saskatchewan Grain Services Union led to the unionization of workers at a Saskatchewan hog barn.

Simon Neufeld and Miné Elbi, working through Toronto-based Environmental Defence Canada, document two case studies in Canadian communities where legal action has been used to stem intensive livestock operation expansion.

Finally we return to political economic perspectives with Roger Epp's chapter focusing on the Canadian context, which calls for action and respect for rural Canadians who for decades have suffered the onslaught of actions and interests beyond their communities.

## Conclusion

The agricultural transition from family farm production to factory farm production is both a microcosm and a major strategy of globalization, as corporations seek ever-increasing economic and political power. The corporate assault on our economy, our cultures, and political autonomy is multi-faceted and widespread. Likewise, the broad-based citizen resistance to intensive livestock production is part of the world-wide resistance to globalization. Understanding



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the corporate takeover of hog production can provide us with a base from which to develop policy alternatives for livestock production, and agriculture in general.

The vision for rural Canada's future needs to embrace humane livestock production that supports the well-being of communities, farmers, workers, and ecosystems while providing high-quality, wholesome food to consumers. This book illustrates that corporate industrial livestock production is not an inevitable outcome of "progress" but an element of a political agenda being pursued by a corporate and government power structure. There are alternatives, and we can go *Beyond Factory Farming*.





# Chapter 1

## Industrial Agriculture, Democracy, and the Future

by Kendall Thu

The lesson of human social and political evolution suggests that the current global concentration of agricultural production, processing, and distribution into fewer hands portends a future of increasing human struggle and conflict. From the hunting and gathering !Kung Bushmen of the Kalahari Desert, to the horticultural Tsembaga of New Guinea, to the intensive agricultural Maya and Aztec civilizations, to the aristocratic estates and slaves of the American South, to the feudal landholders of Western Europe, to the highly industrialized hog production and processing factories in Canada and the U.S., all illustrate the anthropological lesson that the ways food is gathered, grown, and distributed fundamentally shape human societies. Through the prehistoric, historic, and contemporary record of human adaptation, a reasonably clear pattern is discernible—as the food system becomes more centralized, so too do political, economic, and even religious systems. Indeed, the current rapid centralization of ownership and control over land and food does not necessarily free the remainder of society from tilling the soil to pursue affluence, but rather alienates and oppresses a society's inhabitants.

Over the past century, the global shift to an industrialized form of agriculture is arguably as important for our world order as the emergence of agriculture itself some 10,000 years ago. The advent of domesticated animals and plants brought with it profound changes in human adaptation, namely the rise of cities, nation-states, the emergence of centralized political power, differences between classes of people, full-time conscripted armies, taxation, and many other characteristics resulting in a dramatic departure from our hunting and gathering past. The contemporary shift to a global industrial







model of food production and distribution reveals equally compelling consequences for human adaptation.

As anthropologists know, all societies are formatively shaped by a food production and distribution infrastructure that is essential to their survival. In the past, local or regional systems of food production and exchange shaped individual societies in terms of their social organizations, economic systems, and political structures. As the shift from production for one's own consumption gave way to production for market exchange, the production of agricultural surplus no longer meant feeding a society's inhabitants, but rather it allowed political control over the distribution of a basic resource to serve other interests, such as enhancing wealth. Yet, this type of centralization was largely local or regional—even the expansive Roman, Ottoman, or Viking empires were regional in scope largely because each entailed the notion of political expansion from one area to another. Today's globalization process may be much different. With the centralization of agriculture in all areas of the globe an agricultural infrastructure is present that allows for a global centralization of food production and distribution by multinational corporations not bound by traditional nation-states. In other words, today's centralized global political order may not be the result of political domination by one nation-state-based empire over another, but rather a more insidious centralized world order emergent from a common centralized agricultural infrastructure controlled by non-state entities. This emergent power wrests control of land and resources from local inhabitants and is notably present with the emergence of industrialized livestock production.

Ask neighbours of an industrial hog operation in rural Saskatchewan or North Carolina about their experiences. In vivid detail they will describe their diminished quality of life, the impairment of surface and groundwater, the horrific odour, the social upheaval and divisions among neighbours, friends, and family members, the displacement of family farmers and rural decay, the inequitable burden placed on impoverished rural neighbourhoods and communities of colour, concerns over health problems from airborne emissions, intimidation by local officials and industry representatives, and the



collusion between industry, government, and research institutions. Each of these areas is in itself worthy of attention. Taken together, they paint a compelling picture of a fundamental pathology undermining the core infrastructure of society. I argue that without addressing the inequities and imbalances in our food systems, any hope of real social and political equity, as well as environmental stewardship, are likely impossible for any society.

Here I examine the scope of problems resulting from the industrialization of agriculture, with particular attention to the livestock sector in North America. Invoking an anthropological framework, I suggest that the common inability of local, rural communities in Canada and the U.S. to find adequate redress to known and emerging problems of factory livestock operations is a consequence of a more fundamental problem of concentrated political power that is an outgrowth of highly centralized food systems. Consequently, factory livestock operations and the industrial food system of which they are a part are not a concern just of farmers and rural communities, but are of fundamental importance to all members of a society that value democracy.

### Industrialized Food and Global “De-Agriculturalization”

Industrialized agriculture refers to a system of food production and distribution dependent on fossil fuel inputs such as fertilizers, pesticides, machinery, and gasoline (Barlett, 1989; Thu & Durrenberger, 1998). It is also characterized by the replacement of labour (farmers) with capital-intensive production and distribution technology for mass production. The industrialization of agriculture is viewed by some, lauded by others, as a natural model of economic growth and efficiency. A standard economic view of the industrialization of food production is that it is yet another example of industry maturation through achievement of economies of scale. However, broader empirical examinations of industrialized agriculture have revealed a large constellation of economic costs (externalities) frequently ignored by economists who tend to focus on a narrow range of variables to in-

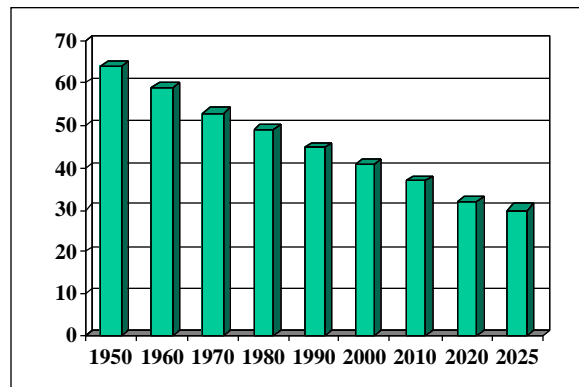




terpret efficiency and economies of scale (Durrenberger & Thu, 1996; Thu & Durrenberger, 1998; Thu et al., 1996). The rapid emergence of environmental and public health costs of industrialized agriculture, particularly in the livestock sector, have revealed the myopia of traditional economic analyses.

Industrialized agriculture has contributed significantly to a profound systemic change in how our world population lives and sustains itself, namely the global movement away from agriculture. In 1950 almost two-thirds of the world's population was principally engaged in agricultural activities. A mere 50 years later this figure was reduced to 40% (see Figure 1). The staggering numbers of peoples involved, the speed of change, and the social and cultural consequences of this metamorphosis reflect a vital change in our world order. According to projections contained in a joint report prepared by the United Nations, the International Labour Organization, and the Food and Agriculture Organization of the United Nations, the year 2025 will witness a world with less than one-third of its inhabitants engaged in primary production. If this prediction rings true, it means that in the 75-year period from 1950 to 2025 the number of people in the world engaged in agriculture will have been reduced by more than half. These changes, occurring within a single generation, may be as dramatic and far-reaching for the human world order as any change since the emergence of agriculture itself.

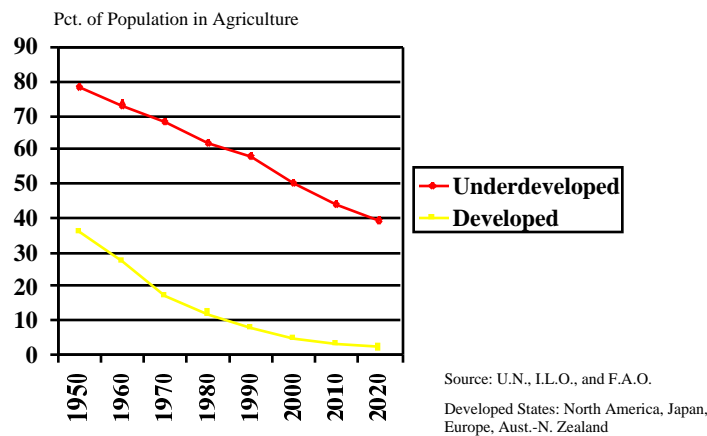
Figure 1. Percentage of World Population in Production Agriculture



An examination of select United Nations' statistics reveals that this pattern of agricultural decline is indeed global, cross-cutting geographical and political borders. A division of the world into "developed" and "less developed" regions reveals a similar pattern at different stages (see Figure 2). More industrialized regions of the world reflect a process of agricultural change that has seemingly run its course, with only 8% of their combined populations engaged in primary production by 1990. This means that in a 40-year period 28% of the total population in developed regions has moved away from primary production as its principle means of subsistence. Projections for the year 2025 indicate a further reduction of this agricultural population to approximately 2%.

So-called less developed regions reflect a similar pattern of agricultural change, though at a slightly slower pace. While the general pattern is the same, less developed regions have a much higher percentage of their population still in primary production. In 1990 fully 56% of the combined populations in less developed nations engaged in some form of agriculture as their primary source of subsistence versus only 8% in developed areas. However, projections up through the year 2025 reveal a continuation of the pattern of declining agricultural populations in less-developed regions. Unless dramatic world changes are forthcoming, it seems reasonable to simply add the 75-

Figure 2. Global Comparison of Declines in Agricultural Populations Between Developed and Underdeveloped States





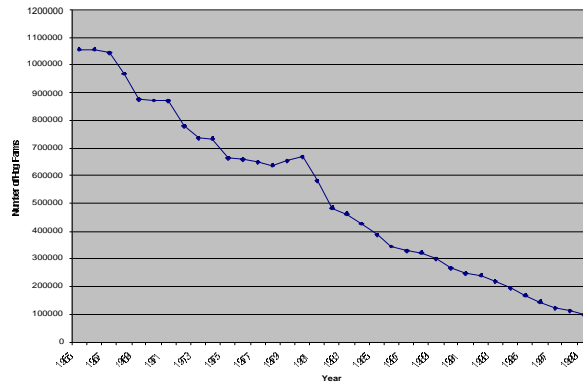
year curve for developed regions onto the end of the 75-year curve for less developed regions. This provides a rough estimation of how a continuation of this pattern would appear in less developed regions another 75 years into the future.

The global decline in farmers parallels the inverse growth of multinational agribusinesses. For example, the largest privately held company in the United States is Cargill, which accounts for nearly half of the world's global grains. Cargill has 97,000 employees spanning 59 countries as part of its nearly 51 billion-dollar annual business. Other global food giants include the likes of Nestlé, Kraft, and ConAgra, which collectively constitute a trillion-dollar industry, second only to the pharmaceutical industry as the largest in the U.S. As farmers disappear and on-farm profit margins narrow or are non-existent, profits for global food conglomerates soar. For example, Cargill's profits rose 131% in a mere one-year period between 2001 and 2002.

The global pattern of agricultural industrialization and increasingly centralized control is exemplified in North American agriculture, particularly the livestock industry in recent years. The swine industry is a classic example of this industrialization process. There is very little difference between the total U.S. inventory of hogs in the year 2000 (59.3 million) compared with the total inventory of hogs produced over 80 years earlier in 1915 (60.6 million) (USDA-NASS, n.d.). While overall production volume has changed little, the structure of the industry has shifted radically. As revealed in Figure 3, the number of hog producers in the U.S. declined precipitously from the 1960s to the present. Notable in this regard is the rapid rate of decline and concurrent emergence of relatively large production operations. For example, in a mere six-year period from 1993 to 1999, there was a 250% increase in the total U.S. hog inventory concentrated in operations with 5,000 or more hogs each (USDA-NASS, n.d.).

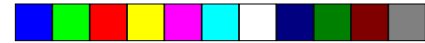
The pattern is similar in Canada where the last two decades (1981 to 2001) alone have witnessed the loss of over 60,000 farms, a 22% decline (Statistics Canada, n.d.). During the same period, over 40,000 farms have ceased raising hogs, a whopping 72% loss of hog produc-

Figure 3. Total U.S. Hog Farmers from 1965 to 1999 (USDA NASS)



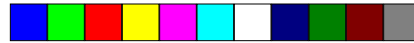
ers. Several Canadian provinces are experiencing the same dramatic disappearance of hog producers as large-scale factory hog operations become entrenched. For example, in Saskatchewan, the total volume of hogs produced nearly doubled between 1981 and 2001. At the same time, the number of farms producing hogs declined over 80%, from nearly 9,200 to 1,700.

This precipitous decline in farms has been well-documented by anthropologists and rural sociologists to have eroding social and economic consequences for rural areas. Rooted in the work of the anthropologist Walter Goldschmidt (1947), a whole generation of research (Thu et al., 1996) has demonstrated that it is simply better for the social and economic fabric of rural communities to have more farmers producing food than to have production concentrated in the hands of a few. The core of the problem, discovered by Goldschmidt over 50 years ago, is that, when farming is practised on a scale that exceeds a family's ability to provide the main source of labour and management, it tends to acquire industrial relations of production in which ownership and management are separated from labour. As a result, this industrialized form of agriculture tends to become disarticulated from surrounding communities, resulting in social inequities, poverty, and a range of attendant social, economic, and environmental pathologies. Indeed, the range of problems associated with industrialized hog production is particularly disconcerting.



The proliferation of industrial hog production facilities and the concentration of swine ownership into fewer hands parallel technological changes. The most notable is the shift from pasture-based and open-lot production to total animal confinement, beginning in the early 1970s. The shift to totally confined production does provide an advantage to hog producers in temperate regions by providing an antidote to harsh climatic conditions which impede growth rates and time to market. When hogs must expend a larger proportion of their nutrients in the form of energy to protect them from the cold, their feed-to-meat conversion rates decline. In addition, enclosed production units provide an opportunity for stricter control of feed rationing and reproduction. However, the costs of confined animal feeding operations, particularly as they take on characteristics of industrial-scale production, are dramatic.

In addition to the economic costs for rural areas, a wide variety of environmental and public health problems have emerged as a result of the industrialization of livestock production (Iowa State University and the University of Iowa Study Group, 2002). Surface and groundwater contamination occurs from the huge volumes of manure produced. In contrast to the solid manure produced in open-air hog production, confined animal production means the storage and management of manure in a liquid form that is much more mobile. Swine produce over twice as much manure per day compared with humans, and the biological oxygen demand (BOD) of undiluted hog waste is 160 times greater than raw human municipal sewage. In addition, the huge volumes of antibiotics fed livestock, primarily served up as growth promotants in feed, are largely excreted in the liquid manure. Consequently, antibiotics, as well as antibiotic-resistant bacteria, join the nitrogen, phosphorous, heavy metals, and other swine manure constituents that find their way into, and degrade, surface and ground waters. Indeed, the problem has become so pronounced in the U.S. that the Environmental Protection Agency (EPA) was legally required to develop new regulations to issue discharge permits for large-scale animal production facilities comparable to the types of permits typically issued to urban factories.



In revisions to the Federal Clean Water Act originally promulgated in 1972, new rules concerning livestock operations were issued in December 2002. These rules specify the primary problem as coming from large livestock operations, in part because large operations are more likely than smaller operations to have an insufficient land base for utilizing manure nutrients. In short, an imbalance has been created in which the nutrients required to grow hogs are taken from local farm environments and concentrated in small areas. As a result, solid manure that was once widely distributed fertilizer for large numbers of sustainable farm systems is transformed into a liquid industrial waste product contaminating the water and air.

A common environmental problem created by large concentrations of hogs and manure is the degradation of air quality. Some 160 volatile organic compounds are emitted from liquid hog manure and their odiferous character can offend even the most seasoned farmer or rural resident. Industrial production facilities housing thousands of swine come with storage facilities holding hundreds of thousands, even millions, of gallons of liquid manure. Large exhaust fans dot the exterior walls of these facilities testifying to the fact that the interior ambient environment is not particularly healthy, so particulates and gases are forced outside. Indeed, fully a third of workers working inside these facilities will develop one or more chronic respiratory problem in direct response to exposure to gas and dust mixtures (Merchant et al., 2002). Compounds such as hydrogen sulfide and ammonia, blended with dusts and endotoxin, also create problems for neighbours, particularly when large volumes of manure are stored in liquid form. Anyone who has spent even a little time on farms clearly understands that some type of odour is inherent to the agricultural environment. However, concentrating hundreds of thousands of gallons of liquid manure in one area is anything but natural and can have a devastating quality-of-life effect on neighbouring farmers and other rural residents.

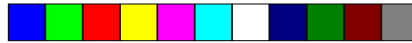
More than merely an unpleasant sensation, odour can have life-altering consequences for denizens of rural communities who relish a way of life premised on enjoying the out-of-doors (Thu & Durrenberger, 1994; Flora et al., 2002). Neighbours of industrial





swine production operations frequently share common views, values, expectations, and experiences concerning country living. Their lives revolve around centrally cherished life values consisting of family, friends, home, and faith. The ability to express these values through activities at their homes is centrally important to their quality of life. Their homes and property are their primary universe and as such the principal arena in which they experience and express their core values concerning family and friends. The encroachment of a factory livestock facility near their homes and their properties is significantly disruptive of numerous individual activities and expectations of rural living. Moreover, it affects the most sacrosanct areas inherently important for their quality of life. The freedom and independence associated with life oriented toward outdoor living gives way to a sense of violation and infringement as activities associated with central dimensions of their lives are taken away. Children and grandchildren cannot experience the unfettered joy of outdoor life in the country—jumping on the trampoline, bicycling, playing in the pool, picking flowers and playing with bugs in the yard, and inviting friends over to play. Additionally, parents become upset when their children are affected by odours, which in turn has a ripple effect creating frustration, anger, and family tensions.

Social occasions when family and friends come together are affected either in actual practice or through disruption of plans or routines that normally provide social cohesion and a sense of neighbourhood belonging—backyard barbecues, visits by friends and family. Their homes are no longer an extension of, nor a means for, enjoying the outdoors. Rather, their homes become a barrier against the outdoors that harbour intrusive odours. In short, the odour significantly infringes on their ability to enjoy their home, property, family, and lives. Their homes and property are intimately connected to their ability to express, appreciate, and enjoy centrally important values in their lives involving family, friends, and home. As such, the odour disrupts more than an itemized list of activities on a calendar; it takes away the most basic elements of their lives and offers them no control in return.



Recent public health research has shown that neighbours of large-scale swine operations are also at elevated risk for health problems (Merchant et al., 2002; Thu, 2002). In addition to odour malfeasance, neighbours appear to be experiencing elevated rates of health symptoms related to the upper respiratory tract. Symptoms such as excess coughing, wheezing, chest tightness, dizziness, and shortness of breath appear more frequently among neighbours of large-scale swine operations when compared with other groups in rural areas. Indeed, results indicate neighbours may be experiencing clusters of symptoms similar to the well-documented toxic or inflammatory respiratory effects among interior workers.

With the mounting evidence of negative social, economic, environmental, and public health consequences of industrial scale livestock production, the natural question is “why?” Why not simply approach our government representatives, explain the problem by showing them the scientific research coupled with local experiences of neighbours, and have them make changes? After all, representative democratic free governments are supposed to exist to protect individual rights and ensure the public interest is being served. Despite the litany of problems associated with industrialized agriculture, the most fundamental issue is not the air, water, or even the decay of rural communities. Most problematic is the fundamental erosion of freedom and democracy via the centralization of political power that follows from industry consolidation. How can we fix water quality, air quality, economic decay, rural community social upheaval, and rural health, if we lose our freedom of speech and find a tightening noose around channels of access to government, scientific research, and the courts? Indeed, deeply disturbing efforts to thwart independent agricultural research, muzzle public criticism of industrial livestock facilities, and force independent family farmers to pay the government for messages about their occupation that they do not agree with signal tendencies not of freedom and democracy, but of autocracy and authoritarianism.



## Democracy, Farming, and the Future

In 1996, famed U.S. talk show host Oprah Winfrey brought vegetarian activist Howard Lyman on her show to discuss Mad Cow Disease and the livestock industry. The show's content suggested the possibility that Mad Cow Disease could spread from cows to humans. To audience applause, an effervescent Oprah proclaimed that "It has just stopped me from eating another burger!" What Oprah probably thought was just another show, another day at the office, turned out to be a major legal battle brought against her by the Texas cattle industry. The Texas cattlemen contended that Oprah and her guests spoke disparagingly about beef which had a significant effect on consumer confidence resulting in considerable financial losses for the industry. No doubt Oprah was unaware that Texas, similar to 12 other U.S. states, had passed "veggie libel laws" which prohibit people from speaking disparagingly about agriculture. A representative example can be seen in South Dakota's law which defines disparagement as follows:

Disparagement: *dissemination in any manner* to the public of any information that implies that an agricultural food product is not safe for consumption by the public or that generally accepted agricultural and management practices make agricultural food products unsafe for consumption by the public. (South Dakota, Title 20, Chapter 20-10A, n.d.)

What may seem an innocuous and inconspicuous law actually represents a bold frontal attack on the fundamental core of the First Amendment of the U.S. Constitution, namely freedom of speech. U.S. citizens in these states are supposed to shut up and not talk publicly about food safety and accept the state's proposition that there are "generally accepted agricultural and management practices" that will protect them. Aside from the glaringly obvious constitutional question, who gets to decide what constitutes "generally accepted agricultural and management practices?" I have a hunch neigh-





bours of industrial scale livestock operations would not be the first line of industry experts outlining what is “generally accepted.”

In and of themselves, veggie libel laws are reason for concern. Unfortunately, they are not an isolated event, but rather part of an emerging pattern of attempts to curtail free speech over problems of industrialized agriculture. For example, in 2002 agricultural industry lobbyists in Illinois tried to get the state legislature to illegalize attempts to photograph confined animal production facilities. This was an effort to respond to images produced by animal welfare groups showing deplorable living conditions for livestock. Just recently in 2003, the agricultural industry in Minnesota passed an amendment to an organic transition cost-share bill that would blacklist groups who have “taken action” to prevent some type of agricultural activity:

The commissioner may not provide a grant to or contract with an individual or organization that in the previous 36 months has taken, or participated financially in, an action to prevent a person from engaging in agricultural activities or expanding an agricultural operation. (Minnesota State Legislature, 2003)

Similar problems appear in Canada. In the discussion aftermath of the Industrial Livestock Conference sponsored by the Canadian Centre for Policy Alternatives, rural residents asked how they could speak out against industrial livestock operations without facing the prospect of “slap lawsuits.”

Other more insidious forms of suppression are also evident. For example, Utah is home to possibly the largest hog operation in the world. The state is also the home of the Church of Latter Day Saints known as the Mormons. When a partnership of large agribusiness interests built Circle 4 Farms near the little town of Milford in southern Utah, they involved the Mormon Church in their efforts by hiring Church bishops in their management team. Local residents who began airing concerns over a 50,000-sow operation and manure lagoons the size of football fields, were faced with social pressure and the possible stigma of not just going against an agribusiness interest,





but by extension the Mormon Church. Residents expressed their frustration that they were having trouble voicing their concerns because the industrial livestock operation was connected with the in-violate sanctity of the church.

Problems of suppression also extend to scientific research. Since science is supposed to provide the foundation to public policy, agency action, and legal adjudication, it is critically important researchers be allowed the unfettered freedom to conduct their research and freely present their results. Indeed, this is the foundation of the tenure system for faculty in U.S. institutions of higher learning. Unfortunately, Adam Smith's invisible hand ostensibly guiding a free market economy appears too often supplanted by the iron fist of industry interests.

The anthropologist Walter Goldschmidt examined the effects of industrialized agriculture in the Central Valley of California beginning in the early 1940s. His work was sponsored by the Bureau of Agricultural Economics in the U.S. Department of Agriculture. Professor Goldschmidt painstakingly compared two similar towns, which differed in the extent to which they were surrounded by smaller independent farms versus larger corporate-owned operations. Goldschmidt found that the town surrounded by smaller independent farms had less poverty, more churches, more civic activity, better standard of living, more schools, more public recreation facilities, and more democratic governance. Thirty years later, in 1972, he provided Congressional testimony to a Senate Subcommittee "On The Role of Giant Corporations in the American and World Economies":

I was ordered [in early 1940s] by my bureau chief in Washington not to undertake the second phase of the study. He did so in response to a buildup of pressure from politically powerful circles. These same sources of influence would have, as a matter of fact, prevented the publication of the report itself, had it not been for...the actions of the late Senator Murray of Montana. I was told, Mr. Senator and gentlemen, that the official manuscript of the study was literally in the file drawer of the desk occupied by Clinton Anderson, then the Secretary of Agriculture, and that it was released to Sena-





tor Murray only upon his agreement that there would be no mention anywhere in the published report of the Department of Agriculture. I could regale this committee beyond its endurance with stories about this public pressure—as, for instance, our small research team being vilified on the radio each noon, as we ate our lunch...by the newscaster sponsored by the Associated Farmers of California. (Goldschmidt, 1972)

The Bureau sponsoring Goldschmidt's work was dismantled.

Unfortunately, Goldschmidt's experiences over a half century ago are still very much alive today. In the spring of 2002, I invited Dr. James Zahn, of the USDA Swine Research Center located at Iowa State University, to join me on a panel for a conference sponsored by the WaterKeeper Alliance and numerous other organizations. Dr. Zahn is one of the premier U.S. researchers engaged in identifying and understanding airborne emissions from large-scale swine operations. I invited him to present the results of his research. Despite Dr. Zahn's willingness to participate, his superiors within the USDA refused to allow him to join us. At Dr. Zahn's invitation, I appealed directly to Dr. Zahn's superiors to allow him to present his research. However, he was denied permission under the paltry excuse that the event was not an "appropriate venue." In my view, this shameful behaviour on the part of the USDA was little more than thinly veiled censorship, denying access to a publicly-funded researcher whose published works are centrally relevant for current public policy debates concerning the consequences for CAFOs on our environmental health.

Many independent family farmers in the U.S. are also discovering the very real consequences of tyranny and suppression by a centralized agricultural system. Farmers throughout the U.S. are forced to pay "tribute" to a centralized commodity organization when they market their products. In the pork industry, hog producers are required under the Federal Pork Production and Consumer Education Act (1985) to pay 45 cents out of every \$100 of pork per hog sold, known as the pork check-off. Among the ostensible purposes



of the money is the promotion of pork to U.S. consumers. However, many family hog farmers in the U.S. disagree with the advertising and public ideology created by these moneys. For example, they disagree with the promotion of pork as the “other white meat” because it may discourage the sale of bacon and ham. Or family farmers end up paying for messages that promote the sale of brand name meats by large-scale integrators as opposed to promoting family-farm-produced meats. Indeed, hog producers are essentially taxed some \$50-60 million in check-off funds which are used to create and promote messages that may serve the interests of one segment of the industry over the other.

A legal challenge to this system was brought by the U.S. Campaign for Family Farms (CFF), which is an advocacy organization consisting of four sub-groups, including a substantial number of family hog farmers. CFF sought an end to the check-off program on the grounds that it was unconstitutional under the First Amendment because it essentially forced family hog producers to pay for messages they did not believe in or agree with. In other words, they are being compelled by the federal government to pay for messages to the general public concerning U.S. agriculture that they do not believe in. The case involved the CFF on one side against an opposition of *both* the Michigan Pork Producers (a state commodity organization funded, in part, by pork check-off funds) *and* the U.S. Department of Agriculture. In other words, a branch of the Federal Government, the U.S.D.A., purposefully blurred the distinction between private industry and public governance by allying itself with the Pork Check program to force farmers to pay financial tribute to the state in order that messages counter to family farm interests could be promoted to the general public. In October 2002, a U.S. District Court Judge thankfully ruled as follows:

In days of low return on agricultural (sic), the decision of an individual farmer to devote funds to uses other than generic advertising is very important. Indeed, the frustration of some farmers are likely to only mount when those funds are used to pay for competitors’ advertising, thereby depriving the farmer of the ability to pay for either niche advertising or

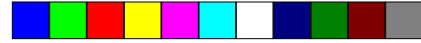


non-advertising essentials (such as feed for 29 livestock). This is true regardless of whether objecting farmers are correct in their economic analysis that the assessments and speech do not sufficiently further their own particular interests. In short, whether this speech is considered on either philosophical, political or commercial grounds, it involves a kind of outrage which Jefferson loathed. The government has been made tyrannical by forcing men and women to pay for messages they detest. Such a system is at the bottom unconstitutional and rotten. For these reasons, the Court concludes that the mandated system of Pork Act assessments is unconstitutional since it violates the Cross-Plaintiffs' rights of free speech and association. (Enslin, 2002)

## Discussion

Local maladies brought by industrial forms of agriculture leave community members and neighbourhoods frustrated, distraught, and dismayed. More disturbing than the odour, water quality degradation, neighbourhood social decay, or even the loss of family farms, is the realization by many that a government that should protect the public interests is frequently little more than a handmaiden of industrial agricultural interests. The larger cultural evolutionary and global contexts to these local and regional frustrations need to be brought to light so that the general public understands that its involvement in maintaining an equitable and sustainable food system is fundamental for ensuring a democratic society. Fixing the problem in any one neighbourhood's backyard should not mean chasing large-scale agricultural interests away to another neighbourhood, another region, another province, or another part of the world. Rather, addressing the litany of problems brought about by facilities such as Intensive Livestock Operations means courageous pioneering and homesteading on the political prairies. Otherwise, the following seemingly innocuous vision of a highly industrialized and centralized agriculture will have waves of consequences for the human order:





To put an end to our backwardness in agriculture and to provide the country with the largest possible amount of market grain, cotton, and so forth, it was necessary to pass...to large-scale farming, for only large-scale farming can employ modern machinery, utilize all the achievements of agricultural science and provide the largest possible quantity of market produce...[We] took the path of organizing large farms...[This] method proved to be an exceedingly progressive method...particularly because it enabled us in the course of several years to cover the entire country with large farms capable of employing modern machinery, of utilizing all the achievements of agricultural science and of providing the country with the largest possible quantity of market produce. (Stalin, 1950)

The above excerpt comes from a speech delivered by Joseph Stalin in 1946 in Moscow at a meeting of voters of the Stalin Electoral District. It sounds eerily like the proponents of industrial agriculture in North America who, in ironic contrast to Stalin, promote large-scale agriculture via the rhetoric of “free markets” and “free trade.” Whether cast as free market forces in North America, or as part of progressive development in the former Soviet Union, the rhetoric belies the political tyranny and wasteland created by industrial scale agriculture.

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**T**he restructuring of hog production in North America provides a rare clear view into the mechanisms and effects of corporate globalization. And the community-by-community fight to stop the incursion of corporate mega-barns and retain family farm hog production provides an example of effective and gritty local resistance to the most negative aspects of globalization.

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