

Addressing the True Impacts of Concentrated Animal Feeding Operations

*“With reference either to individual or national welfare,
agriculture is of primary importance.”*

-George Washington

Agriculture is critical to the overall well-being of any democratic nation. In Iowa, agriculture traditionally has been the foundation not only of our economy, but also our culture. Today, large agribusiness corporations have used political power and externalization of costs to put independent family farmers out of business, extract wealth from rural communities, and disregard the quality and health of our environment. Independent farming, which was once a sustainable economic foundation for rural communities, is rapidly being made dependent on large agribusiness corporations for supplies and stock. Iowa is ripe for a leader with vision and courage to speak honestly about agriculture’s problems and propose life-saving solutions.

Attitudes in Iowa toward the industrialization of agriculture are best exemplified in a statewide poll conducted in January 2003 by GOP pollster Hill Research Consultants of The Woodlands, Texas. They found 94 percent of Iowans believed the issue of concentrated animal feeding operations (CAFOs) was important. **In fact, 74 percent of Iowans polled believed there should be a moratorium on CAFOs, with over 60 percent of Republicans and over 80 percent of Democrats holding this belief.**

Impact on Iowa and the Nation

Iowans’ assessment of industrialized livestock production is clear. CAFOs negatively impact the three most important aspects of their lives:

- *the farm economy in which they earn their livelihoods**
- *the communities in which they interact and raise their families**
- *the natural environment that defines their quality of life**

Commonsense governmental action would help to correct the negative impacts on economics, communities, and our environment.

***RESTORATION OF CAPITALISM TO AGRICULTURE**

Industrial agriculture fosters a concentration in market power where today just four corporations control approximately 60 percent of the pork market and over 80 percent of the beef market. Loss of access to markets and accurate market information has resulted in the elimination of independent farmers and rural businesses.

Without fair and open markets determining pricing through competing buyers and consumer demand, independent farmers are being forced to assume an employee role. They produce livestock in accordance with the controlling corporate dictates, not the competitive capitalist system.

Simple solutions exist to restore capitalism:

- Ban ownership of livestock by meat packers
- Enforce Section 202 of the Packers and Stockyards Act

- Require that a daily percentage of meatpacker purchases come from a competitively-bid market
- Require fair production contracts for contract growers
- Enact effective payment limitations in the federal farm program for commodity supports

***RESTORATION OF COMMUNITY RESPONSIBILITY**

Extraction agriculture destroys rural communities in Iowa and across the nation. Rather than enriching communities, agribusiness exports community wealth to distant corporate headquarters.

As far back as 1946, a report to the U.S. Senate described a lower standard of living and quality of life in rural communities dominated by large-scale industrial agriculture. A 2001 study showed that where corporate agribusiness is restricted, communities have a higher percentage of farms showing cash gains, lower poverty levels, and lower unemployment. As farm size and absentee ownership increase, social conditions in the local community deteriorate. The number of independent farmers raising livestock in rural areas is more important to the economic well-being of communities than the number of livestock produced.

Commonsense policy must:

- Target rural community development to small business and self-employment
- Reverse the depopulation of rural areas and provides incentives for rural residence and entrepreneurship
- Fairly implement Country of Origin Labeling
- Give local governments decision-making authority to site – or not site - CAFOs in their communities

***RESTORATION OF ENVIRONMENTAL RESPONSIBILITY**

Industrialized agriculture is an extraction business that externalizes its social and environmental costs onto communities. Degradation of water quality, air quality and public health results in a diminished quality of life.

American agriculture must be a sustainable system dependent on renewable resources and responsible behavior. Industrialized agriculture, including CAFOs, does not meet these requirements and thereby requires regulatory response:

- Require all CAFOs to comply with existing environmental laws that regulate other polluting industries
- Maintain and fully fund enforcement of clean water and clean air regulations
- Hold livestock integrators accountable and legally liable for the environmental damages associated with CAFOs
- Prohibit public funds that subsidize CAFOs for waste systems

The statewide poll referred to on page 1 was commissioned in January 2003 by The Humane Society of the United States's Care4Iowa Campaign.

***Restoration of Capitalism to Agriculture**

Industrial agriculture fosters an imbalance in market power where today just four corporations control over 80 percent of the beef market and approximately 60 percent of the pork market.

The concentration in livestock markets is presently even greater than in 1921 at the passage of the Packers and Stockyards Act. The threat to free-market capitalism that concentration posed was recognized and acted upon at that time. Unfortunately, recent years have seen administrative enforcement of the Act that has allowed unprecedented consolidation of market power among a very few firms. At no other time in our history has the concentration ratio of the top four firms (CR4) been higher than today.¹

BEEF PACKERS CR4 = 81%

1. Tyson (IBP Inc.)	<u>Historical CR4</u>
2. ConAgra Beef Companies	1990 1995 1998
3. Cargill (Excel Corporation)	72% 76% 79%
4. Farmland National Beef Pkg. Co.	

Note: Smithfield Foods was the 5th largest beef packer.

PORK PACKERS CR4 = 59%

1. Smithfield	<u>Historical CR4</u>
2. Tyson (IBP Inc.)	1987 1989 1990 1992
3. ConAgra (Swift)	37% 34% 40% 44%
4. Cargill (Excel)	

Note: Including Farmland Industries and Hormel foods created a CR6=75%.

PORK PRODUCTION CR4 = 46%

1. Smithfield Foods	<u>Number of Sows In 2001</u>
2. Premium Standard Farms (ContiGroup)	Smithfield Foods 710,000
3. Seaboard Corporation	PSF 211,100
4. Triumph Pork Group*	Seaboard 185,000
	Triumph 140,000

*Farmland provided management and genetics for Triumph.

Loss of access to markets and accurate market information has resulted in the elimination of independent farmers and rural businesses:

The radical re-shaping of the marketplace has done more than changed how independent farmers and ranchers do business; it has affected whether or not they stay in business.

With access to the traditional bid market consisting of take-it-or-leave-it bids offered in one 30 minute time period per week, or with all the livestock on a given farm being owned by an integrated packer and present only at the will of its contract, the competitive free-market system has been removed. And so too have many farmers and ranchers and the local businesses they support been removed.

In states across the nation, the loss of farms is ongoing:

Number of Farms by State²

State:	2000:	2001:	2002:
	Number:		
CA:	87,500	85,000	84,000
IL:	78,000	76,000	76,000
IN:	64,000	63,000	63,000
IA:	95,000	93,500	92,500
KS :	64,000	63,000	63,000
MA:	6,100	6,000	6,000
MO:	109,000	108,000	107,000
NE:	54,000	53,000	52,000
NY:	38,000	37,500	37,000
NC:	57,000	56,000	56,000
ND:	30,300	30,300	30,000
OH:	80,000	78,000	78,000
VT:	6,700	6,600	6,600

Without fair and open markets determining pricing through competing buyers and consumer demand, independent farmers are being forced to assume an employee role. They produce livestock in accordance with the controlling corporate dictates, not the competitive capitalist system.

In the Iowa Farm and Rural Life Poll conducted by Iowa State University, 88 percent of respondents believed that meat packers should be prohibited from owning or feeding livestock. And 89 percent believed that too much economic power is concentrated in a few large agribusinesses.

Over half of the hogs produced in 2000 were from approximately 156 firms marketing more than 50,000 head annually. Nearly 90 percent of their marketings are under contract or packer owned.

Percent of U.S. Hogs Sold through Market Methods, 1997-2001³

Pricing Method	1997	January 1999	January 2000	January 2001
Total non-spot market purchases	56.6%	64.2%	74.3%	82.7%
Total spot market purchases	43.4%	35.8%	25.7%	17.3%

The very structural form of the American free-market capitalist economy is largely non-existent in our domestic agricultural industry, even as we strive to foster its unfettered existence in our trading partners and developing countries throughout the world.

Simple solutions exist to restore capitalism:

- **Ban ownership and feeding of livestock by meat packers more than 14 days before slaughter.**

This is a market facilitating measure designed to increase market competition and minimize the risk of market harm caused by packer-controlled livestock inventories. Packer ownership of livestock is a subset of captive supplies. Captive supplies are livestock that are controlled by packers either through contractual arrangements with producers or outright ownership. Stated another way, captive supplies are all livestock that are not negotiated and priced within fourteen days of slaughter.

The harmful effects of the packer ownership/captive supply trend include:

- 1) Increasing packer market power by allowing them to strategically stay out of the cash market for extended periods of time while keeping their plants full, thus reducing farm gate demand and driving down price.
 - 2) Increasing packer market power by allowing packers to bid more conservatively on the open, or cash, market for slaughter inventory, thus driving down price.
 - 3) Increasing packer market power by allowing packers to go to the cash market only during narrow “bid windows” or time periods each week rather than bidding all week, thus resulting in panic selling by producers.
 - 4) Distorting and/or thinning the public markets because packer owned livestock are not part of the publicly reported, daily cash market. Narrowing the volume in the market makes it more subject to manipulation. Less cash market volume also lessens price.
 - 5) Increasing the incentive and ability for packers to strategically use these supplies to drive the cash price down.
 - 6) Severely lessening, or even eliminating, the ability of small and medium sized producers to even access the market because packer owned and contracted livestock fill the packing plant.
 - 7) Creating conflicts of interest and opportunities for self dealing by packers at the expense of producers.
- **Enforce Section 202 of the Packers and Stockyards Administration’s rules. Section 202: Unlawful practices enumerated.**
It shall be unlawful for any packer with respect to livestock, meats, meat food products, or livestock products in unmanufactured form, or for any live poultry dealer with respect to live poultry, to:
 - (a) Engage in or use any unfair, unjustly discriminatory, or deceptive practice or device; or
 - (b) Make or give any undue or unreasonable preference or advantage to any particular person or locality in any respect, or subject any particular person or locality to any undue or unreasonable prejudice or disadvantage in any respect; or
 - (c) Sell or otherwise transfer to or for any other packer or any live poultry dealer, or buy or otherwise receive from or for any other packer or any live poultry dealer, any article for the purpose or with the effect of apportioning the supply between any such persons, if such apportionment has the tendency or effect of restraining commerce or of creating a monopoly; or

- (d) Sell or otherwise transfer to or for any other person, or buy or otherwise receive from or for any other person, any article for the purpose or with the effect of manipulating or controlling prices, or of creating a monopoly in the acquisition of, buying, selling, or dealing in, any article, or of restraining commerce; or
- (e) Engage in any course of business or do any act for the purpose or with the effect of manipulating or controlling prices, or of creating a monopoly in the acquisition of, buying, selling, or dealing in, any article, or of restraining commerce; or
- (f) Conspire, combine, agree, or arrange, with any other person (1) to apportion territory for carrying on business, or (2) to apportion purchases or sales of any article, or (3) to manipulate or control prices; or
- (g) Conspire, combine, agree or arrange with any other person to do, or aid or abet the doing of, any act made unlawful by subdivision (a), (b), (c), (d), or (e). (7 U.S.C. 192)

- **Require that a daily percentage of meatpacker purchases come from a competitively-bid spot market.**

Requiring meatpackers to purchase a certain percentage of livestock on the daily open market, or a cash basis would provide consistent information for the Mandatory Livestock Price Reporting Program, and provide producers assistance in determining appropriate contract pricing.

Important specifics of this policy should include:

- 1) Applies only to packers large enough to be required to report daily live animal prices to USDA.
 - 2) Exempts single plant entities with no affiliation to larger packing entities
 - 3) Spot market purchase percentage requirements can only be purchases from non-affiliated producers.
 - 4) Does not pre-empt state law regarding packer feeding of livestock, allowing state law to be more restrictive.
- **Require fair production contracts for contract growers.**
- Contracting moves economic risk to farmers and ranchers. That risk is particularly great for farmers and ranchers who have to make large investments in buildings and equipment. Additionally, contracts often stipulate secrecy, preventing farmers from sharing information with other producers or even with their banker or lawyer.
- 1) Require contracts to be in plain language and contain disclosure of material risks.
 - 2) Provide contract producers with a three-day right to review production contracts.
 - 3) Prohibit confidentiality clauses in contracts to help maintain the market transparency that historically has been available to farmers and ranchers through auctions and terminal and futures markets.
 - 4) Provide producers with a first-priority lien for payments due under a contract in case the contractor company should go out of business.
 - 5) Protect producers from having contracts terminated capriciously or as a form of retribution if farmers already have made a sizeable capital investment required by the contracts.
 - 6) Make it an unfair practice for processors to retaliate or discriminate against producers who exercise rights including the right to join producer organizations.

A model plan including the above points was endorsed by the Attorneys Generals of Colorado, Indiana, Iowa, Kentucky, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, North Dakota, Oklahoma, Vermont, West Virginia, Wisconsin, and Wyoming.⁴

- **Enact effective payment limitations in the federal farm program for commodity supports.**

Agricultural policy must stop subsidizing mega farms to drive family farmers out of business and focus on implementing effective and equitable federal farm program payment limitations to fairly distribute those payments.

Current law imposes no real limit on marketing loan gains. Generic certificates allow an infinite intake under the loan program's structure. And additional loopholes ensure that limits on direct and counter-cyclical payments affect almost no farmers willing and able to pay a lawyer to restructure their farms into multiple entities. In effect, this nullification of limitations creates the condition where the nation's largest farms are being subsidized to drive their neighbors out of business by bidding land away from them.

Virtually all program benefits are bid into higher land prices—increasing cash rents, land payments and property taxes. The unlimited assistance essentially negates the intended benefit of farm program payments by increasing production costs. Additionally, the incentive-created over-production provides abundant, below-production-cost feed grain thereby subsidizing corporate grain-buyers and integrated feeders at taxpayer expense. Ultimately, the lack of limits results in a federal program that drives down both agricultural profitability and opportunity.

With foreign competition and uncompetitive markets also driving down commodity prices, such a farm program is the last thing we need. Plus there is the real peril of a potential collapse in land prices if the flow of federal dollars should one day be abruptly cut off.

The good news is that payment limitations do have strong support throughout the country among farmers. A 27 farm-state extension services survey of producers found that 81 percent favored placing limitations on support payments to direct the dollars to smaller operations. Broken down between small farms and large farms, the numbers were 86 percent of small and 61 percent of large farmers supported targeting payments.⁵

Effective reform to farm program payments would:

- 1) Close loopholes by providing the same limit regardless of how the farm is organized. Marketing loan gains on generic certificates and forfeited commodities would count toward the limit.
- 2) Be fiscally responsible by saving federal expenditures. In these uncertain times of deficits and threatened appropriations, the savings can go a long way to safeguard rural development and conservation programs that otherwise are sacrificed first.

***Restoration of Community Responsibility**

Extraction agriculture destroys rural communities in Iowa and across the nation. Communities with large-scale animal production facilities have lower standards of living, including depressed median family incomes, higher levels of poverty, lower education levels, higher levels of unemployment, deteriorating social conditions overall.

Dating back to 1946 is data that details the impact of large-scale corporate agriculture. That year, in a report to the U.S. Senate Special Committee to Study Problems of American Small Business, Walter Goldschmidt presented research that compared two communities similar in nearly every way but one: the type of farms that surrounded each. And although the two communities shared the same population size, value system and customs, the community surrounded by larger enterprises had a lower standard of living and quality of life than did the other. In Goldschmidt's words, this difference "may be properly assigned confidently and overwhelmingly to the scale of farming factor."⁶

In research conducted for the Office of Technology Assessment of the U.S. Congress in 1983, University of California anthropologist Dean MacCannel found the same results. Quoting the report: "*Everyone who has done careful research on farm size, residency of agricultural land owners and social conditions in the rural community finds the same relationship: As farm size and absentee ownership increase, social conditions in the local community deteriorate.*

We have found depressed median family incomes, high levels of poverty, low education levels, social and economic inequality between ethnic groups, etc. associated with land and capital concentration in agriculture.... Communities that are surrounded by farms that are larger than can be operated by a family unit have a bi-modal income distribution, with a few wealthy elites, a majority of poor laborers and virtually no middle class."⁷

And validation of Goldschmidt's original research continues to stack up. In 2001, Dr. Rick Welsh of Clarkson University and Dr. Thomas A. Lyson of Cornell University published a study entitled "Anti-Corporate Farming Laws, the 'Goldschmidt Hypothesis' and Rural Community Welfare." This 20 year study examined the 433 counties in the United States which meet the definition of "agriculturally dependent counties," by comparing the counties within the nine states nationwide that have anti-corporate farming laws to counties in states without such laws.

The results were again clear: "*Communities in states with anti-corporate farming laws have lower poverty levels, lower unemployment, and higher percentage of farms showing cash gains.*"⁸ In fact, when examining only the nine states and comparing those with more restrictive laws to those with less, communities in the more-restrictive law states have lower unemployment and a higher percentage of farms with cash gains.⁹

Rather than enriching communities, agribusiness exports community wealth to distant corporate headquarters.

Most of the money from CAFOs will either be directly spent outside the region or it will quickly migrate there. In theory, if producer purchasing patterns are the same regardless of organizational structure or farm size, the economic impact of livestock production on rural communities would be the same. In reality, community economic impacts are directly related to factors such as purchasing

and marketing patterns and location of profit centers. Larger scale units are more likely to travel further for inputs and bypass local community suppliers, while smaller farms generally purchase a higher percentage of goods locally. To the extent that large firms bypass local suppliers, this may have a negative impact on the number of local businesses and the economic viability of main street.¹⁰ And profits earned by outside interests - such as contractors - are less likely to be retained in the community than profits earned by community residents.¹¹

However, through cost shifting, CAFOs will leave the costs of its odor, health risks, surface water pollution, groundwater pollution, and in the long run, its abandoned lagoons and facilities for the residents of a region to deal with. This directly affects both long and short run economic development. Large animal feeding operations tend to hinder rural economic growth at the local level. Miguel Gomez and Liying Zhang found an inverse relationship between hog production concentration and retail spending in local communities in rural Illinois. Economic growth rates in those communities were 55% higher in areas with conventional hog farms as opposed to those with larger hog operations, in spite of the fact that economic growth rates had been almost identical in all the studied communities before the advent of larger hog operations in the 1990s.¹²

CAFOs also have an effect on community tax revenue. Federal, state, and local taxes are levied on taxable amounts calculated on federal returns. The numerous tax write-offs that are possible because CAFOs are sometimes treated as industries and, at other times, treated as farms, significantly decrease the amounts of taxes paid locally. At the same time, concentrated animal operations create social, health, and traffic costs that the local governments must finance. The local government, in turn, must rely on increased taxes from residents to pay these costs and this can decrease other economic activity in the region.

A higher standard of living can be restored to America's rural communities, through commonsense solutions that address the underlying fact that the number of independent farmers raising livestock in rural areas is more important to the economic well-being of communities than the number of livestock produced.

Such solutions must:

- **Target rural community development to small business and self-employment**
New incentives for local business development are needed to give farmers viable options for a livelihood, but also improve the local economy. CAFOs may provide a livelihood for some producers, but benefits are few for the community itself.

A remarkable entrepreneurial character can be found among the people of agricultural communities. This strength and characteristic should be nurtured and encouraged through public policy. As part of a comprehensive rural development strategy, state and local governments should recognize the crucial role entrepreneurial activity plays in rural communities. Rather than attempting to place rural communities into an urban, industrial model of economic development, more resources should be made available to nurture locally-developed small businesses.

Policymakers should also take immediate steps to bring economic development policy into greater balance. While billions of dollars are devoted to large-scale development that is limited to urban areas, those programs that help develop small businesses and entrepreneurial activities are left with crumbs. Such a policy imbalance only perpetuates the economic imbalance between areas. Micro-enterprise tax credits and other incentives can aid small rural businesses and offer choices besides development of CAFOs.

- **Reverse the depopulation of rural areas and provides incentives for rural residence and entrepreneurship**

Despite federal and state efforts to provide capital and incentives through initiatives such as the USDA Rural Business-Cooperative Service and state and federal enterprise zones, the rural economic slide continues. As well intentioned and well developed as these initiatives may be, they seem to have had little aggregate positive affect on incomes and job growth.

What has had an impact in rural communities is a policy strategy of providing incentives for job creation and business development. But as discussed above, these incentives are particularly ill designed for rural communities. Business development and job creation incentives based on an industrial model are unlikely to work well (or at all) in agriculturally-based communities.

As such, states need to adopt business development and job creation incentives specifically targeted to rural areas at the scale that would benefit rural communities. These strategies must provide incentives for the development and creation of jobs and businesses that are practical and sustainable in rural communities, particularly small businesses, micro-enterprises and self-employment.

Two items need to be clear. First, jobs created pursuant to these incentives cannot be low-income jobs that are created to primarily benefit an investor. These incentive programs must have a focus of providing economic opportunity for rural residents, not a public subsidy for investors to provide low-wage jobs.

Second, these incentives should be structured to provide sustainable economic opportunity. Of course, no job or business can be guaranteed. However, the economic distress of rural people should not be the subject of investors and businesses looking for a tax break. Rural people have been the fodder for extraction economies for too long. Any incentives for private investment should encourage locally owned or community-based enterprises.

- **Fairly implement Country of Origin Labeling**

Country of origin labeling is important to consumers and producers alike for the service it provides. In an era of mad cow disease and bio-terrorism concerns, as well as concentrated market obstacles and imports distorting the livestock marketplace for local producers, knowing the origin of our food has been deemed a useful application of federal law. And how that law is put into practice is as important to achieving its purpose as was its original passage.

Americans for Country of Origin labeling, a group of trade organizations representing fruit and vegetable, peanut, wild fish, farm-raised fish, and live cattle, sheep and swine industries, and consumer organizations, formulated the following principles for the fair implementation of mandatory country of origin. In keeping with both the intent of congress and the specific

language of the law, the least disruptive and most equitable means for establishing the labeling system should adhere to these principles:

Principle 1: The United States Department of Agriculture (USDA) should not unilaterally shrink the pool of covered commodities beyond the specific exclusions expressly listed by Congress. The Agency should specifically state in rules that merely processing a covered commodity, i.e., cooking, roasting, curing, or restructuring does not exclude the commodity from coverage. USDA should specifically state in rules that merely adding water, salt, seasoning, flavoring, or other additives, to a covered commodity does not exclude the covered commodity from coverage.

Principle 2: The Agency should not impose a regulatory burden on persons Congress did not include as regulated entities. Congress listed all the persons who would be subject to the Secretary's discretionary authority to require a verifiable record-keeping audit trail. Included are persons who prepare, store, handle or distribute a covered commodity for resale. Excluded are producers who sell live cattle, hogs and sheep (not covered commodities) to persons who subsequently transform these live animals into covered commodities, and growers who sell covered commodities to those who subsequently prepare, store, handle, or distribute a covered commodity for resale.

Principle 3: USDA should take affirmative steps to delineate responsibilities and authorities relative to verifying origin. The Agency should require that sellers of a covered commodity, i.e., those who prepare, store, handle, or distribute a covered commodity, have no greater duty than to denote the country of origin of the covered commodities during each sales transaction; and USDA should state in rules that it has the exclusive authority to conduct compliance audits for verifying origin.

Principle 4: The Agency should establish a "Presumption of Domestic Origin" in rules. Such a presumption would be the least cost approach for regulatory efficiency without contravening World Trade Organization (WTO) rules that allow imported products to be labeled and tracked in the food system.

Principle 5: USDA should establish in rules that origin declarations be incorporated within existing industry practices and programs. Retailers and suppliers of perishable agricultural commodities are already required to maintain records associated with each produce transaction. It would be a simple matter to incorporate an additional line, box, or field on existing records for a country of origin designation. For non-perishable covered commodities, the Agency should similarly overlay a line, box, or field on existing records associated with the five distinct model certification programs listed by Congress. The Agency should, as a service to industry, developed standardized forms for use in transferring origin information from sellers to buyers in the stream of commerce where industry does not have a pre-existing document adaptable for the purpose.

- **Give local governments decision-making authority to site-or not site-CAFOs in their communities**

County governments should be given the final say over whether CAFOs will be located in their area. Local governments should also be able to set community health and environmental stipulations so that animal operations do not compromise a community's quality of life.

Currently, local authority to regulate CAFOs is restricted or preempted in ten states. Animal feeding operations and/or land application of manure are exempted from local zoning authority in eight states. In addition, “some state laws also contain loopholes that allow certain large corporate farms to qualify as family farms, which may be immune to nuisance suits or certain regulations.”¹³ Forty-three states have laws or right-to-farm acts that protect CAFOs from nuisance suits over their operations. Right-to-farm acts “directly prohibit local jurisdictions from regulating a “nuisance” on agricultural land,” and “prevent local communities from regulating factory farm facilities, which many argue should not rightfully be called ‘agricultural.’”¹⁴

***Restoration of Environmental Responsibility**

Industrialized agriculture is an extraction business that externalizes its social and environmental costs onto communities. Degradation of water quality, air quality and public health results in a diminished quality of life

On traditional farms, farmers considered manure to be a commodity – something beneficial that when applied at agronomic levels helped to enrich the soil and generate crop growth. Today, however, because of the concentration of livestock and consequently the concentration of their manure, urine, feed, dead animals and production facilities, waste from industrial farms has the potential to harm the environment as much as any toxic substance from any polluting industry. The United States Environmental Protection Agency (EPA) estimates that there are over 450,000 CAFOs, producing 575 billion pounds of manure annually in the United States today.¹⁵

CAFOs concentrate thousands and sometimes hundreds of thousands of animals in one location. In order to reduce labor and minimize costs, CAFOs use a liquefied manure system to handle untreated feces and urine. Whereas a city would be required by law to treat human feces and urine, CAFOs routinely produce as much waste as a city, yet are not required to treat it. Instead, CAFOs flush the untreated waste from facilities into either giant manure storage pits under the buildings or into vast earthen basins, more commonly referred to as lagoons. The pollution strength of raw manure is 110 times greater than that of raw municipal sewage.¹⁶

Lagoons made of concrete do not offer adequate groundwater protection automatically. Joints leak and concrete cracks. If concrete is laid in sand or gravel, leaking manure can migrate to water tables.¹⁷ In addition, when manure lagoons are emptied for spreading, cracks in lagoon sidewalls may develop – further increasing the potential for groundwater contamination.¹⁸

Ground and surface waters may become polluted through excessive manure application on fields and from leaking lagoons. State laws allow untreated animal waste to leak regularly from lagoons. In Iowa alone, a 7-acre lagoon may *legally* leak as much as 16 million gallons of liquefied manure annually. However, an Iowa study found that half of the lagoons tested leaked at rates above legal limits.¹⁹ A survey of Iowa's 5,600 manure pits found that 18% were built over alluvial aquifers, which are most vulnerable for contamination and used most widely as drinking water sources.²⁰

Animal Waste in Surface Waterways

When millions of gallons of untreated liquefied feces and urine are contained in a single area, there is a looming potential for catastrophe. When accidents happen, such as a berm or earthen lagoon basin rupture, entire aquatic ecosystems can be devastated or even destroyed. Every year, industrialized hog, dairy and poultry farms are responsible for spilling millions of gallons of liquefied manure into the waterways of the United States.²¹ Between 1995 and 1998, ten Midwestern states recorded over 1,000 manure lagoon spills.²²

Because of spills and agricultural runoff, animal waste contaminants such as nutrients (including nitrate and phosphorous), sediments, organic matter, pathogens, heavy metals, hormones, antibiotics and ammonia pollute Iowa waters that are used for fishing and swimming. Although some nutrients are beneficial, excessive nutrients in our streams and waterways can cause toxic and non-toxic algal

blooms, which deplete oxygen and can kill fish and other aquatic organisms and ultimately disrupt the entire aquatic food chain.²³ In addition, nutrients act as a catalyst for eutrophication of lakes and estuaries, which in turn harms fish and can result in species change.²⁴

When pathogens and toxic algal blooms become present in our waterways as a result of manure runoff, our waterways can become deadly for the fish and people that rely on them for recreation or livelihood. Excessive nutrients can foster a growth of one specific toxic algal bloom known as *Pfiesteria piscicida* or the *cell from hell*. *Pfiesteria* causes festering sores on the skin of species that come in contact with it. In the fall of 2000, nearly 100% of the menhaden swimming in a 40 square mile area of the Neuse River south of New Bern, North Carolina had infected sores. In addition, many of the fishermen that fished the Neuse River reported having similar sores and memory loss – another side effect of *Pfiesteria piscicida*.²⁵ Hog manure runoff and direct discharge was a contributing factor to the excessive nutrients in the Neuse River.

Animal Waste in Drinking Water and Health Effects

Because of the amount of nitrate and pathogens in animal manure, when groundwater becomes contaminated, the result can be deadly for communities downstream that rely on the water for drinking.

If the amount of nitrate in groundwater drinking supplies reaches an unhealthy level, infants can be particularly susceptible to developing *methemoglobinemia* – or Blue Baby Syndrome – an often fatal blood disorder.²⁶

Microorganisms such as *cryptosporidium* and *E. coli*, which are carried in animal waste have been proven to be deadly if ingested. In 1993, after a severe rainstorm washed animal waste into Wisconsin waterways, *cryptosporidium* in Milwaukee's drinking water supply caused 100 deaths and sickened 430,000 people.²⁷ In Walkerton, Ontario, 600 people became ill and 7 died from *E. coli O157:H7* after the city's water supply became contaminated when animal waste seeped into the town's aquifer.²⁸

Air Pollution

Studies consistently show that CAFOs not only pollute water, but that they pollute our air. Scientists convened in 1998 by the Centers for Disease Control and Prevention (CDC) and more recently by the University of Iowa and Iowa State University agree that CAFO air emissions may constitute a public health hazard.²⁹

When animal waste is treated or stored in large quantities, the decomposing liquid manure releases some 400 volatile organic compounds, including hydrogen sulfide, ammonia, dusts, endotoxins and methane.^{30, 31, 32, 33} When these gases and toxins are carried by the wind to neighboring homes, the emissions can have detrimental effects on the neighbors' quality of life and their mental and physiological health.³⁴ Neighbors living next to confinement operations report higher occurrences of headaches, runny noses, sore throats, excessive coughing, diarrhea and burning eyes.³⁵ Hydrogen sulfide specifically is believed to pose a serious, irreversible threat to human health. One scientist has claimed that "hydrogen sulfide poisons the brain and the poisoning is irreversible."³⁶

In addition to the health problems experienced by CAFO neighbors, many residents report that they are unable to enjoy their property because of the odor emitted by the industrial facilities. Many neighbors to industrialized hog farms report not being able to go outdoors or let their children play in their yards because of the smell. Some report that they have to line their windows and fireplaces with plastics to keep outside air from coming into their homes.³⁷ A Missouri farmer Rolf Christen told Audubon magazine, “*On hot summer nights we have to shut the windows. We lie in bed at 2:00a.m. sweating and I get so mad. How does anybody have the right to stink up my place? You feel like a prisoner.*”³⁸

The Threat of Antibiotic Resistance

In addition to creating water and air pollution, CAFOs also jeopardize public health by overusing or misusing antibiotics. To substitute for unsanitary conditions and to promote growth, CAFO operators routinely feed antibiotics to animals that aren’t sick. The Union of Concerned Scientists estimates that nearly 70% of all antibiotics produced in this country are fed to chickens, turkeys, pigs and cattle housed in CAFOs. Scientific consensus now says that this antibiotic use in food animals contributes to antibiotic resistant bacteria transferred to humans mainly through contaminated food.

A study conducted by the Institute for Agriculture and Trade Policy and the Sierra Club found:

- 95% of the 100 whole chickens tested were positive for *Campylobacter*, the top cause of bacterial foodborne illness of food poisoning in the U.S.
- 62% of the *Campylobacter* tested were resistant to 1 or more antibiotics
- More than 8% of the *Campylobacter* tested were resistant to Cipro – the antibiotic of choice for presumptively treating severe bacterial food poisoning
- 35 Salmonella isolates from whole chickens were analyzed for antibiotic resistance – 6% of those isolates were resistant to 4 or more antibiotics.

The American Medical Association has gone on record opposing the use of antibiotics in farm animals that aren’t sick.³⁹ If animals are sick, they should be removed from the herd or flock and treated as individuals. Independent farmers who have the science-based know-how are able to operate humane, sustainable farming systems in which animal welfare is primary and antibiotic feed additives are not needed.

American agriculture must be a sustainable system dependent on renewable resources and responsible behavior. Industrialized agriculture, including CAFOs, does not meet these requirements and thereby requires regulatory response:

- **Require all CAFOs to comply with existing environmental laws that regulate other polluting industries**

CAFOs are industrial operations that produce colossal amounts of raw feces and urine, which have the potential to cause grave devastation to our environment. Industrial agriculture, under the guise of traditional farming, has sought and been successful at exempting ‘agriculture’ from many environmental regulations that are required of any other polluting industry. As industrial facilities, CAFOs should be placed under the full range of federal and state environmental laws - air, water, hazardous waste, OSHA, industrial tax rate, county planning and zoning.

The EPA defines a CAFO or industrial operation as any facility with 1000 animal units or more. An animal unit is determined by the amount of waste each species produces. An industrial operation is defined by the EPA as any individual facility with the one of the following:

- 2500 Hogs
- 700 Dairy Cattle
- 1000 Beef Cattle
- 100,000 Broiler Chickens
- 82,000 Layer Hens

- **Maintain and fully fund enforcement of clean water and clean air regulations**

Provisions in the Clean Water Act and the Clean Air Act require CAFOs to be regulated and monitored by the state environmental agency. Currently in the State of Iowa, not a single National Pollution Discharge Elimination System Permit (NPDES) has been issued to a CAFO in the state. The NPDES permit is a permit required by the federal Clean Water Act for any operation housing 1000 animal units or more. General NPDES permits should not be available for CAFOs meeting the criteria defining a concentrated animal feeding operation. Such operations should be required to obtain individual and/or site-specific permits that spell out operating standards, including a comprehensive waste-handling plan to ensure accountability and measure environmental performance. Because NPDES permits are part of the federal Clean Water Act, they should also include citizen suit provisions.

In addition to harming the health of neighbors, emissions from confinement operations contribute reactive organics and ammonia into the atmosphere and can play a role in the depletion of ozone and the formation of particulate matter in the air. Air pollutants from CAFOs should be monitored and regulated by the Clean Air Act, as would be required by any other industry with the potential to negatively impact air quality. CAFOs should be treated as stationary air sources as defined by the federal Clean Act as amended, and by the National Ambient Air Quality Standards, and CAFOs should be required to apply for a stationary air source permits.

Money should be appropriated to state and federal agencies so that officials can adequately enforce provisions of the Clean Air and Clean Water Acts, including increased inspection and monitoring of CAFOs to ensure compliance with the law in order to protect public health.

- **Hold livestock integrators accountable and legally liable for the environmental damages associated with CAFOs**

When farmers enter contracting arrangements to grow livestock for large meat companies, many of the contract growers are left responsible for the waste and any devastation it causes to the environment. When corporations are profiting at the expense of communities and the environment, they should also be held accountable for any environmental degradation caused by the facility. Integrators and contractors should be held jointly and severally liable for compliance with environmental regulations and for all damages that result from lack of compliance. These responsibilities should not be transferable by contract. In addition, parent companies should bear the responsibility to dispose of dead animals. Under current contracts, it is often the case that the meat company owns the animals when they are alive. However, their waste and any dead animal becomes the responsibility of the contract grower.

CAFO operators should also be required to follow conditions and standards for proper closure of a CAFO upon cessation of operations. These should address at a minimum lagoon draining and filling, removal of waste handling facilities and equipment, and other conditions to assure public health and safety. Financial assurance instruments (irrevocable letter of credit, cash surety bonds or cash bonds) should be posted by the corporate animal owner in an amount sufficient to ensure proper closure.

- **Prohibit public funds that subsidize CAFOs for basic business expenses such as waste systems**

The Environmental Quality Incentive Program (EQIP) of the USDA National Resource Conservation Service contracts with livestock producers to provide incentive payments and cost-shares to implement waste handling systems. EQIP may cost-share up to 75 percent of the costs, and an individual or entity may receive, directly or indirectly, maximum cost-share or incentive payments that, in the aggregate, total \$450,000 for all EQIP contracts entered. This is tax-payer funding of a basic business expense by subsidizing the construction of CAFO structures. Public funding should not be used to improve or expand CAFOs, which are already a problem due to their large number of animal units and amount of animal waste. A commonsense incentives program would reduce the size of CAFOs in a given locality, not subsidize the management of large amounts of concentrated animal waste.

The statewide poll referred to on page 1 was commissioned in January 2003 by The Humane Society of the United States's Care4Iowa Campaign.

- ¹Hendrickson, M. and Heffernan, W., *Concentration of Agricultural Markets*, University of Missouri, February 2002. <http://www.foodcircles.missouri.edu/CRJanuary02.pdf>
- ² U.S. Department of Agriculture, National Agricultural Statistics Service, *Farms and Land in Farms*, February 2003. <http://usda.mannlib.cornell.edu/reports/nassr/other/zfl-bb/fimno0203.txt>
- ³ Grimes, G., "Hog Marketing Contract Study," University of Missouri and National Pork Board, March 2001.
- ⁴ Iowa Attorney General, "Producer Protection Act," September 2000. <http://www.state.ia.us/government/ag/agcontractingexplanation.htm>
- ⁵ Lubben, B., *The 2002 Farm Bill: U.S. Producer Preferences for Agricultural, Food, and Public Policy*, National Public Policy Education Committee. September 2001. <http://www.farmfoundation.org/pubindex.htm>
- ⁶ Goldschmidt, W. "Small Business and the Community". Report of the Smaller War Plants Corporation to the Special Committee to Study Problems of American Small Business. Washington, DC. U.S. Government Printing Office. 1946.
- ⁷ MacCannell, D. "Agribusiness and the Small Community". Background paper to *Technology, Public Policy and the Changing Structure of American Agriculture*. Office of Technology Assessment. US Congress, Washington, DC. 1983.
- ⁸ Welsh, R., and Tyson, T. "Anti-corporate Farming Laws, the "Goldschmidt Hypothesis" and Rural Community Welfare". Presented at the annual meeting of the Rural Sociological Society. Albuquerque, NM. 2001. www.i300.org/what's_new.htm#anti_corp.
- ⁹ Welsh, R., and Tyson, T. "Anti-corporate Farming Laws, the "Goldschmidt Hypothesis" and Rural Community Welfare". Presented at the annual meeting of the Rural Sociological Society. Albuquerque, NM. 2001. www.i300.org/what's_new.htm#anti_corp.
- ¹⁰ Chism, J.W., and Levins, R.A. "Farm Spending and Local Selling: How do they Match up?" Minnesota Agricultural Economist. Spring 676:1-4. University of Minnesota Extension Service. 1994.
- ¹¹ Thu, K, ed. Understanding the Impacts of large-scale Swine Production: Proceedings from and Interdisciplinary Scientific Workshop. P. 127. 1995.
- ¹² Gomez, M. I., and Zhang, L. "Impacts of Concentration in Hog Production on Economic Growth in Rural Illinois: An Economic Analysis". Presented at the American Agricultural Economics Association Annual Meeting. Tampa, FL. July 31- August 2, 2000.
- ¹³ Halverson, M. *The Price We Pay for Corporate Hogs*, Institute for Agriculture and Trade Policy. July 2000.
- ¹⁴ Halverson, M. *The Price We Pay for Corporate Hogs*, Institute for Agriculture and Trade Policy. July 2000.
- ¹⁵ Region 9: Animal Waste Management. US Environmental Protection Agency. http://www.epa.gov/region09/cross_pr/animalwaste/problem.html
- ¹⁶ U.S. Environmental Protection Agency, Office of Water, *Environmental Assessment of Proposed Revisions to the National Pollutant Discharge Elimination System Regulation and the Effluent Guidelines for Concentrated Animal Feeding Operations* (January 2001), EPA-821-b-01-001.
- ¹⁷ Stuss, S.(1999, July 14). Internet memo posted by Steve Struss, agricultural engineer, Wisconsin Department of Agriculture, describing Wisconsin Technical Standard 313 found at <ftp://www.wi.nrcs.usda.gov/incoming/ENG/STANDARDS?313.pdf>
- ¹⁸ McCurdy, M. & McSweeney, K. (1993). The origin and identification of macropores in an earthen-lined dairy manure storage basin. *Journal of Environmental Quality*, 22, 148-154.
- ¹⁹ Barza, M., and Gorbach, S.L., Eds. The need to improve antimicrobial use in agriculture: ecological and human health consequences. *Clinical Infectious Disease* 2002, 38(3):759-771.
- ²⁰ Simpkins, W.W., et. al., "Potential impact of waste storage structures on water resources in Iowa," *Journal of the American Water Resources Association*, 2002, 38(3):759-771.
- ²¹ Frey, M., Fredregill, A., Hopper, R. (1999, December). Spilling Swill: A survey of factory farm water pollution in 1999. Clean Water network and the Izaak Walton League of America.
- ²² Clean Water Network, Izaak Walton League of America and Natural Resources Defense Council, *Spills and Kills: Manure Pollution and America's Livestock Feedlots*, 2000, <http://www.cwn.org>
- ²³ Region 9: Animal Waste Management. US Environmental Protection Agency. http://www.epa.gov/region09/cross_pr/animalwaste/problem.html

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- ²⁴ Jackson, L. L. et al., "Swine Manure Management Plans in North-Central Iowa: Nutrient Loading and Policy Implications," *Journal of Soil and Water*, (Second Quarter 2000).
- ²⁵ Natural Resources Defense Council and Clean Water Network. *Cesspools of Shame: How Factory Farm Lagoons and Sprayfields Threaten Environmental and Public Health*. July 200. pg. 31.
- ²⁶ Region 9: Animal Waste Management. US Environmental Protection Agency.
http://www.epa.gov/region09/cross_pr/animalwaste/problem.html
- ²⁷ Region 9: Animal Waste Management. US Environmental Protection Agency.
http://www.epa.gov/region09/cross_pr/animalwaste/problem.html
- ²⁸ Canada Laboratory Centre for Disease Control, *Apparent drinking water outbreak of e. coli O157:H7I*. 2000.
<http://water.sesep.drexel.edu/outbreaks/walkerton.htm>
Detroit Free Press. *Chronology of the Walkerton Outbreak*. May 26, 2000.
http://www.freep.com/news/nw/chrono26_20000526.htm
- ²⁹ Iowa State University and the University of Iowa Study Group. *Iowa Concentrated Animal Feeding Operations Air Quality Study*. Final report: University of Iowa School of Public Health and Iowa State University College of Agriculture. February 2002. <http://www.ublic-health.uiowa.edu/ehsrc/CAFOstudy.htm>
- Centers for Disease Control, National Center for Environmental Health. *Public Health Issues Related to Concentrated Animal Feeding Operations Workshop*. 1998.
- ³⁰ Halverson, M. *The Price We Pay for Corporate Hogs*, Institute for Agriculture and Trade Policy. July 2000, p.61.
- ³¹ Wing, S. and Wolf, S. Intensive Livestock Operations, Health and Quality of Life Among Eastern North Carolina Residence. A Report Prepared for the North Carolina Department of Health and Human Services, Division of Public Health. Chapel Hill: University of North Carolina School of Public Health, Department of Epidemiology. May 6, 1999
- ³² Jackson, L.L.. "Large Scale Swine Production and Water Quality". *Pigs Profits and Rural Communities*.
- ³³ Thu, K., and Durrenberger, E.P., ed., Albany State University. Pr. of N.Y, 1998. p. 107.
- ³⁴ Halverson, M. *The Price We Pay for Corporate Hogs*. Institute for Agriculture and Trade Policy. 2000 .
- ³⁵ Wing, S. and Wolf, S. Intensive Livestock Operations, Health and Quality of Life Among Eastern North Carolina Residence. A Report Prepared for the North Carolina Department of Health and Human Services, Division of Public Health. Chapel Hill: University of North Carolina School of Public Health, Department of Epidemiology. May 6, 1999
- ³⁶ Morris J. "New Alarm over Hydrogen Sulfide". The Brimstone Battles: A Houston Chronicle Special Report.
<http://www.chron.com/content/chronicle/nation/h2s/index.html>
- ³⁷ Schiffman, S.S., Sattely-Miller, E.P., M.S., and Graham, B.G. "Mood Changes Experienced by Persons Living Near Commercial Swine Operations". *Pigs Profits and Rural Communities*. Thu, K.M. and Durrenberger, E.P. Ed Albany State University. NY Press. 1998 (pp. 84-102).
- ³⁸ Williams, T. "Assembly Line Swine: Factory hog farms are proliferating across rural America, packing pigs into cages, fouling waterways and creating a major stink. Audubon. Pp. 26-33.
- ³⁹ Wallinga, D., M.D., MPA, Bermudez, N., MES & Hopkins, E. *Poultry on Antibiotics: Hazards to Human Health*. Institute for Agriculture and Trade Policy and Sierra Club. December 2002.