



An HSUS Report: The Impact of Industrialized Animal Agriculture on Rural Communities

Abstract

Industrialized animal agriculture production practices and systems not only jeopardize the welfare of farm animals and the environment, but also negatively impact public health, independent family farmers, and quality of life in rural communities. The tolls exacted on rural communities necessitate dramatic and immediate changes in animal agriculture.

Introduction

Concentrated animal feeding operations (CAFOs), also known as factory farms, tend to cluster in geographic locales where input costs, those expenses for components such as land and labor, are lower, and where their vertically integrated infrastructure is well-developed.¹ Within animal agriculture, vertical integration typically involves ownership of both farm animal production and processing. For example, a large, vertically integrated turkey operation may include a hatchery, feed mill, grow-out sheds, and slaughter and processing or packing plants.²

Factory farms are less likely to move into regions, whether communities or states, with the most stringent regulations. These areas tend to be ones with existing environmental problems,^{*} the greatest number of potentially harmful production systems, or nearby towns and counties inhabited by citizens concerned about the local environment.³

As noted in Environmental Management of Concentrated Animal Feeding Operations (CAFOs), “regulations and legislation have fallen behind CAFO creation and operation, enforcement of existing regulations is spotty, and problems associated with CAFOs are still being identified—although you can be sure those who neighbor CAFOs can identify some big issues, both environmental and social.”⁴ One oft-cited example of geographic concentration of large-scale farm animal factories is the state of Iowa, which leads the United States in both egg⁵ and pig⁶ production. Over two decades, Iowans saw an approximately 84% decrease in the state’s total number of farms that raise pigs; during the same period, however, there was a nearly six-fold increase in the average number of pigs per farm, from 252 animals to 1,428.⁷ A 2003 survey of rural Iowans indicated that the development of pig CAFOs was less desirable than construction of prisons, solid waste landfills, slaughter plants, and sewage treatment plants.⁸

Public Health

The wealth of information linking factory farms with illness led the world’s largest association of public health professionals, the American Public Health Association, to evaluate the issue in 2003 and subsequently issue a policy statement urging federal, state, and local governments and public health agencies to impose a moratorium on the construction of new factory farms “until additional scientific data on the attendant risks to public health have been collected and uncertainties resolved.”⁹

^{*} For more information, see “An HSUS Report: The Impact of Industrialized Animal Agriculture on the Environment” at www.hsus.org/farm/resources/research/enviro/animal_agriculture_environment.html.

Factory farm manure contains a number of byproducts of concern to human health, including heavy metals, pathogen bacteria, and volatile gases.⁹ Numerous studies have found such respiratory problems among factory farm workers as chronic bronchitis, occupational asthma, and Organic Dust Toxic Syndrome.¹⁰ Employees of these facilities are not the only ones at risk, however. Studies published in 2006 found that children who attend schools near CAFOs suffer elevated incidences of asthma symptoms,^{11,12} and other research has documented the problems factory farms create for the health of those who live close to them. In one study, researchers compared physical health symptoms of residents in three communities in North Carolina—two near factory farms housing either pigs or cattle and one in another rural area without any agricultural operations using liquid waste management systems.¹³ Residents near the pig factory farm reported more frequent occurrences of “headache, runny nose, sore throat, excessive coughing, diarrhea, and burning eyes.”¹³ Another study found that neighbors of a pig factory farm also suffered from respiratory problems, nausea, weakness, and chest tightness.¹⁴

The way odors affect the moods of individuals living near a pig factory farm has also been investigated, as negative mood can affect immunity.¹⁵ The gaseous emissions from factory farms emanate from the buildings where animals are confined, waste storage systems, and land application of waste,¹⁶ and odors are produced by decomposing feces, spilled feed, and urine.¹⁵ Compared to the control group in the study, individuals living near the factory farm who encountered the odors had “significantly more tension, more depression, more anger, less vigor, more fatigue, and more confusion.”¹⁵ Determined a 2002 report released by Iowa State University and the University of Iowa, hydrogen sulfide and ammonia emissions from factory farms can pose a health risk to humans.¹⁶

Independent Farmers and Contract Growers

Factory farms have made it increasingly difficult, if not impossible, for independent family farms to survive as competition with large-scale corporate operations is challenging. Many once-independent farmers resort to contractual arrangements with large agribusiness corporations,¹⁷ raising the companies’ animals until slaughter. “Contract growing” now makes up much of the factory farming industry, particularly in the pig and poultry sectors.¹⁷ By 1999, contract production accounted for more than 60% of U.S. pig production and 35% of cattle production.¹⁸ Today, poultry production is now almost entirely contract-based.¹⁷

In such contractual arrangements, the corporations typically supply company-owned animals, feed, and transportation, and the “growers,” who likely own the land, construct company-approved buildings, which may require a personal investment of hundreds of thousands of dollars.¹⁹ Contractees are also typically responsible for managing the animals’ waste, so the companies may have no financial obligation to control or rectify pollution from these facilities that are set up according to the corporations’ own specifications.^{20,21}

Robert Taylor, an agricultural economist at Auburn University, has reportedly found that chicken grower contracts are predominantly deceptive. The contract’s base pay, for example, may be much higher than the actual pay most contract growers will earn over the life of the agreement, with the contract’s proffered net income failing to account for economic depreciation or other costs.²²

Financial considerations are indeed significant concerns in the contract grower system. A 2001 study commissioned by the U.S. Department of Agriculture and conducted by Farmers’ Legal Action Group found that 75% of the contractees surveyed felt that entering broiler chicken production had been a good decision, yet only 35% said they would recommend the same decision to others.²³ According to the United Food and Commercial Workers Union, more than 71% of all contract chicken growers earn below poverty-level wages.²⁴

Among sociologists and those who advocate for the rights of contract growers, a great deal of attention is devoted to “the general well-being of contractees (operators) and their families given their asymmetrical relationship in bargaining power with agribusiness firms” and “the bargaining power of external agribusiness is likely to result in a greater of share of risks and costs of production borne by contractees and their families.”²⁵

For individuals in the community, concern over the decline in independent family farms, coupled with the pressures of reduced quality of life and potential resultant socioeconomic disadvantages when factory farms move in, can contribute to CAFO-related post-traumatic stress disorder symptoms.²⁶

Quality of Life

Studies have shown that property values can decline substantially when residences are in close proximity to a CAFO.²⁷⁻²⁹ According to an article in the journal of The Appraisal Institute, an international association of professional real estate appraisers, case studies demonstrate that “diminished marketability, loss of use and enjoyment, and loss of exclusivity can result in a diminishment ranging from 50% to nearly 90% of otherwise unimpaired value.”²⁷ Researchers in Pennsylvania have found that neighboring house prices decrease once the total live weight of confined animals exceeds 200,000 pounds.³⁰

A study conducted in five counties in North-Central Iowa found that nearby residences downwind of a confinement operation may suffer a 10% drop in property value.²⁹ Thus, residents of the community may suffer economic harm for the financial benefit of the company that has contracted with an individual to operate the facility.

Studies have also documented the beneficial impacts independent farms can have on communities, as well as the costs that accompany the increase in factory farms. A 1994 University of Missouri study suggested that one “logical strategy for increasing employment in hog production is to support beginning hog farmers who might choose ‘low-investment,’ pasture production systems. . . In terms of hog farm employment, ten low-investment units would produce 12,000 feeder pig[s] per year and create 8 full-time positions. A single contract farrowing unit producing about the same number of pigs but [*sic*] would employ only 2.5 people.”³¹

According to a 1996 University of Iowa study, “an important reason for advocating industrial scale hog production is its touted efficiency—it reduces the amount of labor required per unit of production. If intensive industrial swine facilities are indeed more efficient, then the number of jobs will be reduced. Industry cannot have it both ways.”³² The study also found that “[w]here large scale operations are present there are fewer farms and fewer hog farms. In rural areas, where there are fewer small-to-moderate hog operations, there are declines in economic well-being as reflected in increased food stamp usage.”³²

A 2000 Illinois State University study concluded that “[c]ontrary to mainstream positions in the agricultural economics literature, the results reject the hypothesis that large hog farming units contribute to the vitality of local economies. Instead, the several models developed here consistently suggest that large hog farms tend to hinder economic growth in rural communities.”³³ A 2007 review article found that “[e]conomic concentration of agricultural operations tends to remove a higher percentage of money from rural communities than when the industry is dominated by smaller farm operations, which tend to circulate money within the community.”¹⁷

Conclusion

In April 2008, the Pew Commission on Industrial Farm Animal Production released the results of a 2.5-year investigation³⁴ into the problems associated with today’s customary animal agriculture practices and systems. The Commission’s 15 expert members focused on the impacts of industrial farm animal production on animal welfare, the environment, public health, and the vitality of rural communities,²⁰ and determined that industrial farm animal production “often poses unacceptable risks to public health, the environment and the welfare of the animals themselves.”³⁴

In its chapter entitled “Rural America,” the Commission concluded:

Research consistently shows that the social and economic well-being of rural communities benefits from larger numbers of farmers rather than fewer farms that produce increased volumes. In rural communities where fewer, larger farms have replaced smaller, locally owned

farms, residents have experienced lower family income, higher poverty rates, lower retail sales, reduced housing quality, and persistent low wages for farm workers.³⁴

Indeed, the billions of animals raised for meat, eggs, and milk in today's industrial animal agribusiness industries are not the only ones who suffer from factory farming. Employees and individuals who live near these facilities are also impacted by today's animal agriculture systems. In addition to impairing water and air quality in surrounding areas, factory farms threaten public health, jeopardize the ability of independent family farms to stay in business, and deteriorate quality of life in rural communities. In this way, communities in which these operations are situated are left to contend with their detrimental impacts for the benefit of agribusiness corporations.

References

1. Herath DP, Weersink AJ, and Carpentier CL. 2005. Spatial and temporal changes in the U.S. hog, dairy, and fed-cattle sectors, 1975-2000. *Review of Agricultural Economics* 27(1):49-69.
2. Harwood J, Heifner R, Coble K, Perry J, and Somwaru A. 1999. Managing risk in farming: concepts, research, and analysis. Agricultural Economics Report No. AER774. U.S. Department of Agriculture Economic Research Service. www.ers.usda.gov/Publications/AER774/. Accessed June 18, 2008.
3. Sullivan J, Vasavada U, and Smith M. 2000. Environmental regulation and location of hog production. U.S. Department of Agriculture Economic Research Service. *Agricultural Outlook*, September, pp. 19-23. <http://usda.mannlib.cornell.edu/reports/erssor/economics/ao-bb/2000/ao274.pdf>. Accessed June 18, 2008.
4. Spellman FR and Whiting NE. 2007. *Environmental Management of Concentrated Animal Feeding Operations (CAFOs)* (Boca Raton, FL: Taylor & Francis Group, p. 6).
5. Iowa Egg Council. 2007. Iowa's egg industry. www.iowaegg.org/iowaeggcouncil.asp?idSection=2&idPage=7. Accessed June 18, 2008.
6. Iowa Pork Producers Association. 2006. Iowa's changing swine industry: a look at the past 25 years. www.iowapork.org/newsroom/changing_industry.html. Accessed June 18, 2008.
7. Otto D and Lawrence J. 2000. The Iowa pork industry 2000: trends and economic importance. Iowa State University. www.econ.iastate.edu/research/webpapers/HogIndustryImpact.pdf. Accessed June 18, 2008.
8. Korsching P, Lasley P, and Roelfs D. 2004. Iowa rural life survey: 2003 summary report. Iowa State University Extension, p. 6. www.soc.iastate.edu/ext/presentations/publications/tech/PM1960 - Iowa Rural Life Poll.pdf. Accessed June 18, 2008.
9. American Public Health Association. 2003. Precautionary moratorium on new concentrated animal feed operations. Policy number 20037. www.apha.org/advocacy/policy/policysearch/default.htm?id=1243. Accessed June 18, 2008.
10. Thu K (ed.). 1995. Understanding the impacts of large-scale swine production. In: *Proceedings from an Interdisciplinary Scientific Workshop, June 29-30 (Des Moines, IA)*.
11. Mirabelli MC, Wing S, Marshall SW, and Wilcosky TC. 2006. Asthma symptoms among adolescents who attend public schools that are located near confined swine feeding operations. *Pediatrics* 118(1):e66-75.
12. Sigurdarson ST and Kline JN. 2006. School proximity to concentrated animal feeding operations and prevalence of asthma in students. *Chest* 129(6):1486-91.
13. Wing S and Wolf S. 2000. Intensive livestock operations, health, and quality of life among eastern North Carolina residents. *Environmental Health Perspectives* 108(3):233-8. www.ehponline.org/members/2000/108p233-238wing/108p233.pdf. Accessed June 18, 2008.
14. Thu K, Donham K, Ziegenhorn R, et al. 1997. A control study of the physical and mental health of residents living near a large-scale swine operation. *Journal of Agricultural Safety and Health* 3(1):13-26.
15. Schiffman SS, Sattely Miller EA, Suggs MS, and Graham BG. 1995. The effect of environmental odors emanating from commercial swine operations on the mood of nearby residents. *Brain Research Bulletin* 37(4):369-75.
16. Iowa State University and the University of Iowa Study Group. 2002. *Iowa concentrated animal feeding operations air quality study, final report*.
17. Donham KJ, Wing S, Osterberg D, et al. 2007. Community health and socioeconomic issues surrounding concentrated animal feeding operations. *Environmental Health Perspectives* 115(2):317-20.

- www.ehponline.org/members/2006/8836/8836.pdf. Accessed June 18, 2008.
18. U.S. Government Accountability Office. 2005. Livestock market reporting: USDA has taken some steps to ensure quality, but additional efforts are needed. www.gao.gov/new.items/d06202.pdf. Accessed June 18, 2008.
 19. Wing S, Cole D, and Grant G. 2000. Environmental injustice in North Carolina's hog industry. *Environmental Health Perspectives* 108(3):225-31. www.ehponline.org/members/2000/108p225-231wing/108p225.pdf. Accessed June 18, 2008.
 20. Pew Commission on Industrial Farm Animal Production. 2008. Putting meat on the table: industrial farm animal production in America. www.ncifap.org/_images/PCIFAP_FINAL_REPORT.pdf. Accessed June 18, 2008.
 21. Kennedy RF Jr and Schaeffer E. 2003. An ill wind from factory farms. *The New York Times*, September 20. <http://query.nytimes.com/gst/fullpage.html?res=9C0DE3DC103AF933A1575AC0A9659C8B63>. Accessed June 18, 2008.
 22. National Contract Poultry Growers Association. 2005. Agricultural economist provides hard numbers for farmers. www.ncpga.info/newsletterpdf/9.pdf. Accessed June 18, 2008.
 23. Farmers' Legal Action Group, Inc. 2001. Assessing the impact of integrator practices on contract poultry growers, September, pp. 2-5. <http://flaginc.org/topics/pubs/poultry/poultryrpt.pdf>. Accessed June 9, 2008.
 24. United Food and Commercial Workers Union. Injury and injustice—America's poultry industry. www.ufcw.org/press_room/fact_sheets_and_backgrounder/poultryindustry_cfm. Accessed June 18, 2008.
 25. Stofferahn CW. 2006. Industrialized farming and its relationship to community well-being: an update of a 2000 report by Linda Lobao. Prepared for the state of North Dakota, Office of the Attorney General for *State of North Dakota v. Crosslands*, North Dakota District Court. www.und.nodak.edu/misc/ndrural/Lobao & Stofferahn.pdf. Accessed June 18, 2008.
 26. Donham KJ, Wing S, Osterberg D, et al. 2007. Community health and socioeconomic issues surrounding concentrated animal feeding operations. *Environmental Health Perspectives* 115(2):317-20, citing: Hodne CJ, unpublished data. www.ehponline.org/members/2006/8836/8836.pdf. Accessed June 18, 2008.
 27. Kilpatrick JA. 2001. Concentrated animal feeding operations and proximate property values. *The Appraisal Journal* LXIX(3):301-6.
 28. Palmquist RB, Roka FM, and Vukina T. 1997. Hog operations, environmental effects, and residential property values. *Land Economics* 73(1):114-24.
 29. Herriges JA, Secchi S, and Babcock BA. 2003. Living with hogs in Iowa: the impact of livestock facilities on rural residential property values. Working Paper 03-WP 342. Iowa State University Center for Agricultural and Rural Development.
 30. Ready RC and Abdalla CW. 2005. The amenity and disamenity impacts of agriculture: estimates from a hedonic pricing model. *American Journal of Agricultural Economics* 87(2):314-26.
 31. Ikerd JE. 2004. The economic impacts of increased contract swine production in Missouri: another viewpoint. <http://web.missouri.edu/ikerdj/papers/con-hog.htm>. Accessed June 18, 2008.
 32. Durrenberger EP and Thu KM. 1996. The expansion of large scale hog farming in Iowa: the applicability of Goldschmidt's findings fifty years later. *Human Organization* 55(4):409-15.
 33. Gomez MI and Zhang L. 2000. Impacts of concentration in hog production on economic growth in rural Illinois: an econometric analysis. Presented to the American Agricultural Economics Association annual meeting in Tampa, July 31 to August 2. <http://ageconsearch.umn.edu/bitstream/21846/1/sp00go03.pdf>. Accessed June 18, 2008.
 34. Pew Commission on Industrial Farm Animal Production. 2008. Pew Commission says industrial scale farm animal production poses "unacceptable" risks to public health, environment. Press release issued April 29. www.ncifap.org/_images/PCIFAP_Final_Release_PCIFAP.pdf. Accessed June 18, 2008.

The Humane Society of the United States is the nation's largest animal protection organization—backed by 10 million Americans, or one of every 30. For more than a half-century, The HSUS has been fighting for the protection of all animals through advocacy, education, and hands-on programs. Celebrating animals and confronting cruelty. On the Web at humanesociety.org.