

# CAFO Operations and the Destruction of Agricultural Communities

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## **I. Paradigmatic Statement:**

There is a strong link between rural community viability and food policy. Conventional family farms cannot exist without the support of a viable agricultural community, and rural communities must thrive if non-corporate food policy is to remain an option. Hence, the most damaging effect of concentrated animal feeding operations (CAFOs) is their destructive impact on the agricultural communities that support conventional farms.

## **II. The Certainty Of Unfavorable Regional Impacts From CAFOS**

The central issues of Concentrated Animal Feeding Operations (CAFOs) initially seem to be ones of price and efficiency. However, the real issues are ones of information and information control. As Jones notes, “[u]ntil greater transparency of information in economic signals between [agricultural] levels occurs, there is a strong incentive for producers to develop formal partnerships through cooperatives, joint ventures, or vertical arrangements.”<sup>1</sup> These ventures create two contracts of interest when a CAFO enters a region:

1. a contract with the CAFO’s organization where information is equally shared and where the motives of all players are a consistent and singular search for profit, and
2. a contract between the community and the CAFO where asymmetrical information exists. It is this second contract that is of interest in the following pages.

When a CAFO enters a region, it strikes a bargain with the community in that region. This implicit contract is usually formed around stated, not written, promises of jobs and economic growth that the CAFO will provide to the region in return for land, water, access, power and the other inputs the CAFO needs to operate.

The CAFO is typically well informed about both the legal contract with its organization and the implied contract with the region because it signed the legal contract and it extended the verbal offers on which the implied regional contract is based. But the citizens of the region have little information about the CAFO’s explicit contract with its organization. This creates an incentive for the CAFO to shift costs between the two contracts based on each party’s access to information about those costs. The party with the least information about costs—the region—is most likely to have costs shifted in its direction.

Local, state, and national laws affect the ability of CAFOs to control information about their operations and these laws predetermine the physical relationship between a CAFO and a region. These laws are usually based on the critical assumptions that:

1. all agricultural operations are similar to the conventional, closed systems that previously dominated agriculture.
2. animal waste, as a natural product, while annoying, is essentially harmless, and not as toxic as human waste because it is from ruminant animals.

When a CAFO enters a region it encounters a set of rules based on these assumptions--rules structured to control a type of agricultural production whose inputs and waste byproducts are not representative--either in quantity or chemical composition--of a CAFO.

At issue here is not whether the CAFO can make an implied contract with the region. Instead, the point is that in addition to this contract being defined around incorrect assumptions, it will also be based on asymmetrical information that heavily favors the CAFO. Such a contract is likely to work in only one direction--it is likely to increase the profits of the CAFO by shifting the operating costs of the CAFO either to the region in which it is situated or, through some mechanism of pollution migration, to another region further removed from the CAFO. The certainty of this outcome follows directly from existence of asymmetrical information about the operation of the CAFO and from the motivation of the operators of the CAFO.

In theory, a CAFO permitting process should insure that residents of a region are fully informed about all aspects of a CAFO’s proposed operation. If this was true, there would be no asymmetrical

information. However, the nature of the permitting process--which is also based on the incorrect assumption that all agricultural projects are conventional in nature--allows the CAFO operator to acquire an operating permit while withholding significant amounts of information from residents of the region by:

1. claiming that its methods of handling waste are proprietary.
2. enforcing requirements for sterile operating facilities that limit public knowledge about CAFO operations.
3. using contracts with out-of-area corporations that limit knowledge of input sources.
4. employing out-of-area ownership and Limited Liability Partnerships that limit the ability of local residents to determine the motivation, trustworthiness, and credibility of owners.
5. using a series of short-term, turn-key projects with no record of performance or reliability.
6. rushing the permit approval process so regions lack the time to do research on the proposal.

As a result of all these factors, the county or other permitting agency inadvertently creates what economists call a moral hazard, a process that occurs when one party is better informed than the other about the characteristics of the transaction. By definition, a moral hazard leads to lower efficiency and higher costs to the least informed party (in this case, the region hosting the CAFO.)

Having created a moral hazard, the region is now faced with a second economic condition called adverse selection--there is an incentive for additional producers who also want to shift costs to the residents of the region to migrate to the area. The only recourse for the region is monitoring by knowledgeable regulators. However, the factors that make it difficult to get information on proposed CAFO operations during permitting also complicate attempts to monitor CAFOs--a condition called low separability. Separability is "...the feasibility to see who has done the work. With low separability, the principal [in this case, the region] will face either high control costs or intense cheating."<sup>2</sup> The history of CAFO operations shows that cheating is likely.

### **III. The Link Between CAFO Efficiency And Unfavorable Regional Impacts**

Insofar as animals and their confinement facilities can be treated as machines, the CAFO philosophy is that they can be "improved" through the addition of capital to the production process. This "improvement" comes through standardization of hog and chicken breeds and sizes, control of growth rates and animal disease, and increased specialization of workers, managers, and animal raising facilities.

If this were all there was to a CAFO, one would expect efficiency to continually increase as more capital was added to the operation. The maximum efficient size of CAFOs would be extremely large because efficiencies would cause average costs to continue to drop. This is not the case. Efficiency peaks as concentration increases because the real cost of waste disposal rises sharply after one exceeds the ability of the land to absorb animal waste.

When all economic costs of CAFOs are considered, two economic concepts--diseconomies of scale and diminishing marginal returns--both mandate that the maximum efficient size should be relatively small.

Diseconomies of scale come into play when problems associated with some element of a production process increase much faster than the size of the process itself increases. With hogs or chickens this occurs when one attempts to control disease and stress from confinement, movement and transportation. The possibility of disease among hogs is so great that dependence on antibiotics, limits to shed populations, requirements to maintain a sterile site, and time limits on the life of hog facilities all act to create diseconomies of scale.

Diminishing returns also limit the efficient size of CAFO operations. When units of a variable resource (hogs) are added to a fixed resource (land) one reaches a point where the marginal product (the revenue gained from the last hog added to the operation less the cost of the last hog added to the operation) of the variable resource begins to decline. The real costs of responsibly handling animal

waste closely link the point of this decline to the ability of the land to absorb and recycle the manure generated by the CAFO. Diminishing returns to scale quickly lead to costs of animal confinement that overwhelm any benefits of CAFOs.

Since these two concepts imply that large CAFOs operate at an inefficient scale, why have CAFOs been able to capture a large and increasing share of the hog market over the last thirty years? There are three reasons: First, the costs of dealing with animal waste from CAFOs have been successfully avoided by CAFO owners and shifted to the surrounding regional population as health problems, traffic, social problems and pollution (odors, chemical and particulate air pollution; chemical, pathogen, and particulate water pollution). These costs are neither paid by the CAFO nor are they included in the price of the products they market.

Second, CAFOs have been major beneficiaries of industrial and agricultural tax breaks and industrial and agricultural subsidies. To achieve this, CAFOs have been designed to take full, economic advantage of the assumptions about agriculture listed in the previous section. These assumptions allow important costs of CAFO operations to be either omitted or understated in their profit and loss calculations. They also allow a CAFO to take advantage of important tax and investment opportunities that, in effect, subsidize its operation. These factors artificially inflate the amount of profit available from CAFO operations, generate short term gains for investors, and draw more investment into CAFO operations.

Third, CAFOs have benefited from a degree of vertical integration that appears to be in violation of US antitrust law. The US packing industry is a regulated industry governed by the Packers and Stockyards Act of 1921. This Act specifically prohibits the kinds of anti-competitive practices (such as captive supplies) that come from vertical integration.

These three advantages have been able to compensate for declines in CAFO production efficiency due to diminishing returns and diseconomies of scale. Unfortunately, these same advantages also contribute to regional economic decline.

Regional economic viability proceeds on the premise that wages paid and purchases made by a company are transferred to other individuals or companies in the region and not to other areas of the state or nation. However, CAFOs are specifically structured to limit these kinds of payments. This makes CAFOs fundamentally incompatible with regional economic health:

1. A capital intensive CAFO is designed to minimize the number of workers and hence, their economic impact.
2. CAFOs receive numerous tax reductions because they are treated both as industries and farms. These write-offs significantly decrease the amount of taxes paid to a region while CAFO operations create social, health and traffic costs the region must finance.
3. Vertical integration requires purchases from and sales to other members of the vertically integrated company, not from local producers and suppliers.
4. The CAFO leaves behind the costs of its odor, health risks, surface water pollution, ground water pollution and in the long run, its abandoned lagoons and facilities. This directly effects both long and short run economic development.

#### **IV. Suggested Remedies:**

Since CAFOs can only compete with conventional agriculture when they can shift the costs of their operations to others, when they receive heavy subsidies from both agricultural and industrial sources, and when they enjoy a vertically integrated structure that restricts the ability of conventional producers to market their goods, these factors must be controlled to keep the CAFO from degrading the long-term economic health of a region. To accomplish this, both lawmakers and local citizens should insist that:

- \*Agribusiness corporations accept responsibility for all the environmental impacts of CAFO production at their contract farms. These corporations should be legally liable for violations of permits, waste management plans, and other environmental requirements.
- \*No CAFO be permitted unless air-tight, written contracts cover every phase of CAFO operations as well as every promise, statement of intent, and assurance given to the local region. Further, every contractual element should be bonded and additional bonds should be required to assure that resources will be available to close and clean up waste lagoons and restore the natural environment around them.
- \*Legislation to deal with agricultural pollution and market problems should be guided by and constructed with input from conventional ranchers and farmers and local communities, not CAFO operators or their representatives and not representatives of corporate agricultural interests.
- \*Agricultural subsidies be directed solely toward conventional farmers who responsibly account for all costs of production.
- \*The US government enforce the Packers and Stockyards Act of 1921.

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<sup>1</sup> Jones, Elund, "The Role of Information in US Grain and Oilseed Markets," Review of Agricultural Economics, vol. 21, no. 1, Spring/Summer, 1999, pp. 244-247.

<sup>2</sup> Sauvee, Loic, "Toward an Institutional Analysis of Vertical Coordination in Agribusiness," in The Industrialization of Agriculture, Jeffrey S. Royer and Richard T. Rogers, eds., Ashgate Press, Brookfield, VT, 1998, p. 55, 56.