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# **Enforcing Environmental Law in an Unequal Market: The Case of Concentrated Animal Feeding Operations**

By Paul Stokstad<sup>1</sup>

## **Introduction**

Regulators enforce environmental laws by imposing civil penalties on violators.<sup>2</sup> Penalties deter because a company that knows it is liable for penalties has a financial incentive to avoid violations. But sometimes more than one party is involved in a pollution-generating activity. A plant manager might order an employee to dispose of waste improperly. A parent corporation might direct its subsidiary to skirt a condition of its environmental permit. In such situations, a central issue in the enforcement of environmental law is to determine who is subject to penalties.

This article deals with one such situation, in which one corporation (typically large) hires another corporation (typically small) to engage in an activity that produces pollution. If the small corporation violates environmental law while engaging in that activity, it will be liable for penalties. But should the law make the larger firm jointly responsible for the environmental violations committed by the smaller? Many questions jump to mind. Is it fair to impose penalties on the larger corporation, even though it did not itself pollute? Will making the larger firm liable for

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<sup>2</sup> While other techniques exist—criminal enforcement, environmental self-auditing programs, compliance assistance, and public disclosure of compliance information, for example—this article does not address them. A thorough treatment of various enforcement approaches can be found in CLIFFORD RECHTSCHAFFEN & DAVID MARKELL, *REINVENTING ENVIRONMENTAL ENFORCEMENT AND THE STATE/FEDERAL RELATIONSHIP* 59 (2003).

penalties cause it to pressure the smaller firm to avoid violations in the future? Does it matter whether the large firm has a bargaining advantage over the small firm? These questions cannot be answered in the abstract. This article examines them in the important context of the American meat-production industry.<sup>3</sup>

The meat industry fits the pattern just described. Once the province of small farmers, meat production in America has come to be dominated by a few large, vertically-integrated corporations, often called "integrators." Their names—Tyson Foods, Smithfield, and others—are familiar to consumers. Though these corporations are involved in most of the stages of meat production, they do not typically raise the animals themselves. Instead, they enter into short-term contracts with farmers to do that for them. These contract farmers are often called "growers."<sup>4</sup>

Integrators have a strong bargaining advantage over growers. In any given local market, there are typically only a few integrators available to buy meat, since a handful of integrators hold a large percentage of the market. Some economic evidence suggests that integrators hold market power<sup>5</sup> and have been able to use it to extract most of the profits created by meat production, leaving growers operating at the margin.<sup>6</sup> In the past few years, agricultural reformers, who assert that integrators have robbed

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<sup>3</sup> "Industry" is the appropriate word. American farmers raise tremendous numbers of animals: 8.8 billion chickens and 61 million hogs in 2006, for example. *See* U.S. DEPT. OF AGRIC., POULTRY: PRODUCTION AND VALUE, 2006 SUMMARY (April 2007); U.S. DEPT. OF AGRIC., QUARTERLY HOGS AND PIGS (June 2007). The industry has sales of \$90 billion annual. *See* U.S. DEPT. OF AGRIC., MEAT ANIMALS PRODUCTION, DISPOSITION, AND INCOME, 2006 SUMMARY 1 (Apr. 2007) (gross receipts of \$64 billion for cattle and calves, hogs and pigs, and sheep and lambs); U.S. DEPT. OF AGRIC., POULTRY - PRODUCTION AND VALUE, 2006 SUMMARY 1 (Apr. 2007) (gross receipts of \$26 billion for broilers, eggs, turkeys, and the value of sales from chickens).

<sup>4</sup> Although the terms "grower" and "integrator" are most common in the poultry sector of the meat industry, this article will use them with respect to the other animal sectors as well.

<sup>5</sup> "The term 'market power' refers to the ability of a firm (or a group of firms, acting jointly) to raise price above the competitive level without losing so many sales so rapidly that the price increase is unprofitable and must be rescinded." William M. Landes & Richard A. Posner, *Market Power in Antitrust Cases*, 94 HARV. L. REV. 937, 937 (1981). Although this article examines integrators' ability to reduce prices for the animals they buy, not to raise prices for the meat they sell, the principle is the same.

<sup>6</sup> *See infra* Section III.A.

them of their independence and damaged rural communities by turning “farmers” into “growers,” have offered a variety of reforms aimed at reducing integrators’ market power or preventing them from taking unfair advantage of it.<sup>7</sup>

There is no question that meat production is a pollution-generating activity. In the modern meat industry, the farmers contracting with integrators do not raise their cows, hogs, and chickens in the green pastures and picturesque barns depicted on milk cartons. They operate large facilities at which thousands, tens of thousands, or even millions of animals are grown in close confines. Critics sometimes call these operations ‘factory farms.’<sup>8</sup> The Environmental Protection Agency refers to them as “Concentrated Animal Feeding Operations” or “CAFOs.”<sup>9</sup> Whatever they are called, these operations create a significant amount of water pollution.<sup>10</sup>

CAFOs pollute water in two ways. One way is through the spreading of too much manure on fields. On traditional small farms, animal manure could be used as fertilizer on nearby fields. But animals packed into CAFOs produce vast quantities of manure. Because manure is expensive to transport, CAFO operators sometimes apply it to nearby fields in amounts that greatly exceed what the plants can absorb. The manure can then seep or wash into waterways, where its nutrients rob marine life of oxygen. The other way CAFOs pollute rivers and streams is through spills. Manure is usually stored in liquid form. Pipes carrying the manure to the fields can burst. Manure applicators can be left on too long or spray too close to streams. Worst, the enormous lagoons that store manure awaiting application sometimes fail. The concentrated manure can wipe out all life in a stream.

While CAFOs have long been subject to environmental laws, as the industry has grown regulators have begun to pay closer attention.<sup>11</sup> EPA and the states have strengthened their enforcement efforts. New regulations under the Clean Water Act<sup>12</sup> have enlarged the number of

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<sup>7</sup> See *infra* Section III.B.

<sup>8</sup> See [www.sierraclub.org/factoryfarms](http://www.sierraclub.org/factoryfarms).

<sup>9</sup> See *infra* Section II.B (for the precise regulatory definition of a CAFO).

<sup>10</sup> See *infra* Section II.A.

<sup>11</sup> See *infra* Section II.B.

<sup>12</sup> 33 U.S.C. §§ 1251-1387 (2006).

CAFOs subject to environmental controls and have limited the amount of manure that can be applied to farmland. In the debate surrounding these new regulations and enforcement efforts, one controversial issue stands out: whether integrators should be subject to penalties for environmental violations at the CAFOs with which they contract.<sup>13</sup>

This article explores this issue by examining how integrators' market power can determine whether it is fair and effective to make them liable for environmental violations at CAFOs.<sup>14</sup> Recent economic research suggests that the more market power integrators hold, the more effective it will be to make them liable for environmental violations at CAFOs; one goal of this article is to bring this economic analysis into the legal debate, where it has not yet been given much attention.

This article also introduces a new wrinkle to the analysis. It argues that the effectiveness of integrator liability depends not only on the extent of their market power, but on the kind of violation at issue: manure over-application or manure spills. The difference between them is that manure over-application is relatively easy to prevent, so long as a CAFO is willing to spend the money to acquire more land or treat the manure to reduce its nutrient content. A CAFO that violates the new manure application limits will do so only if the integrator believes that it will be cheaper to violate the law than to pay the penalties for doing so. In that sense, manure over-

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<sup>13</sup> Agricultural reformers and environmentalists are not the only ones who have criticized CAFOs. Animal welfare advocates lambast the often cruel conditions in which animals are raised. *See, e.g.,* GAIL A. EISNITZ, *SLAUGHTERHOUSE* (1997); DAVID J. WOLFSON, *BEYOND THE LAW: AGRIBUSINESS AND THE SYSTEMIC ABUSE OF ANIMALS RAISED FOR FOOD OR FOOD PRODUCTION* (1999). Social critics contend that CAFOs are destroying rural communities. *See, e.g.,* JOHN IKERD, *CORPORATE HOG PRODUCTION: THE COLONIZATION OF RURAL AMERICA* (2003), *available at* <http://web.missouri.edu/~ikerdj/papers/HogColonialism.htm>; MIGUEL I. GOMEZ, *IMPACTS OF CONCENTRATION OF HOG PRODUCTION ON ECONOMIC GROWTH IN RURAL ILLINOIS: AN ECONOMETRIC ANALYSIS* (2000), *available at* <http://www.factoryfarm.org/docs/Gomez.pdf>. Workers' rights advocates criticize the conditions for workers at CAFOs and meat packing plants. *See, e.g.,* HUMAN RIGHTS WATCH, *BLOOD, SWEAT, AND FEAR: WORKERS' RIGHTS IN U.S. MEAT AND POULTRY PLANTS* (2005), *available at* <http://www.hrw.org/reports/2005/usa0105/usa0105.pdf>.

<sup>14</sup> As the introduction to this point has suggested, this article is using the term "integrator liability" to mean liability to the government for civil penalties for violation of environmental laws and regulations, not liability to third parties for the harmful effects of pollution.

application is an intentional violation. Manure spills, by contrast, are accidents. As will be explained in Section IV, when integrators hold market power, integrator liability is more effective at preventing accidents than at deterring intentional violations.

Section I of this article begins with a brief description of the CAFO industry. Section II outlines the environmental problems CAFOs cause, and the steps the legal system has taken to attempt to alleviate those problems. Section III describes the significant inequality in bargaining power that exists between integrators and growers, explains why that imbalance exists, and details some steps that have been and could be taken to rectify that market imbalance.

Section IV, the heart of this article, discusses two issues. The first, as described above, is whether integrators' market power should affect environmental regulation; in particular, whether integrators should be liable under the Clean Water Act for pollution from CAFOs with which they contract. The second issue addressed in Section IV is whether market reforms—both those aimed at diminishing integrators' market power and those intended to ameliorate the effects of integrators' market power on growers—will affect the ability of regulators to improve the environmental performance at CAFOs. The article concludes with some brief recommendations.

## **I. The Structure of the Meat-Producing Industry**

The poultry sector adopted the CAFO model in the years following World War II. More recently, the hog and cattle sectors have begun to follow suit. The transformation has been dramatic. The number of farms has plummeted. Taking hog farming as an example, of the 870,000 hog farms in the United States in 1970, only 73,600 remained by 2003. Meanwhile, the number of animals per farm has skyrocketed. The average number of hogs raised on a farm has increased more than tenfold, from 73 in 1970 to 821 in 2003.<sup>15</sup> Today, by EPA's count, there are about 18,000

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<sup>15</sup> National Pollutant Discharge Elimination System Permit Regulation and Effluent Limitations Guidelines and Standards for Concentrated Animal Feeding Operations, 66 Fed. Reg. 2960-01, 2974 (proposed Jan. 12, 2001) (hereinafter 2001 Proposed CAFO Rule). Looking at farms that raise broilers (chickens used for meat), the average number

facilities in the United States that meet the regulatory definition of a Concentrated Animal Feeding Operation.<sup>16</sup> CAFOs are now the dominant way meat is produced in the United States.<sup>17</sup>

Two economic characteristics of the industry are particularly important for purposes of this article: the substantial concentration of the industry, particularly in meat processing, and the rising use of production and marketing contracts between independent growers and large, integrated corporations.

### A. Concentration and Integration

The meat-raising industry is concentrated both vertically and horizontally. Vertical integration exists when a firm operates at multiple levels of a production chain. In the meat industry, the levels of production include growing and processing feed grain, raising animals, slaughtering them, and packaging and marketing their meat. Vertical integration has been increasing over the past decade, with large companies known as "integrators" beginning to be involved at many or all of the various stages. This vertical integration is most pronounced in the poultry industry,<sup>18</sup> but the hog and cattle industries have been catching up since the 1990s.<sup>19</sup> For example, in 2005, Cargill was among the largest four firms in the production of animal feed, the raising and slaughter of cattle, and the

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of chickens has grown from 73,300 birds in 1974 to 281,700 in 1997; 1997 the average number of cattle and milking cows grew from 80 to 250. *Id.*

<sup>16</sup> See U.S. ENVTL. PROT. AGENCY, COMPLIANCE AND ENFORCEMENT NATIONAL PRIORITY: CLEAN WATER ACT, WET WEATHER (Nov. 2004), *available at* <http://www.epa.gov/compliance/resources/publications/data/planning/priorities/fy2005prioritycwastorm.pdf>.

<sup>17</sup> CAFOs accounted for 80 percent of the total revenue from the production of livestock in 2001. U.S. GENERAL ACCOUNTING OFFICE, LIVESTOCK AGRICULTURE: INCREASED EPA OVERSIGHT WILL IMPROVE ENVIRONMENTAL PROGRAM FOR CONCENTRATED ANIMAL FEEDING OPERATIONS, GAO/RCED-03-285 (2003) at 1.

<sup>18</sup> FARMERS' LEGAL ACTION GROUP, ASSESSING THE IMPACT OF INTEGRATOR PRACTICES ON CONTRACT POULTRY GROWERS (Sept. 2001) at 1-1.

<sup>19</sup> See JOHN CONNOR ET AL., THE BAN ON PACKER OWNERSHIP AND FEEDING OF LIVESTOCK: LEGAL AND ECONOMIC IMPLICATIONS 1 (2003), *available at* <http://harkin.senate.gov/specials/20020313-packer-report.pdf>.

processing of pork.<sup>20</sup>

Horizontal concentration exists when a relatively small number of firms dominates a single stage of a production process. Both the growing and the processing of animals are horizontally concentrated. In 2005, for example, the top four pork integrators accounted for 49 percent of the sows raised.<sup>21</sup> The concentration is even higher in the meat processing sector. In 2005, the top four pork packing companies controlled 66 percent of the market; the top four beef packing companies controlled 83.5 percent of that market.<sup>22</sup> Meat processing is one of the most concentrated industries in the United States.<sup>23</sup>

## B. Production and Marketing Contracts

Vertical integration in the meat industry exists in two forms. In “pure” vertical integration, the integrator owns its animals and grows them itself. More commonly, integrators enter into contracts with growers who raise the animals for them. There are two forms of such contracts: production contracts and marketing contracts. Under production contracts, growers raise animals owned by the integrators. The growers are paid based on how efficiently they use feed (which the integrator provides) to raise the animals. Production contracts usually contain detailed conditions to which the growers must adhere. Integrators using such contracts often require that facilities be constructed to their specifications. The contracts tell growers how to feed, house, and medicate the animals, how to handle manure, and how to dispose of carcasses.<sup>24</sup> Under marketing contracts, growers agree in advance to sell their animals to integrators under an

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<sup>20</sup> MARY HENDRICKSON & WILLIAM HEFFERNAN, CONCENTRATION OF AGRICULTURAL MARKETS (2007), available at <http://www.nfu.org/wp-content/2007-heffernanreport.pdf>.

<sup>21</sup> *Id.*

<sup>22</sup> *Id.*

<sup>23</sup> Clement E. Ward, *A Review of Causes for and Consequences of Economic Concentration in the U.S. Meatpacking Industry*, 2002 CURRENT AGRIC., FOOD & RES. ISSUES No. 3, at 1, available at [http://cafri.usask.ca/j\\_pdfs/ward3-1.pdf.1](http://cafri.usask.ca/j_pdfs/ward3-1.pdf.1).

<sup>24</sup> See NEIL D. HAMILTON, A FARMER'S LEGAL GUIDE TO PRODUCTION CONTRACTS (1995). See also Farmers' Legal Action Group, Inc., *Assessing the Impact of Integrator Practices on Contract Poultry Growers*, Sept. 2001, 3-3 to 3-18 (description and analysis of terms in two sample contracts).



agreed price system.<sup>25</sup> Both production and marketing contracts commonly contain language purporting to shield the integrator from liability for the grower's actions.<sup>26</sup> Contracts are sometimes form contracts in which the only negotiable term is price.

Contracting has been the dominant model in the poultry industry for many years, with almost 90 percent of broilers sold under contract.<sup>27</sup> It is becoming increasingly common in the pork industry as well. In 2004, 69 percent of hogs were sold under marketing contracts, up from 2 percent in 1980.<sup>28</sup> The practice is much less common in the cattle industry. In 2005, packers acquired only about 29 percent of cattle under contracts, a figure down from a high of 35 percent in 2002.<sup>29</sup>

There are many reasons for using production and marketing

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<sup>25</sup> See TOM HARKIN, ECONOMIC CONCENTRATION AND STRUCTURAL CHANGE IN THE FOOD AND AGRICULTURE SECTOR: TRENDS, CONSEQUENCES AND POLICY OPTIONS 12 (2004). Production contracts are more common in the poultry sector, while marketing contracts are more common for cattle and hogs. *Id.*

<sup>26</sup> For example, a clause in a standard swine marketing contract Farmland uses in Iowa provides that:

"it is understood and agreed by the parties that this Agreement does not create a fiduciary relationship between them, that the producer is an independent contractor, and that nothing in this Agreement is intended to constitute either party an agent, legal representative, subsidiary, joint venturer, partner, employee, employer, joint employer, enterprise or servant of the other for any purpose whatsoever... nor shall Farmland be deemed liable by reason of any act or omission of producer in the conduct of its business pursuant to this Agreement, or for any claim or judgment arising there from.

Iowa Office of the Attorney General, Working for Farmers, Contracts, <http://www.state.ia.us/government/ag/images/contracts/Farmland1.pdf> (last visited Feb. 20, 2008)."

<sup>27</sup> JAMES MACDONALD ET AL., CONTRACTS, MARKETS, AND PRICES: ORGANIZING THE PRODUCTION AND USE OF AGRICULTURAL COMMODITIES, AER-837, AER-83, at 15 (Nov. 2004) (88 percent of poultry produced under production contracts, 7 percent under marketing contracts).

<sup>28</sup> STEVE MARTINEZ & KELLY ZERING, PORK QUALITY AND THE ROLE OF MARKET ORGANIZATION, AER-835 at 1 (Nov. 2004). In addition to the 69 percent of hogs raised under marketing agreements, some of the 17 percent of hogs owned by packers were raised under production contracts. *Id.*

<sup>29</sup> U.S. DEPT. AGRIC., GRAIN INSPECTION, PACKERS AND STOCKYARDS ADMIN., 2006 ANNUAL REPORT 54, available at <http://archive.gipsa.usda.gov/pubs/06ar.pdf>.

contracts.<sup>30</sup> From a grower's perspective, a contract provides some protection against highly variable prices, offers a guaranteed market, and reduces the transaction cost of finding a buyer.<sup>31</sup> Contracts ease access to capital;<sup>32</sup> in the poultry industry, in fact, a grower cannot even obtain financing to construct a facility without first having a contract with an integrator.<sup>33</sup> Integrators prefer contracts because they provide a way to control both the quality and quantity of the meat they receive. The contracts give control over quality by specifying how the animals must be raised.<sup>34</sup> Ensuring a stable supply of meat is desirable because it can lower processing costs.<sup>35</sup> Contracting enables integrators to obtain more animals without needing more capital or labor.<sup>36</sup> It may be a way to prevent rival integrators from gaining access to the local market by tying up the supply of animals.<sup>37</sup> Finally—and most importantly for this article—integrators prefer contracting to raising animals themselves because, for reasons discussed below, it can somewhat insulate them from environmental liability. In one survey, integrators marketing over 50,000 hogs per year listed “reduced environmental and regulatory problems” as the second-leading reason for using production contracts, behind only “increased financial leverage.”<sup>38</sup> Although integrators' desire to avoid liability for

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<sup>30</sup> See U.S. DEPT. AGRIC., ECON. RES. SERV., FARMERS' USE OF MARKETING AND PRODUCTION CONTRACTS, USDA-AER No. 747 (1996).

<sup>31</sup> See MACDONALD, *supra* note 26, at 25-29.

<sup>32</sup> See FARMERS' USE OF MARKETING AND PRODUCTION CONTRACTS, *supra* note 29, at 3.

<sup>33</sup> See Dan L. Cunningham, *Guide for Prospective Contract Broiler Producers*, Sept. 2005, <sup>33</sup> See available at <http://pubs.caes.uga.edu/caespubs/pubcd/B1167.htm>.

<sup>34</sup> See Wayne D. Purcell, *Contracts and Captive Supplies in Livestock: Why We are Here, Implications, and Policy Issues*, (2001) at 9; available at <http://archive.gipsa.usda.gov/psp/issues/forum/Purcell.htm> (last visited Feb. 20, 2008).

<sup>35</sup> See *id.*

<sup>36</sup> See MACDONALD, *supra* note 26, at 25.

<sup>37</sup> See Peter Carstensen, *Concentration and the Destruction of Competition in Agricultural Markets: The Case for Change in Public Policy*, 2000 WISC. L. REV. 531, 534 (2000).

<sup>38</sup> JOHN LAWRENCE ET AL., PRODUCTION AND MARKETING CHARACTERISTICS OF U.S. PORK PRODUCERS, 1997-1998, at table 12, available at <http://www.econ.iastate.edu/faculty/lawrence/Testimony/staffpapr331.pdf> (last visited Sept. 26, 2007). “Increased financial leverage” was listed on 39 of the 106 survey responses and “reduced” environmental and regulatory problems” on 24; “accessing” motivated labor” was the next leading advantage with 18; “cost” control” was listed on

manure handling is not the only reason for the prevalence of contracting over pure vertical integration—after all, contracting was the dominant model in the poultry industry long before liability for manure disposal became a realistic fear—it is surely the reason that contracts often specify that growers are solely responsible for manure handling. However, contracting has some disadvantages for integrators, as compared to growing their own animals. In the survey described above, the top two self-reported disadvantages of production contracts were “loss of control” and “increased production costs.”<sup>39</sup>

## II. The Environmental Critique of CAFOs and the Legal System's Response

### A. Environmental Problems

CAFOs cause serious environmental problems. The most severe is the contamination of water with manure. The vast amount of manure produced by confined animals<sup>40</sup> contains pathogens harmful to humans<sup>41</sup> and nutrients that reduce the oxygen available to marine life.<sup>42</sup> According to EPA's 2000 Water Quality Inventory Report,<sup>43</sup> “[a]griculture, including

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only 7 responses. *Id.* Because these responses came from a voluntary survey, the numbers are not scientifically reliable.

<sup>39</sup> In the survey, the top five self-reported disadvantages of production contracts were “loss of control” with 21, “increased production costs” with 13, “paying for grower assets” with 10, “differing agendas” with 10, and “grower mismanagement” with 5. *Id.*

<sup>40</sup> EPA has estimated that confined animals in the United States generate approximately 128 billion pounds of manure annually. U.S. ENVTL. PROT. AGENCY, ALTERNATIVE TECHNOLOGIES/USES FOR MANURE (draft), EPA Pub. 833-D-02-001 (2002) at 1.

<sup>41</sup> See ENVTL. PROT. AGENCY, ENVIRONMENTAL IMPACTS OF ANIMAL FEEDING OPERATIONS (1998) available at <http://www.epa.gov/guide/feedlots/envimpct.pdf>. Agricultural runoff from land application of cow manure and wastewater from a slaughterhouse and meat packing plant were among the suspected causes of a cryptosporidium outbreak in Milwaukee in 1993, which sickened 400,000 people and killed about 100. See *id.* at 20.

<sup>42</sup> See *id.* at 7-16.

<sup>43</sup> See National Pollutant Discharge Elimination System Permit Regulation and Effluent Limitation Guidelines and Standards for Concentrated Animal Feeding Operations (CAFOs), 68 Fed. Reg. 7176, 7181 (Feb. 12, 2003) (hereinafter 2003 Final CAFO Rule).

animal confinements, is the leading cause of water quality impairments in the nation's rivers, streams, lakes, ponds and reservoirs. Agriculture is also the fifth leading contributor to water quality impairments in the nation's estuaries."<sup>44</sup> In the Upper Midwest between 1990 and 2000, pollution from livestock caused more fish kills than municipal and industrial pollution combined.<sup>45</sup>

Some of this water pollution comes from over-application of manure. Large CAFOs often produce too much manure for the surrounding farmland to absorb when the manure is applied to crops as fertilizer.<sup>46</sup> The amount of what the USDA calls "excess nutrients" has been rising because while the amount of manure produced has been increasing, the amount of crop and pasture land controlled by CAFOs has been decreasing, from 3.6 acres per 1,000 pounds live animal weight in 1982 to 2.2 acres in 1997.<sup>47</sup> Manure applied too heavily can run off into waterways when it rains. The accumulation of manure from around the

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<sup>44</sup> Terence Centner holds a contrary view about the environmental impact of animal feeding operations, that animal feeding operations impair "only" about 3.3 percent of rivers and 0.5 percent of lake acreage. Terence J. Centner, *Establishing a Rational Basis for Regulating Animal Feeding Operations: A View of the Evidence*, 27 VT. L. REV. 115, 121 (2002).

<sup>45</sup> See RACHEL HOPPER, GOING TO MARKET: THE COST OF INDUSTRIALIZED AGRICULTURE 13 (2002).

<sup>46</sup> See Charles W. Abdalla, *The Industrialization of Agriculture: Implications for Public Concern and Environmental Consequences of Intensive Livestock Operations*, 10 PENN. ST. ENVTL. L. REV. 175, 187 (2002). Although manure can be used as a fertilizer, it has low economic value because the nutrients in manure are dilute, making transportation, storage, and application more expensive, and because different nutrients are intermixed, sometimes in non-useful proportions. See Laura Martin & Kelly Zering, *Relationships Between Industrialized Agriculture and Environmental Consequences: The Case of Vertical Coordination in Broilers and Hogs*, 29 J. AGRIC. & APPLIED ECON. 45, 50 (1997). The use of manure as an energy source is being researched, but has not occurred on a large scale. See U.S. ENVTL. PROT. AGENCY, ALTERNATIVE TECHNOLOGIES/USES FOR MANURE, *supra* note 39.

<sup>47</sup> 2003 Final CAFO Rule, 68 Fed. Reg. at 7180. 60 percent of nitrogen and 70 percent of phosphorus generated at larger CAFOs must be taken "off site." *Id.* See also CHARLES H. LANDER ET AL., NUTRIENTS AVAILABLE FROM LIVESTOCK MANURE RELATIVE TO CROP GROWTH REQUIREMENTS, USDA RESOURCE ASSESSMENT AND STRATEGIC PLANNING WORKING PAPER 98-1 (1998); KELLOGG ET AL., MANURE NUTRIENTS RELATIVE TO THE CAPACITY OF CROPLAND AND PASTURELAND TO ASSIMILATE NUTRIENTS: SPATIAL AND TEMPORAL TRENDS FOR THE UNITED STATES (2000).

country harms estuaries,<sup>48</sup> causing algae blooms that can kill and contaminate fish.<sup>49</sup> Scientists also consider excess nutrients to be a cause of the hypoxic “dead zones” that occur annually in more than half of the coastal waters in the United States.<sup>50</sup> According to the 2003 Report of the Pew Oceans Commission, “[t]he greatest pollution threat to coastal marine life today is the runoff of excess nitrogen from fertilized farm fields, animal feedlots and urban areas.”<sup>51</sup> Contamination of groundwater is also a concern. One-third of drinking water wells in Maryland, which has many large poultry CAFOs, exceed safe levels for nitrates, a component of manure.<sup>52</sup>

Animal manure can also cause acute harms to waterways. Manure spills, usually from manure storage lagoons or from pipes taking manure to fields, can have catastrophic effects on streams. The best-known example is the failure of an eight-acre manure-storage lagoon in North Carolina in 1995, which spilled 25 million gallons of animal waste, killing 40 million fish over a 17-mile stretch of river (another million-gallon spill occurred at a separate facility the same day<sup>53</sup>). These disasters continue to

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<sup>48</sup> See generally John H. Davidson, *Factory Fields: Agricultural Practices, Polluted Water and Hypoxic Oceans*, 9 GREAT PLAINS NAT. RESOURCES J. 1 (2004).

<sup>49</sup> See Harmful Algal Bloom and Hypoxia Amendments Act of 2003, S. Comm. Print No. 108-125 (2003) at 2 (“Those blooms can kill fish and other marine organisms, poison people who eat contaminated seafood, and cause respiratory distress in susceptible people due to inhalation of aerosolized toxin.”) The Harmful Algal Bloom and Hypoxia Research and Control Act of 1998 created an interagency task force to assess the problem. Public Law 105-383 (Nov. 13, 1998) (codified at 16 U.S.C. § 1451). The act was re-authorized by the Harmful Algal Bloom and Hypoxia Amendments Act of 2004, Public Law 108-456.

<sup>50</sup> See David Malakoff, *Death by Suffocation in the Gulf of Mexico*, 281 SCIENCE No. 5374, 190-92 (July 10, 1998). The largest dead zone, in the Gulf of Mexico, has averaged about 4,800 square miles since 1985. Press Release Louisiana Universities Marine Consortium (July 29, 2005), available at <http://www.lumcon.edu/Information/news/default.asp?XMLFilename=20050801RabalaisHypoxia.xml>.

<sup>51</sup> PEW OCEANS COMMISSION, AMERICA’S LIVING OCEANS: CHARTING A COURSE FOR A SEA CHANGE 2 (2003).

<sup>52</sup> Peter Goodman, *An Unsavory Byproduct: Runoff and Pollution*, WASHINGTON POST, Aug. 1, 1999, at A6.

<sup>53</sup> Joby Warrick, *Hog-waste Spill Fouls Land, River in Onslow*, NEWS & OBSERVER (Raleigh, N.C.), Jun. 23, 1995, at A1; Wade Rawlins & Ben Stocking, *Chicken Waste*

occur. Marks Dairy Farm in New York spilled several million gallons of liquid manure into the Black River in August 2005, killing over 375,000 fish.<sup>54</sup>

Although this article focuses on water pollution from CAFOs, recent years have also seen increasing concern over air pollution from CAFOs. The decomposition of animal manure creates hydrogen sulfide and ammonia gases and the ventilation of barns releases animal dander and dried manure.<sup>55</sup> Odor, of course, is a serious problem as well.

## **B. Environmental Regulation of CAFOs**

Water pollution from CAFOs has been addressed primarily under the Clean Water Act. Although the CWA regulates only point sources of pollutants,<sup>56</sup> and water pollution from CAFOs often comes from wide areas such as from feedlots and fields, the Clean Water Act explicitly defines CAFOs as point sources.<sup>57</sup> Under the applicable regulations, a CAFO is defined as a large "Animal Feeding Operation" (AFO), which is in turn defined as an unvegetated facility where animals are kept more than 45 days in any 12 month period.<sup>58</sup> To qualify as a "large CAFO" an AFO must contain more than a specified number of animals. To be defined as a "medium CAFO" an AFO must contain a somewhat smaller

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Hits River, NEWS & OBSERVER (Raleigh, N.C.), Jul. 5, 1995, at A1; Michael Satchell, *Hog Heaven--and Hell*, U.S. NEWS & WORLD REPORT, Jan. 22, 1996, at 57.

<sup>54</sup> Press Release, New York State Department of Environmental Conservation (August 3, 2006), *available at* <http://www.dec.state.ny.us/website/press/pressrel/2006/2006120.html>. The dairy agreed to settle the violations for \$2.2 million. *Id.*

<sup>55</sup> IOWA STATE UNIVERSITY AND THE UNIVERSITY OF IOWA STUDY GROUP, IOWA CONCENTRATED ANIMAL FEEDING OPERATIONS AIR QUALITY STUDY, FINAL REPORT 35-39 (2002), *available at* [http://www.ehsr.uiowa.edu/cafo\\_air\\_quality\\_study.html](http://www.ehsr.uiowa.edu/cafo_air_quality_study.html).

<sup>56</sup> The CWA defines the "discharge of any pollutant" as "(A) any addition of any pollutant to navigable waters from any point source, [or] (B) any addition of any pollutant to the waters of the contiguous zone or the ocean from any point source other than a vessel or other floating craft." 33 U.S.C. § 1362(12) (2006).

<sup>57</sup> 33 U.S.C. § 1362 (14) ("The term 'point source' means any discernible, confined and discrete conveyance, including but not limited to any... concentrated animal feeding operation.").

<sup>58</sup> 40 C.F.R. § 122.23(b) (2006).

number of animals.<sup>59</sup> An AFO can also be designated as a CAFO if EPA or an authorized state regulator determines that the AFO “is a significant contributor of pollutants to waters of the United States.”<sup>60</sup>

EPA promulgated its first CAFO regulations in 1974 and 1976.<sup>61</sup> In response to settlements entered into with the Natural Resources Defense Council in 1992 and 1999,<sup>62</sup> EPA promulgated new regulations under the Clean Water Act in 2003. The new regulations had three primary components: They established effluent limitation guidelines,<sup>63</sup> they required that all CAFOs obtain permits,<sup>64</sup> and they required the permits to include nutrient management plans to implement the effluent guidelines.<sup>65</sup> The new requirements imposed significant costs on the CAFO industry; the USDA estimated that the new nutrient management requirements would cost the poultry and livestock sectors about \$1 billion, increasing

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<sup>59</sup> To give an idea of the scale of these operations, the thresholds for a large CAFO are, for example, 700 mature dairy cows, 2500 swine weighing more than 55 pounds each, or 55,000 turkeys. 40 C.F.R. § 122.23(b)(4).

<sup>60</sup> 40 C.F.R. § 122.23(c) (2006).

<sup>61</sup> See Effluent Limitations Guidelines, 39 Fed. Reg. 5,704 (Feb. 14, 1974); Concentrated Animal Feeding Operations, 41 Fed. Reg. 11,458 (Mar. 18, 1976).

<sup>62</sup> See *Management Options for Concentrated Animal Feeding Operations: Hearing Before the Subcomm. on Water Resources. And Environment of the House Comm. on Transportation. And Infrastructure*, 107th Cong. (May 16, 2001).

<sup>63</sup> 2003 Final CAFO Rule, 68 Fed. Reg. at 7183, 7207-26. The guidelines established not numerical limitations on discharges, but rather best management practices. *Id.* They required that CAFOs land apply manure at unspecified rates that would “minimize phosphorus and nitrogen transport from the field to surface waters in compliance with technical standards for nutrient management established by the Director [of the state regulatory program].” *Id.* They also prohibited existing CAFOs from discharging except in the event of a 25-year, 24-hour storm, and new CAFOs from discharging except in the event of a 100-year, 24-hour storm. *Id.*

<sup>64</sup> *Id.* at 7182. Large CAFOs were given the opportunity to demonstrate that they never discharged in lieu of obtaining a permit. *Id.* EPA estimated that these regulations would increase the number of CAFOs that needed a permit to an estimated 15,500. *Id.* at 7176.

<sup>65</sup> *Id.* at 7182. The plans were to “identify practices necessary to implement the [effluent limitation guidelines] and any other requirements in the permit and ... include requirements to land apply manure, litter, and process wastewater consistent with site specific nutrient management practices that ensure appropriate agricultural utilization of the nutrients.” *Id.*

production costs on the order of one percent.<sup>66</sup> Despite these costs, EPA predicted that the rule would put few large CAFOs out of business.<sup>67</sup>

The new regulations were immediately challenged in court by both industry and environmentalists. In *Waterkeeper Alliance v. EPA*,<sup>68</sup> (“*Waterkeeper*”) the Second Circuit struck down several aspects of them. The court ruled that the terms of nutrient management plans must be incorporated into permits, that the public was entitled to participate in the development and enforcement of the plans, and that permitting authorities were entitled to review the plans.<sup>69</sup> The incorporation of nutrient management plans into permits is significant because once a plan is made part of a permit, a violation of that plan constitutes a violation of the permit, and by extension, the Clean Water Act. The court further held that EPA could not require all CAFOs to apply for a permit, on the ground that since the Clean Water Act regulates only actual discharges, not potential discharges, a CAFO could not be subject to the Act until it had discharged.<sup>70</sup> EPA has proposed new regulations in response to that

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<sup>66</sup> The exact estimates varied by region and depended on the perhaps optimistic assumption that 40 percent of farmland in the United States would be willing to accept manure. See MARC RIBAUDDO ET AL., MANURE MANAGEMENT FOR WATER QUALITY, COSTS TO ANIMAL FEEDING OPERATIONS OF APPLYING MANURE NUTRIENTS TO LAND, AER-824, 82-84 (2003). If less farmland were available, the costs would be higher.

<sup>67</sup> 2003 Final CAFO Rule, 68 Fed. Reg. at 7245-46. EPA’s economic analysis indicated that no CAFOs in the veal, dairy, turkey, and egg laying sectors would be at risk of closure, and that about 3 percent of the large CAFOs in the beef cattle, heifer, hog and broiler sectors would be at risk. *Id.*

<sup>68</sup> 399 F.3d 486 (2005).

<sup>69</sup> *Id.* at 502-04. The court reasoned that nutrient management plans had to be incorporated into the permits because they constituted “applicable effluent limitations,” which, under 33 U.S.C. sections 1311(a), 1311(b), & 1342(a), must be included in permits. *Id.* at 502-03. The public participation ruling was based on the Clean Water Act’s public participation provision (33 U.S.C. section 1251(e)). 1251(e). *Id.* at 502.

<sup>70</sup> *Id.* at 504-06. The decision also upheld several aspects of the regulations, including a provision regarding the so-called “agricultural stormwater exception.” *Id.* Whether runoff from fields where manure has been applied should qualify as point source discharges has been a disputed issue, because while the Clean Water Act provides that CAFOs are point sources, it excludes from the definition of “point source” any “agricultural storm water discharges and return flows from irrigated agriculture.” *Id.* The 2003 CAFO regulations resolved this issue by providing that precipitation-related discharges of manure from fields would be agricultural storm water discharges (and thus exempt from regulation) if the manure was “applied in accordance with site specific



decision.<sup>71</sup> In accordance with the *Waterkeeper* decision, the proposed regulations will require a CAFO to seek a permit only if it actually discharges or proposes to discharge manure; will require permitting authorities to review nutrient management plans and provide for public comment; and will require that nutrient management plans be incorporated into permits.<sup>72</sup>

Although CAFO regulations under the Clean Water Act have been on the books since the 1970s, EPA paid little attention to CAFOs until the 1990s.<sup>73</sup> As CAFOs grew larger and more numerous, and after some high profile disasters such as the 1995 North Carolina spills, EPA and state regulators began to pay more attention to enforcement. In 1998, EPA and USDA published a "Unified National Strategy for Animal Feeding Operations" that set performance standards and goals for animal feeding operations.<sup>74</sup> CAFO compliance is now on EPA's official list of enforcement priorities.<sup>75</sup>

Regulators have paid much less attention to air pollution from CAFOs. EPA has only recently begun to include Clean Air Act claims in its enforcement actions. EPA also now asserts<sup>76</sup> that air emissions from

nutrient management practices that ensure appropriate agricultural utilization." 40 C.F.R. § 122.23(e). The Second Circuit held that the regulation was a permissible construction of the Act. *Waterkeeper Alliance*, 399 F.3d at 506-09.

<sup>71</sup> See Revised National Pollutant Discharge Elimination System Permit Regulation and Effluent Limitation Guidelines for Concentrated Animal Feeding Operations in Response to *Waterkeeper Decision*, 71 Fed. Reg. 37744-37787 (June 30, 2006) (to be codified at C.F.R. pt. 122, 412). See also <http://www.epa.gov/guide/cafo/> (last visited Sept. 26, 2007) (useful collection of documents related to the 2003 rule and the proposed revision).revision.

<sup>72</sup> See 71 Fed. Reg. at 37745.37744.

<sup>73</sup> See U.S. GENERAL ACCOUNTING OFFICE, LIVESTOCK AGRICULTURE: INCREASED EPA OVERSIGHT WILL IMPROVE ENVIRONMENTAL PROGRAM FOR CONCENTRATED ANIMAL FEEDING OPERATIONS, GAO-03-285, 9-10 (2003).

<sup>74</sup> Unified National Strategy for Animal Feeding Operations, 63 Fed. Reg. 50192-209 (Sept. 21, 1998).

<sup>75</sup> EPA, AGENCY, NATIONAL PRIORITIES FOR ENFORCEMENT AND COMPLIANCE ASSURANCE, FY 2005-07, available at <http://www.epa.gov/oecaerth/resources/policies/data/planning/npmguidance1008.pdf>.<http://www.epa.gov/oecaerth/data/planning/priorities/index.html#priorities>

<sup>76</sup> See EPA, AGENCY, RESPONSE TO PUBLIC COMMENTS ON THE ANIMAL FEEDING OPERATION AIR AGREEMENT, available at

CAFOs may also be subject to the reporting requirements of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)<sup>77</sup> and the Emergency Planning and Community Right To Know Act (EPCRA).<sup>78</sup> Because EPA's claims have been hampered by the difficulty in measuring emissions from CAFOs and a lack of knowledge about how to accurately estimate them, in 2005 the agency offered integrators and contract growers a generic settlement of Clean Air Act violations, exchanging conditional covenants not to sue for the payment of fairly small penalties.<sup>79</sup>

### **III. The Economic Critique of CAFOs and the Legal System's Response**

A separate group of commentators, comprising agricultural economists and advocates for small farms, has criticized the market dynamics in the CAFO industry. They contend that integrators have accumulated market power over growers. One such critic, for example, testified before Congress that there "are serious problems of market failure" in segments of the meat industry, including "price manipulation by buyers, discrimination among producers, and conduct strategically aimed at exploiting and entrenching market power."<sup>80</sup>

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<http://www.epa.gov/compliance/resources/agreements/caa/cafo-agr-response-com.html> (last visited September 20, 2007).

<sup>77</sup> 42 U.S.C. § 9601(9) (2006).

<sup>78</sup> 42 U.S.C. § 9603 (2006) (requires reports of hazardous substances from facilities of releases that exceed a "reportable quantity"); 42 U.S.C. § 9601(9) (2006) (, defines a facility in a manner that clearly encompasses animal feeding operations); operations, 42 U.S.C. § 11004 (2006) (, requires that reports under CERCLA also be provided to state and local emergency planners). *See also* planners. In *Sierra Club v. Tyson Foods*, 299 F. Supp. 2d. 693 (2003) (supporting this reading of CERCLA and EPCRA). The court held that Tyson Foods was both "the person in charge" and the "operator" on the facilities owned by the independent growers with whom it contracted. *Id.* at 711.

<sup>79</sup> *See* Animal Feeding Operations Consent Agreement and Final Order; Notice, 70 Fed. Reg. 4958-77 (Jan.(January 31, 2005). More than 2,700 animal feeding operations signed on to the consent agreement. *See* EPA, Animal Feeding Operations Air Agreements, <http://www.epa.gov/compliance/resources/agreements/caa/cafo-agr-0604.html> (last visited Feb. 7, 2008).2007). The 2700 AFOs comprise more than 6,700 farms. *Id.*

<sup>80</sup> Monopsony Issues in Agriculture: Buying Power of Processors in Our Nation's Agricultural Markets, Hearing before the Sen. Judiciary Comm. (Oct. 30, 2003)

### A. Integrators' Market Power

As discussed above, the meat processing sector, the primary business of integrators, has become concentrated. Typically, firms begin to accumulate market power (the ability to unilaterally set prices) when the market share held by the largest four firms exceeds the 40 to 45 percent range that is common in American industry.<sup>81</sup> As noted, in 2005, the top four beef processing companies controlled 83.5 percent of the market.<sup>82</sup> For several reasons, the market power of integrators is likely even stronger than these numbers suggest. First, the perishability of agricultural products exacerbates the effect of concentration. Most animals cannot be transported a long distance from where they are raised to where they will be slaughtered. Growers can therefore do business only with nearby slaughterhouses. National statistics about market concentration therefore do not tell the whole story, for regional concentration can be more important.

Integrators may also have a stronger market position than the four-firm concentration suggests because they have better access to information than growers. Integrators are often more familiar with the meat-raising business, particularly when dealing with a first-time grower. Integrators also have better information about pricing.<sup>83</sup> They enter into contracts with many growers, whereas each grower typically enters into a contract with only one integrator. Finally, integrators, whose financial resources enable them better access to legal advice, may be better able to assess the financial risks of environmental liability.

Integrators' bargaining power is also magnified because the nature of CAFO production techniques creates a hold-up problem for growers. The barns, manure disposal equipment, and other facilities used for growing animals in CAFOs are expensive and typically require a grower to take out long-term loans to acquire the necessary capital. A grower is

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(testimony of Peter Carstensen) (hereinafter Monopsony Hearing), *available at* [http://judiciary.senate.gov/testimony.cfm?id=975&wit\\_id=2782](http://judiciary.senate.gov/testimony.cfm?id=975&wit_id=2782).

<sup>81</sup> HARKIN, ECONOMIC CONCENTRATION AND STRUCTURAL CHANGE IN THE FOOD AND AGRICULTURE SECTOR, *supra* note 25, at 8.

<sup>82</sup> MARY HENDRICKSON AND WILLIAM HEFFERNAN, CONCENTRATION OF AGRICULTURAL MARKETS (2005).

<sup>83</sup> MACDONALD, *supra* note 27, at 52.

free to negotiate financial terms with an integrator when it first enters the business. But once the initial contract has expired, a grower has little choice but to enter into another contract in order to be able to continue to pay off his or her loans, for the CAFO facilities and equipment are good for no other purpose.<sup>84</sup> Often there are few, if any, other buyers with whom to contract; in the hog and cattle industries for example, there is often only one buyer, and rarely more than three, in any given area.<sup>85</sup> So when the contract renewal is being negotiated, the processor holds all the cards and so can dictate the terms of the new contract.

Economists have disagreed about whether there is direct economic evidence of anti-competitive behavior in the meat industry.<sup>86</sup> Some indirect economic evidence suggests that integrators have used their superior market position to gain an advantage over growers. In 1998, hog prices paid to growers dropped to levels not seen since the Great Depression.<sup>87</sup> Meanwhile, Iowa Beef Processors, the nation's largest meatpacker at the time, was able to generate record fourth-quarter profits that were four times higher than for the same quarter in 1997. Such wide variations in profits can indicate that one party holds an advantage in bargaining power.<sup>88</sup> Another indication of integrators' market power is that the farmer's share of the pork retail dollar fell from about fifty cents in 1970, before the processing stage of the meat industry became significantly concentrated, to about twelve cents in December 1998.<sup>89</sup>

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<sup>84</sup> DARYLL E. RAY, AGRICULTURAL POLICY ANALYSIS CENTER, ON COMPENSATING PRODUCERS WHO CONTRACT PRODUCTION (2005), <http://agpolicy.org/weekcol/233.html>; C. Robert Taylor, *Restoring Economic Health to Contract Poultry Production*, Agricultural & Resource Policy Forum (2002); MACDONALD, *supra* note 27, at 27.

<sup>85</sup> CONNOR ET AL., THE BAN ON PACKER OWNERSHIP AND FEEDING OF LIVESTOCK at 4.

<sup>86</sup> See Ward, *A Review of Causes for and Consequences of Economic Concentration in the U.S. Meatpacking Industry*, *supra* note 23.

<sup>87</sup> HARKIN, ECONOMIC CONCENTRATION AND STRUCTURAL CHANGE, *supra* note 25, at 8.

<sup>88</sup> *Id.*

<sup>89</sup> HARKIN, ECONOMIC CONCENTRATION AND STRUCTURAL CHANGE, *supra* note 25, at 9. Some economists, however, believe that the farmer's share of the retail dollar is not a valid measure of the competitiveness of the meat-raising industry. See PURCELL, CONTRACTS AND CAPTIVE SUPPLIES IN LIVESTOCK, *supra* note 34, at 1. Citing a large study performed by GIPSA, Purcell argues that there is no evidence that the increased use of contracts has lowered the price that producers receive for their meat; rather, the

Third, in the livestock sector, the spread between farm prices and wholesale prices has risen sharply since the mid-1990s, not what would be expected in a fully competitive market.<sup>90</sup> Fourth, over recent years there has been an increase in spread between what packers pay for meat and what they sell the meat for, suggesting a general decrease in competitiveness in the meatpacking industry.<sup>91</sup> Anecdotal evidence is consistent with the economic data. State regulators have noted an increasing number of grower complaints about unfair integrator practices.<sup>92</sup> In-depth investigative reports in the Washington Post and the Baltimore Sun in 1999 vividly described the ways in which integrators used their market power over chicken growers in Maryland's Delmarva Peninsula, one of the main chicken-raising areas in the country.<sup>93</sup>

### B. Proposed Market Reforms

Agricultural reformers who contend that integrators' market power in the CAFO industry is a problem have generally proposed two kinds of solutions: reducing integrators' market power or lessening its negative consequences. This article takes no position on whether these reforms would improve the economic efficiency of the CAFO industry, or whether

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difficulties faced by meat producers in the past 20 years have primarily been caused by depressed prices at the retail level. *Id.* at 2-7.

<sup>90</sup> NEIL E. HARL, AGRICULTURE IN THE 21ST CENTURY 24 (2003), available at <http://www.econ.iastate.edu/faculty/harl/AgInTwentyFirstCentury.pdf>.

<sup>91</sup> CONNOR ET AL., THE BAN ON PACKER OWNERSHIP AND FEEDING OF LIVESTOCK at 2-3, available at

<http://www.econ.iastate.edu/outreach/agriculture/reports/PackerOwnership.pdf>.

<sup>92</sup> Statement of State Attorneys General on "Producer Protection Act" (September 13, 2000) (on file with author). The statement also asserts that "[t]he poultry industry, which has been vertically integrated for decades through the extensive use of contracts, is replete with allegations of unfair treatment of producers." *Id.*

<sup>93</sup> See Dan Fesperman and Kate Shatzkin, *The Plucking of the American Chicken Farmer*, THE BALTIMORE SUN, Feb. 28, 1999 at 1.A.; Dan Fesperman & Kate Shatzkin, *Taking a Stand, Lstand, osing the Farm*, THE BALTIMORE SUN, Mar. 1, 1999 at 1.A.; Dan Fesperman & Kate Shatzkin, *Unprotected and Alone*, THE BALITMORE SUN, Mar. 2, 1999 at 1.A.; Peter S. Goodman, *An Unsavory Byproduct: Runoff and Nutrient Pollution*, WASH. POST, Aug. 1, 1999 at A1; Peter S. Goodman, *Permitting a Pattern of Pollution*, WASH. POST, Aug. 2, 1999 at A1; Peter S. Goodman, *Who Pays for What Is Thrown Away?*, WASH. POST, August 3, 1999 at A1. A.

they should be enacted to help protect the traditional American ideal of independent agriculture and small family farms. While those are vital questions, this article will focus, in Section IV, only on whether reducing integrators' market power or preventing integrators from taking advantage of it would improve the environmental performance of CAFOs.

### 1. Reducing Integrators' Market Power

One proposed response to this market imbalance is to more vigorously enforce existing antitrust statutes. Professor Peter Carstensen has argued that "prompt and significant changes in both antitrust enforcement and the market constituting regulations administered by the U.S. Department of Agriculture" are needed to restore "socially and economically desirable market conditions."<sup>94</sup> It is true that the federal government has not taken any significant antitrust actions in this area. The Antitrust Division of the United States Department of Justice has not found antitrust violations in any recent meatpacking mergers, although it does claim to be keeping a close eye on the industry.<sup>95</sup> A Department of Justice investigation in 1993 and 1994 into the proposed merger of two of the top five beef packers did lead to the abandonment of the merger.<sup>96</sup> As the Department of Justice admits, however, its power to slow the changes in the agriculture industry is limited.<sup>97</sup> In sum, it is unrealistic to expect antitrust actions against existing packers,<sup>98</sup> even if such action is

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<sup>94</sup> Carstensen, *supra* note 37, at 531.

<sup>95</sup> *Monopsony Hearing*, *supra* note 80, (statement of Hewitt Pate, Asst. Atty. Gen. for Antitrust, U.S. Dept. of Justice).

<sup>96</sup> *Id.*

<sup>97</sup> *See id.* ("[T]he ("the responsibility entrusted to us as enforcers of the antitrust laws is not to engineer the best competitive structure for the marketplace. . . . We do not have the power to restructure any industry, any market, or any company, or to stop any practice, except in a precise and focused fashion as necessary to prevent or remedy specific violations of the antitrust laws that we can prove in court. We are law enforcers, not regulators.")).

<sup>98</sup> PAARLBERG ET AL., STRUCTURAL CHANGE AND MARKET PERFORMANCE IN AGRICULTURE: CRITICAL ISSUES AND CONCERNS ABOUT CONCENTRATION IN THE PORK INDUSTRY, Staff Paper #99-14, Purdue University (Oct. 1999) at 11. In a joint statement released in 2000, the attorneys general of sixteen states asserted that "it is clear that enforcement of antitrust laws, as interpreted by the courts, may not be enough to promote

warranted.<sup>99</sup>

Another way to try to equalize the bargaining power of growers and integrators is to encourage collective bargaining by growers.<sup>100</sup> Two federal statutes are designed to protect the bargaining rights of growers. The Capper-Volstead Act<sup>101</sup> allows farmers to form cooperatives despite the provisions of the Sherman Act.<sup>102</sup> The Agricultural Fair Practices Act<sup>103</sup> prohibits those who purchase agricultural products for processing to discriminate against producers on the basis of their membership in an association of producers.<sup>104</sup> However, the so-called "disclaimer clause" in the AFPA has limited the effectiveness of the law. The clause allows a processor to refuse to deal with the member of an association of producers if the processor is able to cite any reason for its refusal other than the membership in the association.<sup>105</sup> Despite the limited effectiveness of these laws, growers have become increasingly organized. In the past decade, grower-oriented legal action groups, such as the Rural Advancement Fund International in North Carolina and the Farmers'

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effective competition in agriculture. The antitrust laws do not provide us with the tools to deal with an important cause of concentration in agriculture -- contracting." STATEMENT OF STATE ATTORNEYS GENERAL, *supra* note 92.

<sup>99</sup> PAARLBERG ET AL., *supra* note 98, at 5, 10. The use of antitrust action in the meat producing industry is controversial. Because the four-firm index in the swine industry is still at a moderate level, the existing monopsony power may not be high enough to warrant antitrust action there. *Id.* Moreover, the Justice Department has traditionally been concerned primarily with market concentration where it has the capability to affect consumer prices. See HARL, *supra* note 90, at 22 (opining that in agriculture, the Department of Justice should focus also on the impact on producers). That is not likely the case here, because the United States market for pork is integrated into the global market, and the demand elasticity for pork is high. PAARLBERG ET AL., *supra* note 98, at 4-5. Thus, concentration in the meat packing business has the ability to affect the prices paid to growers for their pork, but less ability to affect the prices paid by consumers.

<sup>100</sup> HARKIN, ECONOMIC CONCENTRATION AND STRUCTURAL CHANGE, *supra* note 25, at 18.

<sup>101</sup> 7 U.S.C. § 291 (2000).

<sup>102</sup> 15 U.S.C. §§ 1-7 (2000).

<sup>103</sup> 7 U.S.C. §§ 2301-06 (2000).

<sup>104</sup> 7 U.S.C. § 2303 (2000).

<sup>105</sup> The clause provides: "Nothing in this chapter shall prevent handlers and producers from selecting their customers and suppliers for any reason other than a producer's membership in or contract with an association of producers, nor require a handler to deal with an association of producers." 7 U.S.C. § 2304 (2000).

Legal Action Group in Minnesota, have been created.<sup>106</sup>

## **2. Preventing Unfair Behavior**

Other proposed reforms aim to lessen the negative consequences of integrators' market power by prohibiting them from taking unfair advantage of it. Critics have proposed both strengthening the enforcement of existing statutes and creating new statutes.<sup>107</sup>

Agriculture-specific statutes govern competition in the meat production industry. These statutes are "designed to protect farmers and consumers from the harmful effects of excess consolidation and integration."<sup>108</sup> The Packers and Stockyards Act<sup>109</sup> ("P&S Act") requires fair practices in the livestock, poultry, and meat-packing industry.<sup>110</sup> In particular, Section 202 of the P&S Act makes it unlawful for a packer to "[e]ngage in or use any unfair, unjustly discriminatory, or deceptive practice or device." Federal courts, however, have limited the effectiveness of the law by narrowly construing what constitutes an unfair practice.<sup>111</sup> They require that the processor intends to discriminate and that the practice is likely to cause actual competitive harm.<sup>112</sup> A processor can prove a lack of intent simply by showing that it had some legitimate business reason for its action, an easy burden to meet. Courts have held

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<sup>106</sup> NEIL D. HAMILTON, A FARMER'S LEGAL GUIDE TO PRODUCTION CONTRACTS 124 (1995).

<sup>107</sup> Some of the proposals described in this article as aimed at prohibiting unfair practices could also be construed as addressing the imbalance of market power. For example, proposals to prohibit the confidentiality clauses that integrators currently insist upon could be characterized both ways. Outlawing such clauses would end an arguably unfair practice integrators can only require because of their superior market power; it would also address the information asymmetry that is a source of integrators' superior market power.

<sup>108</sup> DOUG O'BRIEN, DEVELOPMENTS IN HORIZONTAL CONSOLIDATION AND VERTICAL INTEGRATION 7 (2005), *available at* [http://www.nationalaglawcenter.org/assets/articles/obrien\\_antitrust.pdf](http://www.nationalaglawcenter.org/assets/articles/obrien_antitrust.pdf).

<sup>109</sup> 7 U.S.C. §§ 181-229(b) (2006). 181-229b.

<sup>110</sup> The 2002 farm finally extended the protections of the act, such as they are, to hog producers. P.L. 107-171 § 10502 (codified at 7 U.S.C. § 181).

<sup>111</sup> HARKIN, *supra* note 25, at 19-20.

<sup>112</sup> *Armour & Co. v. United States*, 402 F.2d 712, 717 (7th Cir. 1968).



that the P&S Act cannot limit the parties' freedom to contract.<sup>113</sup> Finally, the P&S Act has been ineffectively enforced by the Department of Agriculture.<sup>114</sup> In the past few years, some growers have attempted to use citizen suits under the P&S Act to challenge the use of production contracts. They have been unsuccessful.<sup>115</sup>

Several bills related to agricultural contracting have been introduced in the United States Congress in recent years, but none have passed. An attempt to ban ownership of livestock by meatpackers for more than fourteen days prior to slaughter failed to make it to the House floor in

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<sup>113</sup> See *Jackson v. Swift Eckrich, Inc.*, 53 F.3d 1452, 1458 (8th Cir. 1995).

<sup>114</sup> Partly this is a result of poor staffing; the Grain Inspection, Packers and Stockyards Administration (GIPSA), which enforces the P&S Act, has only a handful of lawyers. HARKIN, *supra* note 25 at 20.

GIPSA completes only a handful of investigations a year—just eight in 2003, for example. *Id.*

Several government reports in the past decade have criticized GIPSA enforcement. In 1997, the USDA's Office of Inspector General concluded that GIPSA lacked the ability to effectively conduct investigations into anticompetitive activities, and in fact was not even organized for operated for that purpose. In 2000, the General Accounting Office reached a similar conclusion, criticizing GIPSA's ability to investigate anticompetitive activities in the cattle and hog industries. See U.S. GENERAL ACCOUNTING OFFICE, PACKERS AND STOCKYARDS PROGRAMS: ACTIONS NEEDED TO IMPROVE INVESTIGATIONS OF COMPETITIVE PRACTICES, GAO/RCED-00-242 (Sept. 2000), *available at* <http://www.gao.gov/new.items/rc00242.pdf> (2000). More recent reports have reiterated these complaints. See U.S. DEPARTMENT OF AGRICULTURE, OFFICE OF INSPECTOR GENERAL, GRAIN INSPECTION, PACKERS AND STOCKYARDS ADMINISTRATION'S MANAGEMENT AND OVERSIGHT OF THE PACKERS AND STOCKYARDS PROGRAMS, Report No. 30601-01-Hy (Jan. 10, 2006), *available at* <http://www.usda.gov/oig/webdocs/30601-01-HY.pdf> (2006); U.S. GENERAL ACCOUNTING OFFICE, PACKERS AND STOCKYARDS PROGRAMS: CONTINUING PROBLEMS WITH GIPSA INVESTIGATIONS OF COMPETITIVE PRACTICES, GAO-06-532T, (March 9, 2006), *available at* <http://www.gao.gov/new.items/d06532t.pdf> (2006).

<sup>115</sup> See *Pickett v. Tyson Fresh Meats*, 420 F.3d 1272, 1281-82 (11th Cir. 2005) (use of marketing contracts by processor does not violate Section 202 of P&S Act because Tyson had legitimate competitive purposes for using agreements). The 11th circuit relied in part on *London v. Fieldale Farms Corp.*, which held that a plaintiff bringing a case under Section 202 must show not only that the defendant engaged in an unfair practice, but also that the practice "adversely affects competition or is likely to adversely affect competition." 410 F.3d 1295 (11th Cir. 2005). This holding will make it much more difficult for plaintiffs in that circuit to prevail in claims under the Packers and Stockyards Act. See also *Griffin v. Smithfield Foods, Inc.*, 183 F. Supp. 2d 824, 828 (E.D. Va. 2002).

2002.<sup>116</sup> The 2002 Farm Bill came close to providing protections for producers who use production contracts. It would have ensured that the decision to arbitrate is truly voluntary. That provision was removed in conference. The Fair Contracts for Growers Act, introduced several times between 2002 and 2005, would have given farmers a choice of venues to resolve disputes associated with production contracts. The Mandatory Price Reporting Act of 1999 would have required price reporting and public dissemination. The proposed Captive Supply Reform Act would require packers (and producers) to bid against each other to win a contract in open, public markets. In essence, it would prohibit secret deals. It also would require a fixed base price in formula contracts.

There have been legislative efforts at the state level as well.<sup>117</sup> A few have been successful. The Minnesota Agricultural Commodities Contracts Act of 1990 protects farmers from the cancellation of a production contract until they have recaptured their investment in production facilities.<sup>118</sup> Iowa law prohibits confidentiality clauses in production contracts.<sup>119</sup> Kansas law contains a variety of provisions to protect poultry producers, including requiring that poultry production contracts be readable and contain a disclosure of risks, prohibiting unfair or deceptive trade practices, and allowing producers to compare contract terms.<sup>120</sup> Arkansas, Georgia, and Illinois have statutes<sup>121</sup> based in part on the Producer Protection Act, a model statute proposed by the attorneys general of 16 states, which creates an implied obligation of good faith,

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<sup>116</sup> Monopsony Hearing, *supra* note 80, (statement of Sen. Patrick Leahy), *available at* [http://judiciary.senate.gov/member\\_statement.cfm?id=975&wit\\_id=2629](http://judiciary.senate.gov/member_statement.cfm?id=975&wit_id=2629).Leahy).

<sup>117</sup> (116) See O'BRIEN, *supra* note 108, at 6-7.

<sup>118</sup> See MINN. STAT. § 17.92(1) (2007).17.92. The provision applies to production contracts that require a producer to invest \$100,000 or more in buildings and equipment. *Id.* If the contractor (typically an integrator or processing company) cancels before the producer has recouped that investment, the producer must be "reimbursed for damages incurred by an investment in buildings or equipment that was made for the purpose of meeting minimum requirements of the contract." *Id.* It also requires "a clear written disclosure setting forth the nature of the material risks faced by the producer if the producer enters into the contract." MINN. STAT. § 17.91(2) (2007).

<sup>119</sup> See IOWA CODE §§ 202.3, 202A.4 (2007).

<sup>120</sup> See KAN. STAT. ANN. §§ 16-1701(b)(1)-(2), (5) (2006). 16-1701.

<sup>121</sup> See ARK. CODE ANN. § 2-32-201 (2007); 2-23-201; GA. CODE ANN. §§ 2-22-1 to 2-22-5 (2007); 505 ILL. COMP. STAT. §§ 17/1-17/99 (2007).

requires that risks be disclosed and that contracts be readable, limits confidentiality, and restricts integrators' ability to terminate contracts.<sup>122</sup> Alabama, Florida, North Carolina, North Dakota, Oklahoma, and Iowa have considered but have not passed similar legislation.<sup>123</sup> These changes have faced stiff political resistance across the country from the integrators' powerful political lobby.<sup>124</sup>

#### IV. The Relationship Between Market Power and Environmental Compliance at CAFOs

Environmental regulators have been slow to recognize how the economic characteristics of the CAFO industry—vertical integration, horizontal concentration, the use of contracting, and integrators' market power—affect how the industry should be regulated. For example, the “Unified National Strategy for Animal Feeding Operations”<sup>125</sup> published jointly by EPA and USDA in 1999 almost entirely ignored the very existence of integrators. The only mention is a single paragraph that states that the role of integrators is to ensure that their “contract growers are environmentally responsible,” to consider the possible environmental impacts of CAFOs when they locate their processing plants, and to “help

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<sup>122</sup> See also Steven Wu, *Regulating Agricultural Contracts: What are the Tradeoffs?* CHOICES 18-2218(1) (2003) (analysis of Producer Protection Act), available at <http://www.choicesmagazine.org/2003-1/2003-1-05.pdf>. Boehlje et al., *The Producer Protection Act—Will It Protect Producers?*, 18 PURDUE AGRIC. ECON. REPORT 1-4 (Feb. 2001) (criticism of the Producer Protection Act), available at <http://www.agecon.purdue.edu/extension/pubs/paer/2001/paer0201.pdf>. Senator Tom Harkin of Iowa introduced a similar bill, called the Agricultural Producer Protection Act (S-2343), in the 106th Congress in 2000, but it never reached a floor vote. Wu at 19-20. It was reintroduced as the Securing the Future for Independent Agriculture Act of 2001 (S-20), and died in committee. Wu at 19-20.

<sup>123</sup> See 92nd Ill. General Assembly, Status of HB0524, available at <http://www.ilga.gov/legislation/legisnet92/status/920HB0524.html> (last visited Sept. 26, 2007) (Ill.(Iowa bill); HAMILTON, *supra* note 24, at 160-61 (other bills).

<sup>124</sup> Kate Shatzkin & Dan Feserman, *Winning Battles but Losing the Political Wpolitical* ar, BALTIMORE SUN, March 2, 1999, at 7A.

<sup>125</sup> U.S. DEP'T. OF AGRIC. & U.S. ENVTL. PROT. AGENCY, UNITED NATIONAL STRATEGY FOR ANIMAL FEEDING OPERATIONS (1999), available at <http://www.epa.gov/npdes/pubs/finafost.pdf> (last visited Sept. 20, 2007).

develop alternatives for manure use and transport.”<sup>126</sup>

While the 1999 Unified National Strategy largely ignored the relationship between integrators and contract growers, a new debate about CAFOs soon flared up that focused the attention on the market imbalance in the meat production industry: the debate over integrator liability.<sup>127</sup> Historically, EPA did not include integrators in its Clean Water Act enforcement actions against CAFOs (except when the integrators were operating CAFOs they owned themselves). But in 1999 EPA dropped a bombshell, stating in a draft guidance document that parties who exercised “substantial operation control” over a CAFO would be considered “operators” under the Clean Water Act regulations and required to obtain a Clean Water Act permit.<sup>128</sup> “Substantial operational control” was to be determined by evaluating factors including whether the party: (a) directed the activity of persons working at the CAFO either through a contract or direct supervision; (b) owned the animals; or (c) specified how the animals were grown, fed, or medicated.<sup>129</sup> This policy was clearly aimed at integrators. Many integrators would have fallen under the ambit of this definition of “operator,” for as discussed above, integrators who use production contracts own the animals raised at CAFOs and often specify

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<sup>126</sup> *Id.* at 33.6.0.

<sup>127</sup> See also<sup>127</sup> Susan M. Brehm, Comment, Note, *From Red Barn to Facility: Changing Environmental Liability to Fit the Changing Structure of Livestock Production*, 93 CAL. L. REV. 797, 814-34 (2005) (analysis of integrator liability). . See also Aya Ogishi e al., *Animal Waste Policy: Reforms to Improve Environmental Quality*, CHOICES: THE MAGAZINE OF FOOD, FARM AND RESOURCE ISSUES, Fall 2002; Cynthia M. Roelle, Comment, *Pork, Pollution, and Priorities: Integrator Liability in North Carolina*, 35 WAKE FOREST L. REV. 1055 (2000). (2000);

<sup>128</sup> See U.S. ENVTL. PROT. AGENCY, GUIDANCE MANUAL AND EXAMPLE NPDES PERMIT FOR CONCENTRATED ANIMAL FEEDING OPERATIONS, REVIEW DRAFT 2-10 (August 6, 1999), available at [http://www.epa.gov/npdes/pubs/dman\\_af.pdf](http://www.epa.gov/npdes/pubs/dman_af.pdf), [http://www.epa.gov/npdes/pubs/dman\\_af.pdf](http://www.epa.gov/npdes/pubs/dman_af.pdf). announced in Notice of Availability: Draft Guidance Manual and Example NPDES Permit for Concentrated Animal Feeding Operations, 64 Fed. Reg. 46,390 (Aug.(August 25, 1999). EPA claimed that this fairly broad interpretation of the statutory term “operator” was merely a clarification of the existing law. *Id.* That was true in theory, but not in practice. While a few courts have held integrators liable under an agency theory, liability is not much of a risk for integrators at this time. See Brehm, *From Red Barn to Facility*, *supra* note 127, at 814-34.

<sup>129</sup> See U.S. ENVTL. PROT. AGENCY, MANUAL, *supra* note 128, at 2-10.

how the animals must be grown, fed, and medicated.<sup>130</sup> An integrator who issued a permit would then be liable for Clean Water Act violations at the CAFOs it controlled, even if the violations were committed by the grower. Because both the integrator and the grower would need a permit, this proposal was referred to as “co-permitting.” When EPA subsequently included a co-permitting provision in its 2001 proposed CAFO regulations,<sup>131</sup> co-permitting quickly became one of the most controversial issues in the CAFO debate.<sup>132</sup>

Proponents of co-permitting contended that it would encourage integrators to ensure that their growers complied with the Clean Water Act by installing the necessary waste handling infrastructure and managing their facilities appropriately. Co-permitting would also give integrators an incentive to reduce the costs of proper manure management in several ways: by creating centralized manure storage and treatment facilities, which would create economies of scale;<sup>133</sup> by providing growers with feed that contained reduced levels of nitrogen and phosphorus;<sup>134</sup> and by researching new manure management technologies.

Integrators argued that they would be unfairly liable for manure handling practices over which they had no effective control.<sup>135</sup> They also argued that making them liable for environmental violations by their contract growers would cause them to abandon the contract system and raise the animals themselves, thus driving contract growers out of

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<sup>130</sup> When EPA included a co-permitting requirement in its 2001 proposed CAFO regulation, it estimated that “94 meat packing plants that slaughter hogs and 270 poultry processing facilities may be subject to the proposed co-permitting requirements.” 2001 Proposed CAFO Rule, *supra* note 15, at 2986. EPA stated that it did not expect that integrators that entered into marketing contracts would need permits because they generally did not exercise substantial operational control. *Id.*

<sup>131</sup> *Id.*

<sup>132</sup> See CLAUDIA COPELAND, ANIMAL WASTE AND WATER QUALITY: EPA REGULATION OF CONCENTRATED ANIMAL FEEDING OPERATIONS (CAFOs), CRS-21 (April 15, 2003), available at <http://digital.library.unt.edu/govdocs/crs/permalink/meta-crs-9077:1.2003>.

<sup>133</sup> See 2001 Proposed CAFO Rule, *supra* note 15, at 3026. 3027.

<sup>134</sup> See BOESSEN ET AL., CHAPTER 7: CO-PERMITTING PROVISIONS IN THE PROPOSED REVISIONS TO THE NPDES PERMIT REGULATION AND EFFLUENT GUIDELINES AND STANDARDS FOR CAFOs, COMMENTS TO THE USEPA ON THE CONCENTRATED ANIMAL FEEDING OPERATION PROPOSED RULE 7-1 (July 26, 2001).

<sup>135</sup> COPELAND, *supra* note 132.

business.<sup>136</sup> Perhaps surprisingly, many contract growers opposed co-permitting. They feared that integrators would require growers to indemnify them for any environmental liability; that integrators would begin to take more of a day-to-day management role at farms, depriving growers of what autonomy they still have; and that integrators would use environmental violations as a pretext for contract termination.<sup>137</sup>

In the end, and to the surprise of those on both sides of the debate,<sup>138</sup> EPA did not include a co-permitting requirement in its final regulation in 2003.<sup>139</sup> A similar story has played out in state legislatures and environmental agencies, with several considering and rejecting co-permitting.<sup>140</sup> Maryland briefly took a different approach, directly requiring integrators to assist with manure disposal, but the regulation was quickly challenged in court and dropped by an incoming Republican governor.<sup>141</sup>

The failure of these state and federal efforts suggests that it may be politically infeasible to add co-permitting requirements to federal or state

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<sup>136</sup> COMMENTS OF US POULTRY AND EGG ASSOCIATION ON PROPOSED CAFO RULE (July 16, 2001), *available at* [http://poultryegg.org/environment/docs/Comments\\_1p.pdf#search=%22comment%20proposed%20co-permitting%22](http://poultryegg.org/environment/docs/Comments_1p.pdf#search=%22comment%20proposed%20co-permitting%22) (“Co-permitting will drive integrators (compelled to minimize potential liability exposure) to large investor-owned or company owned farms over time, at the expense of the family farmer.”).

<sup>137</sup> 2001 Proposed CAFO Rule, *supra* note 15, at 3025-26. 3025.

<sup>138</sup> PHILIPPE BONTEMS ET AL., ENVIRONMENTAL REGULATION OF LIVESTOCK PRODUCTION CONTRACTS 50 (Ashgate ed., Institut d’Economie Industrielle, Toulouse 2004).

<sup>139</sup> Final CAFO Rule, *supra* note 43. The EPA’s final regulation contained no explanation for its decision to reject its initial proposal to require permits from integrators who exercised substantial operational control over CAFOs. *Id.*

<sup>140</sup> See Brehm, *supra* note 127, at 830; *see also* Goodman, *supra* note 52 (discussing how integrators used powerful political connections to kill a Virginia bill which would have made integrators liable for pollution from their contract farms); *see also* Josh Marks, *Regulating Agricultural Pollution in Georgia: Recent Trends and the Debate Over Integrator Liability*, 18 GA. ST. U. L. REV. 1031 (2002).

<sup>141</sup> Anita Huslin, *Maryland Governor Ehrlich Eases Liability For Big Chicken Firms, Drops Policy on Manure Runoff in Bay*, WASH. POST, June 14, 2003, *available at* <http://www.mindfully.org/Industry/2003/Maryland-Liability-Chicken14jun03.htm>. 2003. Paul L. Sorisio, *Poultry, Waste, and Pollution: The Lack of Enforcement of Maryland’s Water Quality Improvement Act*, 62 MD. L. REV. 1054 (2003) (description of the history of the Maryland regulatory effort).

statutes and regulations. That does not mean that it is impossible to hold integrators liable for pollution from CAFOs. Some private plaintiffs have brought common law claims seeking to hold integrators vicariously liable under the common law doctrines of nuisance and trespass.<sup>142</sup> South Dakota has a statute providing that an owner of livestock who “negligently entrusts” it to another is jointly and severally liable for any environmental damage the livestock cause.<sup>143</sup> As mentioned above, Clean Water Act regulations apply to discharges not only by owners of facilities, but by “operators” as well. EPA stated in its 2001 proposed CAFO rule that “the existing definition of “operator” in [40 C.F.R. §] 122.2 generally already encompasses operators who exercise substantial operational control,”<sup>144</sup> meaning that integrator liability could potentially be imposed despite the agency’s decision not to include an explicit provision in the final regulation. Despite the lack of co-permitting requirements, therefore, integrator liability remains possible.

### **A. The Implications of Integrators’ Market Power for the Assignment of Environmental Liability in the CAFO Industry**

But is integrator liability good environmental policy? How does the relative bargaining power of integrators and CAFO operators affect the answer? Does it matter whether the pollution is intentional or accidental? This subsection explores these three questions. It concludes that the strong bargaining position integrators hold is indeed relevant to the assignment of liability for CAFO pollution. In general, the more market power held by integrators, the more responsibility integrators should bear, both because it is fair and because it is likely to improve regulatory compliance.

#### **1. The Fairness of Integrator Liability**

Integrators argue that it is unfair to make them responsible for

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<sup>142</sup> See, e.g., *Overgaard v. Rock County Board of Commissioners*, 2002 WL 31924522 (D. Minn. 2002); *Tyson Foods, Inc. v. Stevens*, 783 So. 2d 804 (Ala. 2000).

<sup>143</sup> S.D. CODIFIED LAWS § 20-9-30 (2007) (no reported cases involving this statute).statute.

<sup>144</sup> 2001 Proposed CAFO Rule, *supra* note 15, at 3023.

pollution that they do not create. That argument has some intuitive appeal. It is, after all, the growers who raise (and sometimes own) the chickens, hogs, and cattle that pollute the water and the air. But upon closer examination, integrators do bear some equitable responsibility, particularly for nutrient over-application. That pollution is not primarily the result of mismanagement or carelessness on the part of growers. It is the aggregation of large numbers of animals in small areas and the application of their manure onto insufficient acreage that transforms manure from useful fertilizer to a pollutant. If the pollution is endemic to the industry, then all players in the industry bear some responsibility. This equitable argument, however, is less applicable to spills, which can be the result of mismanagement or carelessness on the part of growers.

Another reason it can be unfair to make growers solely responsible for CAFO pollution is that integrators using production contracts (in which they own the animals and pay growers for raising them) often exercise substantial control over the way the operations are run, including aspects of the business that impact the amount of pollution created, such as the composition of the feed and (less commonly) the handling of the manure.<sup>145</sup> The more control integrators exercise over an operation, the more fair it is to hold them responsible for pollution from that operation. This equitable argument is therefore less applicable to integrators who use marketing contracts (in which they agree to buy animals using a predetermined pricing formula), for marketing contracts give integrators less control over the ways the animals are raised

Finally, fairness mandates that a party that benefits from pollution should help pay for its prevention. Integrators profit from CAFO pollution.

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<sup>145</sup> Contracts commonly require specific particular management techniques, which sometimes extend to aspects of management that influence pollution. For example, some contracts require particular manure handling techniques. See DAVID MOELLER, *LIVESTOCK PRODUCTION CONTRACTS: RISKS FOR FAMILY FARMERS* 3 (Mar. 22, 2003), available at <http://www.flaginc.org/topics/pubs/arts/artcf005.pdf>. A less obvious, but perhaps even more important, environmental aspect of production contracts is the requirement that growers use feed specified (and often provided) by the processor. Feed varies considerably in the amount of nitrogen it contains, which impacts the amount of nitrogen a CAFO adds to the environment when it disposes of manure. TOMISLAV VUKINA, *THE IMPACT OF 2003 FEDERAL CAFO REGULATIONS ON INTEGRATOR-GROWER RELATIONS*, IN *ANIMAL AGRICULTURE AND THE ENVIRONMENT: NATIONAL CENTER FOR MANURE AND ANIMAL WASTE MANAGEMENT WHITE PAPERS* 155-160 (2006).



To the extent that growers save money by failing to adopt technologies that reduce pollution, integrators are able to take advantage of those savings by paying growers less for animals. It is therefore unfair to hold the growers solely responsible for the costs of the pollution, even if they directly cause it. In these two respects—operational control and financial benefit—the degree of market power held by integrators determines the balance of the equities. The more market power integrators have, the more they can dictate the operational and financial terms of the contacts. And the more market power integrators have, the greater the share of the wealth created by the industry they are able to take for themselves. The equitable justification for integrator liability is thus strongest where integrators hold substantial market power.

## **2. The Effect of Integrator Liability on Compliance**

Co-permitting was partly intended to improve regulatory compliance by giving integrators an incentive to ensure that their growers did not violate their permits.<sup>146</sup> Whether integrator liability would increase compliance is a complicated question. But just as with the question of equity, it turns out that the degree of integrators' market power affects the answer (at least with regard to accidental manure spills, though not for nutrient leaching). Economic theory suggests that when two contracting parties participate in a pollution-generating activity, and one party holds significant market power, it is important to hold that stronger party jointly responsible for accidental pollution by the weaker party with whom it contracts. Doing so becomes more necessary as the degree of market power increases.

### **a. Compliance and Intentional Pollution**

The greater market power of integrators does not justify making them liable for manure over-application at CAFOs. To see why this is so,

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<sup>146</sup> See 2001 Proposed CAFO Rule, *supra* note 15, at 3026 (“co-permitting could motivate corporate entities to oversee environmental compliance of their contract growers, in order to protect themselves from potential liability, thus providing an additional layer of environmental oversight”).

imagine the extreme case of an integrator with full monopsony<sup>147</sup> power over its growers. That integrator's monopsony power enables it to determine the price it pays for the animals and any other terms of the contract, such as how the animals are raised.<sup>148</sup> That integrator will bear the entire cost of the manure disposal requirements,<sup>149</sup> even if the law does not make it liable for violation of those requirements.<sup>150</sup> That is because, in the language of economics, the integrator has already appropriated all the profits from the raising of animals. In colloquial terms, the integrator has already financially squeezed its growers as far as they can be squeezed. As new costs of avoiding nutrient leaching are imposed on growers, the hypothetical integrator with a monopsony will have to subsidize those new costs<sup>151</sup> by offering its growers better contract terms. Otherwise the growers, already operating at the margin, would go bankrupt, and no new growers would want to do business with the integrator.<sup>152</sup>

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<sup>147</sup> A monopsony exists where a market has only one buyer. The more familiar term "monopoly" refers to a market with only one seller. BLACK'S LAW DICTIONARY (8th ed. 2004).

<sup>148</sup> Although integrators only have the contractual power to mandate production methods when they use production contracts, an integrator with monopsony power could presumably force a grower to accept a production contract instead of a marketing contract.

<sup>149</sup> One such cost will be drafting nutrient management plans. For CAFOs that have been over-applying nutrients, complying with those plans may require obtaining additional land for waste application, reducing the nutrient content of feed, using pre-application treatment methods that reduce nutrients, or other methods.

<sup>150</sup> See Tomislav Vukina, *The Relationship Between Contracting and Livestock Waste Pollution*, 25 REVIEW OF AGRIC. ECONOMICS, 66-88 (2003).

<sup>151</sup> If the integrators could not afford to subsidize the costs of the regulations, they would either have to pass the new costs on to consumers, find a more efficient method of producing meat, or leave the business entirely.

<sup>152</sup> Growers went bankrupt even before new environmental restrictions were imposed. Integrators have remained able to sign up new growers for several reasons. First, confidentiality clauses in contracts imposed by integrators slow the dissemination of financial information among grower. Integrators have been able to use their informational advantage and their marketing resources to sign up new growers even when many growers lose money. Second, production contracts commonly employ a "tournament" payment scheme, in which growers are paid according to how well they perform (in terms of turning feed into meat) in comparison with nearby growers. Even if the average grower loses money, new growers might still be willing to enter the system if they

Now consider the actual situation, in which integrators have some, but not total, market power. Growers doing business with such an integrator can use their limited leverage to retain some portion of profits earned by raising the animals and selling their meat. The integrators and its growers will share the cost of complying with the new regulatory requirements, eventually settling on the same division of the remaining profits that they had before.<sup>153</sup> Thus, whether integrators have complete market power or just some market power, they will end up paying much of the cost of the environmental regulations regardless of whether the integrator is made liable.<sup>154</sup> Economic theory suggests that making integrators liable for non-compliance with manure disposal requirements will not make them any more vigilant about compliance than they already are.

The analysis so far suggests that integrators' market power does not provide a justification for integrator liability for nutrient over-application. This is because regardless of whether integrator liability is imposed, integrators with complete or partial market power will bear at least some share of the environmental costs. They will therefore have an incentive to ensure compliance.

### **b. Compliance and Accidental Pollution**

But what about accidental pollution? At CAFOs, such pollution ranges from small spills from broken pipes carrying liquid manure to catastrophic spills from lagoons. As explained below, when integrators hold market power, integrator liability should reduce the chance of

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believed that they could outperform their competitors. Finally, some growers might want to enter into contracts for non-financial reasons, such as a personal desire to raise animals. But even if these advantages enable a monopsonistic integrator to shift some costs to its already-marginal growers in the short term, in the long run it could not do so, for too many of its growers would fail to earn a profit.

<sup>153</sup> Vukina, *supra* note 150, at 136.

<sup>154</sup> EPA recognized this problem when, in its discussion of its co-permitting proposal, it stated: "As a practical matter, however, regulatory authorities have limited ability to influence who pays for environmental compliance, since the division of costs and operational responsibilities is determined by private contracts, not regulation." 2001 Proposed CAFO Rule, *supra* note 15, at 3024.

accidental manure spills.

Regulating accidental pollution is different from regulating intentional pollution. The EPA can directly regulate the conduct that causes nutrient runoff. Addressing accidental pollution, by contrast, is a matter of regulating risk. It is true that regulators can mandate behavior that reduces the chance of an accident. CAFO permits can contain conditions that reduce the risk of a manure spill, for example, by requiring growers to regularly inspect manure storage lagoons and prohibiting them from filling them too high. Where such direct regulations exist, the analysis of incentives is the same as for intentional pollution. But compliance with the literal regulatory requirements can only do so much to prevent accidents. The ultimate risk of a manure spill depends on the level of care exhibited by a grower, who understands the idiosyncrasies of his or her particular operation, terrain, and climate. What effect would integrator liability have on the level of care?

Economic research on a related issue—lender liability—offers insight into whether imposing liability on integrators will cause growers to be more careful. Lender liability theory examines a generic situation in which a lender with deep pockets loans money to a firm with limited assets that engages in a hazardous activity. The borrowing firm is liable for its accidents; the question is whether making the lender jointly liable will reduce the chance of an accident. On first glance, it seems likely that it will. A lender with no liability for the borrower's accidents would seem to have no incentive to encourage the borrower to prevent them. A lender facing joint liability would seem to have an incentive to pressure the borrower to be more careful, decreasing the risk of an accident.<sup>155</sup>

The economist Rohan Pitchford, however, has argued that lender liability can actually increase the risk of an accident.<sup>156</sup> He reasons (based on a formal economic model) that a lender facing possible liability for the borrower's accidents will charge the borrower higher interest. From the borrower's perspective, the higher loan payments would be like accident

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<sup>155</sup> Models developed by several economists supported that conclusion. See, e.g., Anthony Heyes, *Lender Penalty for Environmental Damage and the Equilibrium Cost of Capital*, 63 *ECONOMICA* 311 (1996); and Marcel Boyer et al., *Environmental Risks and Bank Liability*, 41 *EUROPEAN ECONOMIC REVIEW* 1427 (1997).

<sup>156</sup> See Rohan Pitchford, *How Liable Should a Lender Be: The Case of Judgment-Proof Firms and Environmental Risk*, 85 *AMER. ECON. REV.* 1171 (1995).

insurance. In exchange for paying higher rates, the borrower would know it would not have to pay an accident victim as much because the victim would likely seek compensation from the deep-pocket lender. Because the financial consequences on the borrower of an accident would be reduced, it would have less incentive to avoid accidents.

So does lender liability increase or decrease the chances of an accident? The economist Dieter Balkenborg has argued that the answer depends on the relative bargaining power of the lender and the borrower.<sup>157</sup> His economic modeling indicates that when a lender has relatively high bargaining power, its pressure on the borrower will increase the firm's level of care. The reason is that when a lender has more leverage over the borrower, it has more incentive to insist the borrower be careful because it can extract the financial benefit of accident avoidance. A lender with less bargaining power than the borrower, by contrast, has less incentive to insist on care because it benefits less from accident avoidance and because it has less ability to force the borrower to act carefully. Therefore, the higher a lender's bargaining power relative to a borrower's, the more it makes sense to impose lender liability.

This research in the field of lender liability is applicable to the CAFO industry. Integrators are similar to the hypothetical lenders in that they have deeper pockets and a financial relationship with contract growers on which the growers depend. Contract growers are analogous to the hypothetical borrowers in that they are engaging in a hazardous activity and have relatively few assets compared to the lender. The question, then, is whether integrator liability will increase or decrease how careful growers are to avoid spills. The answer depends on how much market power integrators have. Assuming that penalties for accidents are set high enough, extra steps to avoid manure spills—perhaps by building better storage lagoons and inspecting them carefully—though initially costly, will save growers money in the long run because they will avoid penalties.<sup>158</sup> If integrators have significant market power, they have an

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<sup>157</sup> See Dieter Balkenborg, *How Liable Should a Lender be?* 91 AMER. ECON. REV. 731 (2001). Subsequent economic literature has accepted his conclusion. See, e.g., Rohan Pitchford, *How Liable Should a Lender Be? The Case of Judgment-Proof Firms and Environmental Risk: Reply*, 91 AMER. ECON. REV. 739 (2001).

<sup>158</sup> To assess whether extra care will save money, growers and integrators must make numerous estimates, such as how much spill prevention measures will cost, how much

incentive to force the growers to take those steps because the integrators will be able to appropriate those savings by offering the growers less money for the animals.<sup>159</sup> Their greater bargaining power, moreover, enables integrators to force growers to take that extra care. If, by contrast, integrators lack market power, they have less incentive to demand those terms because they will be less able to extract the long-term savings, and they will have less power to impose the terms in the first place. For those reasons, economic research on lender liability suggests that the greater the integrators' bargaining power, the more integrator liability is likely to encourage integrators to prevent environmental accidents such as manure spills.

Will integrator liability reduce a grower's incentive to be careful? Here, there is a difference between lender liability theory and the analysis of integrator liability. The form of integrator liability discussed in this article is not liability to private parties harmed by an accident but rather liability to the government for penalties. The borrowing firm considered above may be able to safely assume that an injured party will pursue his or her claim against the deep pocketed lender. A grower cannot assume that the government will seek penalties only against an integrator (unless, as discussed below, the grower is judgment-proof). Unlike private plaintiffs, environmental regulators are concerned not with obtaining the largest monetary judgment for the least effort, but with ensuring that all responsible parties pay appropriate penalties. A grower who recognizes that fact will not be careless when integrators are jointly liable. Unlike lender liability, therefore, the imposition of integrator liability is not likely to be counter-productive even when integrators hold less-than-total market

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those measures will reduce the chance of a spill, how likely an environmental regulator is to detect the spill, how likely it is that penalties will be imposed, and how large the penalties will be. While these estimates are difficult to make, that difficulty does not invalidate this article's economic analysis of integrator liability, for the same difficulties exist with regard to the traditional penalty-based enforcement of all command-and-control regulations.

<sup>159</sup> Integrators facing the risk of liability are more likely to see these long-term savings than growers would be. Any individual grower is unlikely to suffer a major spill, even if he does not take extra care, simply because such spills are relatively rare. For an integrator who contracts with dozens or hundreds of growers the risk of an accident occurring at one of its contract farms is much greater.

power.

### c. Compliance by the Judgment-Proof

The analysis so far has not considered the problem of the judgment-proof grower. As discussed above, when integrators have substantial market power, contract growers may well be judgment-proof because integrators can offer contract terms that leave growers operating on the margin.<sup>160</sup> The problem of the judgment-proof defendant was extensively discussed by scholars in the 1990s<sup>161</sup> who realized that large corporations engaged in hazardous activities had an incentive to outsource them to judgment-proof subsidiaries or other companies.<sup>162</sup> Scholars feared that practice would enable the large corporations to avoid liability entirely. Several industries provided examples. Creating subsidiaries was widespread in the tobacco and hazardous waste disposal industries.<sup>163</sup> Companies in the chemical industry also began to divest themselves of

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<sup>160</sup> In theory, just because a grower earns little or no net income does not necessarily make it judgment-proof, for it might also have capital assets that the government could attach, such as its barns. But in practice, contract CAFOs have few capital assets. Contract growers typically take out large, long-term loans to purchase the facilities needed to grow animals according to integrators' specifications, and changing technology and integrator requirements can require growers to incur new debt for expensive upgrades. See Feserman & Shatzkin, *supra* note 93.

<sup>161</sup> The problem, of course, is older than that. Barney et al., *Organizational Responses to Legal Liability: Employee Exposure to Hazardous Materials, Vertical Integration, and Small Firm Production*, 35 ACADEMY OF MGT. J. 328, 330 (1992), provides an example from the 1970s in which a large company contracted out the production of a dangerous chemical to a small company with little assets. When it turned out that workers at the small company had been harmed by exposure to those chemicals, the large company was found not to be liable as a mere independent contractor. *Id.*

<sup>162</sup> See Al H. Ringleb & Steven N. Wiggins, *Liability and Large-Scale, Long-Term Hazards*, J. POLITICAL ECONOMY, 574, 589 (1990) ("the incentive to evade liability has led to roughly a 20 percent increase in the number of small corporations in the US economy"); Steven N. Wiggins & Al H. Ringleb, *Adverse Selection and Long-Term Hazards: The Choice between Contract and Mandatory Liability Rules*, J. LEGAL STUDIES, 189, 211 (1992) (empirical analysis providing consistent results). Seminal articles on this topic in the legal literature include Henry Hansmann & Reinier Kraakman, *Toward Unlimited Shareholder Liability For Corporate Torts*, 100 YALE L.J. 1879 (1991); and Lynn LoPucki, *The Death of Liability*, 106 YALE L.J. 1 (1996).

<sup>163</sup> Hansmann & Kraakman, *supra* note 162.

particularly hazardous aspects of their business.<sup>164</sup>

A judgment-proof corporation presents a two-fold problem. First, potential victims of hazardous accidents cannot obtain adequate compensation for their injuries from judgment-proof firms. Second (and more important for our purposes), regulators cannot always adequately control the conduct of judgment-proof firms. The most important tool regulators have for ensuring that companies comply with regulatory requirements is the threat of civil penalties for violations. That threat may work with a judgment-proof firm when the regulator is trying to force simple, inexpensive modifications in the firm's behavior because the threat to impose small fines is believable. The judgment-proof problem is worse when a firm is engaging in an activity that can cause serious accidents that are difficult to predict—like operating a manure storage lagoon. In that case, the appropriate penalties would be large, and the threat to impose them would be empty. Environmental agencies often have policies limiting civil penalties (at least in settlements) to the maximum amount the company can afford.<sup>165</sup> A company with little to lose—such as a marginally profitable CAFO—could simply cease operating rather than pay the fine, a risk it might be especially willing to accept if accidents are uncommon. Although regulators can still use injunctions, the threat of criminal sanctions, and a variety of other enforcement methods, there is no doubt that they have less leverage over judgment-proof firms.

This generic discussion of judgment-proof defendants is largely applicable to growers, but some caveats are necessary. First, this discussion is necessarily theoretical. There are no good data on how many growers are actually judgment-proof. Second, individual growers may have incentives to avoid accidents that the abstract judgment-proof firm above does not. Because CAFO farming is capital intensive, most growers incur long-term debt to construct a facility, making shutting down an unattractive option. Even if environmental regulators impose affordable

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<sup>164</sup> *Id.*

<sup>165</sup> See, e.g., ENVTL. PROT. AGENCY, INTERIM REVISED CLEAN WATER ACT SETTLEMENT PENALTY POLICY (1995) ("EPA should not seek a penalty that would seriously jeopardize the violator's ability to continue operations and achieve compliance, unless the violator's behavior has been exceptionally culpable, recalcitrant, threatening to human health or the environment, or the violator refuses to comply"), available at <http://www.epa.gov/EPA-WATER/1995/May/Day-04/pr-108.html>. comply").



finer for an accident, a grower may also reasonably fear that the negative publicity from an enforcement action could lead an integrator to cancel the contract regardless of whether the integrator is liable for the accident. A grower may well also wish to remain in the business for personal reasons, such as commitment to that way of life. However, it is still reasonable to assume that at least some growers are virtually judgment-proof and that the reduced threat of penalties will likely make at least some judgment-proof growers less careful than they would be if they had more to lose.

In sum, when integrators have significant or total market power, there are two effects on accident prevention: (1) integrator liability is needed because many growers will be judgment proof, and (2) integrator liability will be effective because integrators will benefit from accident prevention and will have the power to demand that growers change their behavior.

Imposing integrator liability might have other effects as well. Imposing liability on integrators might cause them to forego production and marketing contracts and instead raise animals themselves.<sup>166</sup> From a strictly environmental standpoint, complete vertical integration would not necessarily be a bad thing. It would, after all, make the meat industry look more like the hazardous waste or chemical industries did before corporations started divesting hazardous operations to avoid liability. It would be easier to police violations by a few integrators than by many smaller companies. It would be more efficient to bring one large enforcement action against an integrator than many smaller actions against its growers. Finally, it would be more effective to threaten penalties against a deep-pocket defendant than against a judgment-proof one.<sup>167</sup>

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<sup>166</sup> Vukina, *supra* note 150, at 147-48. Vukina argues that one reason potentially liable integrators would cease contracting is that it is much harder for an integrator to monitor and measure how well a grower is doing at reducing environmental risk than to determine how well a grower is doing at raising animals. *Id.* Growers would therefore have an incentive to devote too much of their efforts to growing animals and not enough to avoiding environmental liability. *Id.* Faced with that problem, integrators might prefer to raise their own animals, giving them full control over environmental performance. *Id.*

<sup>167</sup> This article focuses on the effects market structure and manipulation can have on environmental regulation, but this point demonstrates the opposite phenomenon: environmental regulation and enforcement can affect market structure.

**B. The Effect of Market Reforms on Environmental Compliance by CAFOs**

Reducing integrators' market power could have positive environmental effects. It could help improve regulators' ability to effectively prevent accidents by decreasing the numbers of judgment-proof growers. Increasing growers' market power by facilitating collective bargaining might enable growers to shield themselves from integrator pressure to take environmental shortcuts.

Market correction, however, would not likely be as effective a way to improve environmental performance as integrator liability would, for several reasons. First, although regulators would regain some leverage over the now more-profitable growers, that gain would not be as great as that which the leverage regulators would gain using integrator liability. That is because even a moderately profitable CAFO could not afford to pay a penalty that truly reflects the amount of environmental damage a major spill can cause. Only integrator liability, therefore, can produce a level of care that is appropriate to the actual risk of harm posed by major accidents.

A second reason why market correction might be a less desirable environmental solution than integrator liability is that integrators with an incentive to prevent CAFO accidents might be more effective enforcers than regulators. It is possible that an integrator will be more familiar than regulators are with the risks at the operations with which it contracts, especially if all the CAFOs have been designed to its uniform specifications. More importantly, integrators have some "enforcement" tools that are more powerful than the government's. An integrator who finds that a particular grower is not taking sufficient care to avoid accidents might simply refuse to do business with that grower, a reason that would certainly be supportable under the generous "legitimate business reason" standard under the Packers & Stockyards Act.<sup>168</sup> Regulators cannot so easily close an unsafe grower down. A risk-averse integrator could theoretically use its contracts to prescribe precise safety precautions that go beyond what the regulations require.

A final reason market correction is a less desirable approach to

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<sup>168</sup> See *supra* Section III.B.(2).

environmental protection is that market correction does not offer the enforcement efficiencies that come with being able to focus on a few integrators instead of a great many growers. Regulators do not have the resources to closely monitor all the CAFOs who will need Clean Water Act permits under the new regulations. Moreover, even when an inspector visits a CAFO, it can be difficult to detect violations because certain kinds of violations occur irregularly and because other potential violations, such as land application in excess of agronomic rates, may be hard to discover. Shared liability helps alleviate that concern by providing a second level of monitoring.<sup>169</sup>

Correcting the balance of market power is just one of the proposed ways to correct the market problems in the meat industry. What impact, if any, might the other class of proposals—prohibiting unfair behavior by integrators—have on environmental protection? Some of the proposals in Section III.B.2., above, such as prohibiting confidentiality in contracting, are aimed at correcting the information imbalance. Like directly reducing market power through antitrust, improving growers' access to information would be better than nothing from the environmental perspective, but not as good as integrator liability. Banning packer ownership of livestock until shortly before slaughter, however, might actually increase pollution. By preventing integrators from owning and operating their own CAFOs, bans on packer ownership could lead integrators to outsource the raising of animals to judgment-proof growers, making it more difficult for regulators to control environmental performance.

One final question: what would be the environmental effect of implementing *both* integrator liability and market reforms? Is there any inconsistency between them? To some degree, reducing integrators' market power would work at cross purposes with the imposition of integrator liability. As discussed above, integrator liability is most effective as a method of environmental control when integrators have the market power to control grower behavior; market reforms that reduce integrator market power will, therefore, lessen the effectiveness of integrator liability. That does not mean, though, that the two approaches are fundamentally inconsistent. No market reform will completely remove integrators' ability to shape grower behavior.

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<sup>169</sup> See also Ogishi, *Animal Waste Policy*, *supra* note 127.

The various market reforms aimed at correcting unfair conduct could have differing effects. Prohibiting contract confidentiality would help regulators and environmentalists monitor the extent to which integrators are using contracting to affect the degree of care growers use; that market reform would thus be a valuable addition to integrator liability as a way to improve environmental performance. Other reforms could clash with integrator liability. Reforms such as Minnesota's Agricultural Commodities Contracts Act of 1990, which prohibits the cancellation of a production contract until the grower has recaptured his or her investment in production facilities, would severely curtail integrators' ability to require more care, so extending that reform to other states might be undesirable to environmental regulators and activists if integrator liability had already been imposed.

### Conclusion

The forgoing discussion leads to a number of recommendations. First, since the appropriateness of imposing integrator liability depends on the degree of integrators' market power, and since their degree of market power varies locally and regionally,<sup>170</sup> integrator liability might be more effectively imposed on the state, not the federal, level. There appears to be greater chance that integrator liability might actually be imposed in such states. It is states like Maryland, in which integrators appear to hold significant market power, that some experiments with making integrators responsible for pollution have occurred.

Second, integrator liability can be limited to liability for manure spills, for that is the only area in which it is necessary. No co-permitting proposal has ever attempted to make that distinction. Maryland's proposal to make integrators partially responsible for manure disposal did address itself to only one aspect of CAFO pollution, but it was the wrong aspect because integrators with market power already have a financial incentive to make sure their growers avoid penalties for improper manure application.

Third, to the extent that imposing integrator liability is politically infeasible, environmentalists should lend their support to economic

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<sup>170</sup> See Vukina, *supra* note 150, at 148.

proposals aimed at increasing the bargaining power of CAFOs.<sup>171</sup> Although there is no way to predict with certainty the extent to which those reforms would be effective, economic theory suggests that reducing integrators' market power would lessen the problem of judgment-proof growers, enabling regulators to more effectively pressure growers to prevent accidents. Environmentalists who detest CAFOs may balk at helping them but should do so nonetheless.

Finally, while the question of integrator liability is important in its own right, the analysis in this article is applicable beyond the CAFO context, in other industries—such as the chemical industry and the hazardous-waste-disposal industry—in which a large, deep-pocketed company contracts with a small one to engage in a pollution-generating activity. In such circumstances, regulators and enforcers should recognize that whether it is good policy to make the large company jointly liable for violations depends at least in part on whether violations are intentional or accidental and on whether the large company has market power.

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<sup>171</sup> Although environmentalists and agricultural reformers share an interest in this respect, political realities might prevent them from forming an alliance of convenience. Hard-line environmentalists tend to object to CAFOs as a method of raising meat; expecting them to support CAFO operators, even in a dispute with big agriculture, might be unrealistic. Growers, meanwhile, could not be expected to argue that market intervention would protect the environment, given the underlying rationale that growers can only be trusted to assiduously guard against spills if they are sufficiently profitable. As discussed above, moreover, they have tended to oppose integrator liability for several reasons, including the threat that it would cause integrators to quit contracting and grow their animals themselves.